

# Coconino County & Flagstaff

## Economic Base Analysis

The economic base technique is grounded in the assumption that the local economy can be divided into two very general sectors: (1) a basic (or non-local) sector or (2) a non-basic (or local sector).

- **Basic Sector:** This sector is made up of local businesses (firms) that are entirely dependent upon external factors. For example, McDonald Douglas in Apache Junction, Arizona sells its helicopters to the US government. Their business is dependent almost entirely upon non-local firms, the US government, Department of Defense. McDonald Douglas does not sell its “Apache” attack helicopters to families or households locally, so their business is very much dependent upon exporting their goods. Manufacturing and local resource-oriented firms (like logging or mining) are usually considered to be basic sector firms because their fortunes depend largely upon non-local factors, they usually export their goods.
- **Non-basic Sector:** The non-basic sector, in contrast, is composed of those firms that depend largely upon local business conditions. For example, a local grocery store sells its goods to local households, businesses, and individuals. Its clientele is locally based and, therefore its products are consumed locally. Almost all local services (like drycleaners, restaurants and drug stores) are identified as non-basic because they depend entirely on local factors.

Economic base theory assumes that all local economic activities can be identified as basic or non-basic. Economic base theory also suggests that the local economy is strongest when it develops those economic sectors that are not closely tied to the local economy. By developing firms that rely primarily on external markets, the local economy can better insulate itself from economic downturns because, it is hoped, these external markets will remain strong even if the local economy experiences problems. In contrast, a local economy wholly dependent upon local factors will have great trouble responding to economic slumps. The economic cycles of boom and bust mining towns are a good example of where the external economic impacts cause the decline of the local economy.

# Economic Base Analysis Techniques

There are three basic ways to analyze the strengths/weaknesses, specializations, and overall diversity of the local economy. The three methods are simple but popular techniques to determine the diversity of and specialization of the local economy:

- I. Assumption Technique: By far the simplest economic analysis technique estimates basic sector employment by using a fundamental set of assumptions about the local economy. Here the analyst decides based upon established knowledge of the local economy what industries are basic or non-basic. A drawback of this technique is all employment is determined as either basic or non-basic.
- II. Location Quotient Technique: the LQ technique determines the level of basic sector employment by comparing the local economy of a larger geographic unit such as the state or the US.
- III. Minimum Requirements Technique: Slightly more complex method that compares the local economy with the economies of a sample of similarly sized regions.

All three methods are applicable, however, the location quotient technique is the most commonly utilized base analysis method. The technique compares the local economy to a reference economy, in the process attempting to identify specializations in the local economy.

## Location Quotient

Location Quotients (LQs) are ratios that allow an area's distribution of employment by industry to be compared to a reference or base area's distribution. The reference area is usually the U.S., but it can also be a state or a metropolitan area. The reference or base industry is usually the All industry total. The discussion below assumes the defaults are used. LQs also allow areas to be easily compared to each other.

LQs are calculated by first, dividing local industry employment by the all industry total of local employment. Second, reference area industry employment is divided by the all industry total for the reference area. Finally, the local ratio is divided by the reference area ratio.

If an LQ is equal to 1, then the industry has the same share of its area employment as it does in the reference area. An LQ greater than 1 indicates an industry with a greater share of the local area employment than is the case in the reference area. For example (assuming the Arizona as the reference area), Flagstaff will have an LQ greater than 1 in the commercial logging industry the LQ for Coconino county is 4.02 more than four times the state proportion.

An LQ of 1.0 suggests that the local employment is exactly sufficient to meet the local demand for a good or service. Therefore, all of this employment is also considered non-basic because none of these goods or services are exported. In Coconino County, Retail Stores - General merchandise has a LQ of .99.

An LQ that is greater than 1.0 provides evidence of basic employment for a given industry. When a  $LQ > 1.0$  it can be concluded that local employment is greater than expected and it is therefore assumed that this "extra" employment is basic. These extra jobs then must export their goods and services to non-local areas which, by definition, makes them Basic sector employment.

A LQ of less than 1.0 suggests that local employment is less than was expected for a given industry. Therefore the industry is not even meeting the demand for a given good or service. Therefore all of this employment is considered non-basic. Not all local (county, regional) economies have all the industry sectors active in their region and will yield LQs of 0, as is the case of agricultural crop production in Coconino County. However, when looking at the natural resource industries such as commercial logging,

An LQ of 1 means that the area under consideration (Coconino County in this case) has the same percentage of employment in that industry as does the area it is being compared to (in this case, Arizona). Coconino County industries with LQs close to 1.0 include:

- Fluid power process machinery manufacturing
- Dog and cat food manufacturing
- Surgical appliance and supplies manufacturing
- Sanitary paper product manufacturing
- Turbine and turbine generator set units manufacturing
- Heating equipment (except warm air furnaces) manufacturing
- Laminated plastics plate, sheet (except packaging), and shape manufacturing
- Cookie, cracker, and pasta manufacturing
- Mining gold, silver, and other metal ore
- Musical instrument manufacturing
- Transport by pipeline
- All other miscellaneous wood product manufacturing
- Confectionery manufacturing from purchased chocolate
- Hotels and motels, including casino hotels
- Surgical and medical instrument, laboratory and medical instrument manufacturing
- Boat building
- Upholstered household furniture manufacturing
- Other Federal Government enterprises
- Industrial gas manufacturing
- Commercial logging
- Pottery, ceramics, and plumbing fixture manufacturing
- Museums, historical sites, zoos, and parks
- Amusement parks, arcades, and gambling industries
- Urethane and other foam product (except polystyrene) manufacturing
- Book publishers
- Sporting and athletic goods manufacturing
- Transport by rail
- Environmental and other technical consulting services
- General and consumer goods rental except video tapes and discs
- Other amusement and recreation industries
- Other plastics product manufacturing
- Employment and payroll only (state & local govt, education)
- Warehousing and storage
- Other state and local government enterprises
- Employment and payroll only (federal govt, non-military)
- Other accommodations
- Miscellaneous nonmetallic mineral product manufacturing
- Transport by water
- Personal and household goods repair and maintenance
- Grant making, giving, and social advocacy organizations

- Retail Stores - Gasoline stations
- Scenic and sightseeing transportation and support activities for transportation
- Bowling centers
- Automotive equipment rental and leasing
- Scientific research and development services
- Other rubber product manufacturing
- Private hospitals
- Independent artists, writers, and performers
- Food services and drinking places
- Video tape and disc rental
- Performing arts companies
- Animal production, except cattle and poultry and eggs
- Retail Stores - Sporting goods, hobby, book and music
- Showcase, partition, shelving, and locker manufacturing
- Other personal services
- Cutting tool and machine tool accessory manufacturing
- Poultry and egg production
- Religious organizations
- Doll, toy, and game manufacturing
- Private household operations
- Individual and family services
- Water, sewage and other treatment and delivery systems
- Retail Stores - Clothing and clothing accessories
- Lighting fixture manufacturing
- Newspaper publishers
- Automotive repair and maintenance, except car washes
- Retail Stores - Food and beverage
- Veterinary services
- Fitness and recreational sports centers
- Community food, housing, and other relief services, including rehabilitation services
- Soft drink and ice manufacturing
- Cattle ranching and farming
- Offices of physicians, dentists, and other health practitioners
- State and local government electric utilities
- Broadcast and wireless communications equipment manufacturing
- Mining and quarrying stone
- Retail Stores - Building material and garden supply
- Retail Stores - Miscellaneous
- Mining and quarrying sand, gravel, clay, and ceramic and refractory minerals
- Medical and diagnostic labs and outpatient and other ambulatory care services
- Retail Non-stores - Direct and electronic sales
- Motion picture and video industries

The largest location quotients occur for (1) Fluid power process machinery manufacturing, (2) Dog and cat food manufacturing, (3) Surgical appliance and supplies manufacturing, (4) Sanitary paper product manufacturing, and (5) Turbine and turbine generator set units manufacturing. All these industries are located near or in Flagstaff i.e. Wisconsin Tissue, in Belmont. State and local government education employment in Coconino County is 2.48 which means that the proportion of employment in the state and local government sector is twice as high as the state. Similarly, federal government employment (USGS, USFS, BOR etc.) has a location quotient of 2.38, twice the state average.

The LQ is often used to determine basic and non-basic industries in economic base studies. Basic industries are those in which the LQ is greater than 1.0.

While the LQ can be a very useful tool some words of caution are in order. First, LQs can vary considerably from year to year. Second, LQs can be very different depending on the data source used. Third, LQs can vary depending on the level of aggregation of industries. The tables below are at the lowest levels of aggregation. Finally, LQs will vary considerably if wage or income data rather than employment are used to calculate the LQs.

An alternative to simply using location quotients is a technique termed shift-share analysis which attempts to calculate how sectors of the economy have shifted over time, as new opportunities have emerged and as old sectors have declined. The difficulty with this analysis is finding accurate data at lower levels. The BEA County Business Patterns data is normally used for this analysis and this data set is updated bi annually. If shift-share is done over a larger region i.e. the northern half of Arizona it may show changes in base employment that are not noticeable at the local level. However, in a community like Flagstaff, employment shifts at the local level are noticed far quicker by the local Workforce Investment Board than by bi annual shift share analysis. A good example of a shift share is an article by James P. Quintero, "Regional Economic Development: An Economic Base Study and Shift Share Analysis of Hays County, Texas", 2007. Dr. Lay Gibson, emeritus professor at the University of Arizona has performed economic base studies for a majority of Arizona counties and these studies can be found on the internet.

As the Flagstaff economy accounts for between 50 and 60 percent of Coconino County output, the county location quotient is probably reasonable. A comparison of the County of Flagstaff LQ to the surrounding counties in Northern Arizona may be useful. Another alternative may be to compare Coconino to other rural counties with urban areas removed as this may show significant differences in location dominant industries. However, all economic activity in Arizona is mitigated by Maricopa County and LQ's for industrial sectors are adversely affected.

Source of data for the following tables are employment matrices from the Implan software, derived from the County Business patterns of the Bureau of Economic Analysis (BEA).

**Location Quotient for Coconino County, reference area is Arizona, extended NAICS codes:**

Sector Description	AZ	Coconino	% AZ	% Coco	LQ
Total	3,376,989	72,132	100	100	1.00
Oilseed farming	0	0	0.0%	0.0%	0.00
Grain farming	1,415	3	0.0%	0.0%	0.11
Vegetable and melon farming	3,064	2	0.1%	0.0%	0.03
Fruit farming	342	6	0.0%	0.0%	0.76
Tree nut farming	157	0	0.0%	0.0%	0.00
Greenhouse, nursery, and floriculture production	2,643	34	0.1%	0.0%	0.59
Tobacco farming	0	0	0.0%	0.0%	0.00
Cotton farming	793	0	0.0%	0.0%	0.00
Sugarcane and sugar beet farming	0	0	0.0%	0.0%	0.00
All other crop farming	3,507	34	0.1%	0.0%	0.45
Cattle ranching and farming	4,114	98	0.1%	0.1%	1.12
Dairy cattle and milk production	4,299	9	0.1%	0.0%	0.09
Poultry and egg production	57	2	0.0%	0.0%	1.42
Animal production, except cattle and poultry and eggs	1,048	34	0.0%	0.0%	1.50
Forestry, forest products, and timber tract production	135	0	0.0%	0.0%	0.00
Commercial logging	694	60	0.0%	0.1%	4.03
Commercial Fishing	40	0	0.0%	0.0%	0.00
Commercial hunting and trapping	81	1	0.0%	0.0%	0.81
Support activities for agriculture and forestry	16,164	35	0.5%	0.0%	0.10
Extraction of oil and natural gas	2,512	12	0.1%	0.0%	0.22
Mining coal	197	0	0.0%	0.0%	0.00
Mining iron ore	7	0	0.0%	0.0%	0.00
Mining copper, nickel, lead, and zinc	8,686	0	0.3%	0.0%	0.00
Mining gold, silver, and other metal ore	20	7	0.0%	0.0%	17.03
Mining and quarrying stone	1,013	24	0.0%	0.0%	1.09
Mining and quarrying sand, gravel, clay, and ceramic and refractory minerals	699	16	0.0%	0.0%	1.06
Mining and quarrying other nonmetallic minerals	536	2	0.0%	0.0%	0.14
Drilling oil and gas wells	177	0	0.0%	0.0%	0.00
Support activities for oil and gas operations	336	0	0.0%	0.0%	0.00
Support activities for other mining	161	0	0.0%	0.0%	0.00
Electric power generation, transmission, and distribution	9,080	27	0.3%	0.0%	0.14
Natural gas distribution	1,096	0	0.0%	0.0%	0.00
Water, sewage and other treatment and delivery systems	2,350	66	0.1%	0.1%	1.32

Construction of new nonresidential commercial and health care structures	78,568	1,401	2.3%	1.9%	0.83
Construction of new nonresidential manufacturing structures	10,069	179	0.3%	0.2%	0.83
Construction of other new nonresidential structures	48,941	876	1.4%	1.2%	0.84
Construction of new residential permanent site single- and multi-family structures	54,803	981	1.6%	1.4%	0.84
Construction of other new residential structures	16,901	303	0.5%	0.4%	0.84
Maintenance and repair construction of nonresidential structures	28,100	517	0.8%	0.7%	0.86
Maintenance and repair construction of residential structures	10,362	185	0.3%	0.3%	0.84
Dog and cat food manufacturing	211	185	0.0%	0.3%	41.09
Other animal food manufacturing	136	0	0.0%	0.0%	0.00
Flour milling and malt manufacturing	67	0	0.0%	0.0%	0.00
Wet corn milling	0	0	0.0%	0.0%	0.00
Soybean and other oilseed processing	28	0	0.0%	0.0%	0.00
Fats and oils refining and blending	51	0	0.0%	0.0%	0.00
Breakfast cereal manufacturing	0	0	0.0%	0.0%	0.00
Sugar cane mills and refining	0	0	0.0%	0.0%	0.00
Beet sugar manufacturing	0	0	0.0%	0.0%	0.00
Chocolate and confectionery manufacturing from cacao beans	0	0	0.0%	0.0%	0.00
Confectionery manufacturing from purchased chocolate	77	11	0.0%	0.0%	6.69
Nonchocolate confectionery manufacturing	50	0	0.0%	0.0%	0.00
Frozen food manufacturing	81	0	0.0%	0.0%	0.00
Fruit and vegetable canning, pickling, and drying	387	0	0.0%	0.0%	0.00
Fluid milk and butter manufacturing	1,016	0	0.0%	0.0%	0.00
Cheese manufacturing	0	0	0.0%	0.0%	0.00
Dry, condensed, and evaporated dairy product manufacturing	380	0	0.0%	0.0%	0.00
Ice cream and frozen dessert manufacturing	857	0	0.0%	0.0%	0.00
Animal (except poultry) slaughtering, rendering, and processing	814	3	0.0%	0.0%	0.15
Poultry processing	819	0	0.0%	0.0%	0.00
Seafood product preparation and packaging	0	0	0.0%	0.0%	0.00
Bread and bakery product manufacturing	2,768	16	0.1%	0.0%	0.27
Cookie, cracker, and pasta manufacturing	359	133	0.0%	0.2%	17.30
Tortilla manufacturing	477	6	0.0%	0.0%	0.63
Snack food manufacturing	380	0	0.0%	0.0%	0.00
Coffee and tea manufacturing	210	0	0.0%	0.0%	0.00
Flavoring syrup and concentrate manufacturing	113	0	0.0%	0.0%	0.00
Seasoning and dressing manufacturing	138	0	0.0%	0.0%	0.00
All other food manufacturing	938	0	0.0%	0.0%	0.00
Soft drink and ice manufacturing	3,383	84	0.1%	0.1%	1.16
Breweries	14	0	0.0%	0.0%	0.00
Wineries	72	0	0.0%	0.0%	0.00
Distilleries	0	0	0.0%	0.0%	0.00



Tobacco product manufacturing	19	0	0.0%	0.0%	0.00
Fiber, yarn, and thread mills	138	0	0.0%	0.0%	0.00
Broad woven fabric mills	17	0	0.0%	0.0%	0.00
Narrow fabric mills and schiffli machine embroidery	7	0	0.0%	0.0%	0.00
Nonwoven fabric mills	16	0	0.0%	0.0%	0.00
Knit fabric mills	21	0	0.0%	0.0%	0.00
Textile and fabric finishing mills	114	0	0.0%	0.0%	0.00
Fabric coating mills	123	0	0.0%	0.0%	0.00
Carpet and rug mills	68	0	0.0%	0.0%	0.00
Curtain and linen mills	296	4	0.0%	0.0%	0.58
Textile bag and canvas mills	267	0	0.0%	0.0%	0.00
All other textile product mills	748	0	0.0%	0.0%	0.00
Apparel knitting mills	39	0	0.0%	0.0%	0.00
Cut and sew apparel contractors	256	1	0.0%	0.0%	0.18
Mens and boys cut and sew apparel manufacturing	95	0	0.0%	0.0%	0.00
Womens and girls cut and sew apparel manufacturing	34	0	0.0%	0.0%	0.00
Other cut and sew apparel manufacturing	49	0	0.0%	0.0%	0.00
Apparel accessories and other apparel manufacturing	32	0	0.0%	0.0%	0.00
Leather and hide tanning and finishing	24	0	0.0%	0.0%	0.00
Footwear manufacturing	123	0	0.0%	0.0%	0.00
Other leather and allied product manufacturing	280	0	0.0%	0.0%	0.00
Sawmills and wood preservation	388	0	0.0%	0.0%	0.00
Veneer and plywood manufacturing	48	0	0.0%	0.0%	0.00
Engineered wood member and truss manufacturing	1,250	20	0.0%	0.0%	0.76
Reconstituted wood product manufacturing	19	0	0.0%	0.0%	0.00
Wood windows and doors and millwork manufacturing	2,363	27	0.1%	0.0%	0.54
Wood container and pallet manufacturing	572	0	0.0%	0.0%	0.00
Manufactured home (mobile home) manufacturing	2,146	0	0.1%	0.0%	0.00
Prefabricated wood building manufacturing	548	1	0.0%	0.0%	0.09
All other miscellaneous wood product manufacturing	231	34	0.0%	0.0%	6.93
Pulp mills	36	0	0.0%	0.0%	0.00
Paper mills	409	0	0.0%	0.0%	0.00
Paperboard Mills	40	0	0.0%	0.0%	0.00
Paperboard container manufacturing	793	0	0.0%	0.0%	0.00
Coated and laminated paper, packaging paper and plastics film manufacturing	247	0	0.0%	0.0%	0.00
All other paper bag and coated and treated paper manufacturing	151	0	0.0%	0.0%	0.00
Stationery product manufacturing	132	0	0.0%	0.0%	0.00
Sanitary paper product manufacturing	585	322	0.0%	0.4%	25.75
All other converted paper product manufacturing	12	0	0.0%	0.0%	0.00
Printing	6,539	45	0.2%	0.1%	0.32
Support activities for printing	1,205	0	0.0%	0.0%	0.00

Petroleum refineries	44	0	0.0%	0.0%	0.00
Asphalt paving mixture and block manufacturing	40	0	0.0%	0.0%	0.00
Asphalt shingle and coating materials manufacturing	138	0	0.0%	0.0%	0.00
Petroleum lubricating oil and grease manufacturing	4	0	0.0%	0.0%	0.00
All other petroleum and coal products manufacturing	5	0	0.0%	0.0%	0.00
Petrochemical manufacturing	20	0	0.0%	0.0%	0.00
Industrial gas manufacturing	171	15	0.0%	0.0%	4.04
Synthetic dye and pigment manufacturing	91	0	0.0%	0.0%	0.00
Alkalies and chlorine manufacturing	0	0	0.0%	0.0%	0.00
Carbon black manufacturing	0	0	0.0%	0.0%	0.00
All other basic inorganic chemical manufacturing	157	0	0.0%	0.0%	0.00
Other basic organic chemical manufacturing	33	0	0.0%	0.0%	0.00
Plastics material and resin manufacturing	522	0	0.0%	0.0%	0.00
Synthetic rubber manufacturing	76	0	0.0%	0.0%	0.00
Artificial and synthetic fibers and filaments manufacturing	269	0	0.0%	0.0%	0.00
Fertilizer manufacturing	449	0	0.0%	0.0%	0.00
Pesticide and other agricultural chemical manufacturing	133	0	0.0%	0.0%	0.00
Medicinal and botanical manufacturing	84	0	0.0%	0.0%	0.00
Pharmaceutical preparation manufacturing	1,009	0	0.0%	0.0%	0.00
In-vitro diagnostic substance manufacturing	8	0	0.0%	0.0%	0.00
Biological product (except diagnostic) manufacturing	33	0	0.0%	0.0%	0.00
Paint and coating manufacturing	195	0	0.0%	0.0%	0.00
Adhesive manufacturing	70	0	0.0%	0.0%	0.00
Soap and cleaning compound manufacturing	282	0	0.0%	0.0%	0.00
Toilet preparation manufacturing	606	0	0.0%	0.0%	0.00
Printing ink manufacturing	36	0	0.0%	0.0%	0.00
All other chemical product and preparation manufacturing	706	7	0.0%	0.0%	0.49
Plastics packaging materials and unlaminated film and sheet manufacturing	165	0	0.0%	0.0%	0.00
Unlaminated plastics profile shape manufacturing	170	0	0.0%	0.0%	0.00
Plastics pipe and pipe fitting manufacturing	389	0	0.0%	0.0%	0.00
Laminated plastics plate, sheet (except packaging), and shape manufacturing	33	15	0.0%	0.0%	20.75
Polystyrene foam product manufacturing	550	0	0.0%	0.0%	0.00
Urethane and other foam product (except polystyrene) manufacturing	151	12	0.0%	0.0%	3.71
Plastics bottle manufacturing	459	0	0.0%	0.0%	0.00
Other plastics product manufacturing	2,188	117	0.1%	0.2%	2.51
Tire manufacturing	233	0	0.0%	0.0%	0.00
Rubber and plastics hoses and belting manufacturing	184	0	0.0%	0.0%	0.00
Other rubber product manufacturing	254	10	0.0%	0.0%	1.83
Pottery, ceramics, and plumbing fixture	132	11	0.0%	0.0%	3.88

manufacturing					
Brick, tile, and other structural clay product manufacturing	550	0	0.0%	0.0%	0.00
Clay and non-clay refractory manufacturing	79	0	0.0%	0.0%	0.00
Flat glass manufacturing	5	0	0.0%	0.0%	0.00
Other pressed and blown glass and glassware manufacturing	143	0	0.0%	0.0%	0.00
Glass container manufacturing	168	0	0.0%	0.0%	0.00
Glass product manufacturing made of purchased glass	529	0	0.0%	0.0%	0.00
Cement manufacturing	423	0	0.0%	0.0%	0.00
Ready-mix concrete manufacturing	4,341	77	0.1%	0.1%	0.83
Concrete pipe, brick, and block manufacturing	944	0	0.0%	0.0%	0.00
Other concrete product manufacturing	1,183	0	0.0%	0.0%	0.00
Lime and gypsum product manufacturing	50	0	0.0%	0.0%	0.00
Abrasive product manufacturing	89	0	0.0%	0.0%	0.00
Cut stone and stone product manufacturing	438	5	0.0%	0.0%	0.54
Ground or treated mineral and earth manufacturing	68	0	0.0%	0.0%	0.00
Mineral wool manufacturing	106	0	0.0%	0.0%	0.00
Miscellaneous nonmetallic mineral product manufacturing	160	7	0.0%	0.0%	2.15
Iron and steel mills and ferroalloy manufacturing	129	0	0.0%	0.0%	0.00
Steel product manufacturing from purchased steel	521	0	0.0%	0.0%	0.00
Alumina refining and primary aluminum production	161	0	0.0%	0.0%	0.00
Secondary smelting and alloying of aluminum	0	0	0.0%	0.0%	0.00
Aluminum product manufacturing from purchased aluminum	1,014	0	0.0%	0.0%	0.00
Primary smelting and refining of copper	611	0	0.0%	0.0%	0.00
Primary smelting and refining of nonferrous metal (except copper and aluminum)	95	0	0.0%	0.0%	0.00
Copper rolling, drawing, extruding and alloying	388	0	0.0%	0.0%	0.00
Nonferrous metal (except copper and aluminum) rolling, drawing, extruding and alloying	565	0	0.0%	0.0%	0.00
Ferrous metal foundries	1,426	0	0.0%	0.0%	0.00
Nonferrous metal foundries	765	0	0.0%	0.0%	0.00
All other forging, stamping, and sintering	59	0	0.0%	0.0%	0.00
Custom roll forming	0	0	0.0%	0.0%	0.00
Crown and closure manufacturing and metal stamping	790	0	0.0%	0.0%	0.00
Cutlery, utensil, pot, and pan manufacturing	69	0	0.0%	0.0%	0.00
Hand-tool manufacturing	261	0	0.0%	0.0%	0.00
Plate work and fabricated structural product manufacturing	2,458	48	0.1%	0.1%	0.91
Ornamental and architectural metal products manufacturing	5,181	9	0.2%	0.0%	0.08
Power boiler and heat exchanger manufacturing	21	0	0.0%	0.0%	0.00

Metal tank (heavy gauge) manufacturing	146	0	0.0%	0.0%	0.00
Metal can, box, and other metal container (light gauge) manufacturing	618	0	0.0%	0.0%	0.00
Ammunition manufacturing	18	0	0.0%	0.0%	0.00
Arms, ordnance, and accessories manufacturing	428	0	0.0%	0.0%	0.00
Hardware manufacturing	41	0	0.0%	0.0%	0.00
Spring and wire product manufacturing	521	0	0.0%	0.0%	0.00
Machine shops	3,679	66	0.1%	0.1%	0.85
Turned product and screw, nut, and bolt manufacturing	357	0	0.0%	0.0%	0.00
Coating, engraving, heat treating and allied activities	1,802	6	0.1%	0.0%	0.17
Valve and fittings other than plumbing manufacturing	2,533	0	0.1%	0.0%	0.00
Plumbing fixture fitting and trim manufacturing	4	0	0.0%	0.0%	0.00
Ball and roller bearing manufacturing	0	0	0.0%	0.0%	0.00
Fabricated pipe and pipe fitting manufacturing	126	0	0.0%	0.0%	0.00
Other fabricated metal manufacturing	487	0	0.0%	0.0%	0.00
Farm machinery and equipment manufacturing	289	0	0.0%	0.0%	0.00
Lawn and garden equipment manufacturing	370	0	0.0%	0.0%	0.00
Construction machinery manufacturing	257	0	0.0%	0.0%	0.00
Mining and oil and gas field machinery manufacturing	68	0	0.0%	0.0%	0.00
Other industrial machinery manufacturing	373	0	0.0%	0.0%	0.00
Plastics and rubber industry machinery manufacturing	212	0	0.0%	0.0%	0.00
Semiconductor machinery manufacturing	585	0	0.0%	0.0%	0.00
Vending, commercial, industrial, and office machinery manufacturing	105	0	0.0%	0.0%	0.00
Optical instrument and lens manufacturing	955	6	0.0%	0.0%	0.28
Photographic and photocopying equipment manufacturing	75	0	0.0%	0.0%	0.00
Other commercial and service industry machinery manufacturing	353	0	0.0%	0.0%	0.00
Air purification and ventilation equipment manufacturing	99	0	0.0%	0.0%	0.00
Heating equipment (except warm air furnaces) manufacturing	60	27	0.0%	0.0%	21.11
Air conditioning, refrigeration, and warm air heating equipment manufacturing	1,130	0	0.0%	0.0%	0.00
Industrial mold manufacturing	410	5	0.0%	0.0%	0.55
Metal cutting and forming machine tool manufacturing	646	8	0.0%	0.0%	0.59
Special tool, die, jig, and fixture manufacturing	447	5	0.0%	0.0%	0.52
Cutting tool and machine tool accessory manufacturing	118	4	0.0%	0.0%	1.43
Rolling mill and other metalworking machinery manufacturing	158	0	0.0%	0.0%	0.00
Turbine and turbine generator set units manufacturing	117	58	0.0%	0.1%	23.23
Speed changer, industrial high-speed drive, and gear manufacturing	10	0	0.0%	0.0%	0.00

Mechanical power transmission equipment manufacturing	0	0	0.0%	0.0%	0.00
Other engine equipment manufacturing	37	0	0.0%	0.0%	0.00
Pump and pumping equipment manufacturing	38	0	0.0%	0.0%	0.00
Air and gas compressor manufacturing	0	0	0.0%	0.0%	0.00
Material handling equipment manufacturing	136	0	0.0%	0.0%	0.00
Power-driven hand-tool manufacturing	32	0	0.0%	0.0%	0.00
Other general purpose machinery manufacturing	95	0	0.0%	0.0%	0.00
Packaging machinery manufacturing	15	0	0.0%	0.0%	0.00
Industrial process furnace and oven manufacturing	17	0	0.0%	0.0%	0.00
Fluid power process machinery manufacturing	33	30	0.0%	0.0%	42.86
Electronic computer manufacturing	346	0	0.0%	0.0%	0.00
Computer storage device manufacturing	55	0	0.0%	0.0%	0.00
Computer terminals and other computer peripheral equipment manufacturing	336	3	0.0%	0.0%	0.39
Telephone apparatus manufacturing	95	0	0.0%	0.0%	0.00
Broadcast and wireless communications equipment manufacturing	898	21	0.0%	0.0%	1.10
Other communications equipment manufacturing	190	0	0.0%	0.0%	0.00
Audio and video equipment manufacturing	326	0	0.0%	0.0%	0.00
Electron tube manufacturing	0	0	0.0%	0.0%	0.00
Bare printed circuit board manufacturing	2,821	0	0.1%	0.0%	0.00
Semiconductor and related device manufacturing	20,799	0	0.6%	0.0%	0.00
Electronic capacitor, resistor, coil, transformer, and other inductor manufacturing	293	0	0.0%	0.0%	0.00
Electronic connector manufacturing	640	0	0.0%	0.0%	0.00
Printed circuit assembly (electronic assembly) manufacturing	726	0	0.0%	0.0%	0.00
Other electronic component manufacturing	602	0	0.0%	0.0%	0.00
Electro-medical and electrotherapeutic apparatus manufacturing	797	0	0.0%	0.0%	0.00
Search, detection, and navigation instruments manufacturing	8,491	0	0.3%	0.0%	0.00
Automatic environmental control manufacturing	1,321	0	0.0%	0.0%	0.00
Industrial process variable instruments manufacturing	525	0	0.0%	0.0%	0.00
Totalizing fluid meters and counting devices manufacturing	358	0	0.0%	0.0%	0.00
Electricity and signal testing instruments manufacturing	964	0	0.0%	0.0%	0.00
Analytical laboratory instrument manufacturing	157	0	0.0%	0.0%	0.00
Irradiation apparatus manufacturing	176	0	0.0%	0.0%	0.00
Watch, clock, and other measuring and controlling device manufacturing	334	0	0.0%	0.0%	0.00
Software, audio, and video media for reproduction	494	0	0.0%	0.0%	0.00
Magnetic and optical recording media manufacturing	26	0	0.0%	0.0%	0.00

Electric lamp bulb and part manufacturing	19	0	0.0%	0.0%	0.00
Lighting fixture manufacturing	304	8	0.0%	0.0%	1.29
Small electrical appliance manufacturing	41	0	0.0%	0.0%	0.00
Household cooking appliance manufacturing	6	0	0.0%	0.0%	0.00
Household refrigerator and home freezer manufacturing	165	0	0.0%	0.0%	0.00
Household laundry equipment manufacturing	232	0	0.0%	0.0%	0.00
Other major household appliance manufacturing	0	0	0.0%	0.0%	0.00
Power, distribution, and specialty transformer manufacturing	345	0	0.0%	0.0%	0.00
Motor and generator manufacturing	219	0	0.0%	0.0%	0.00
Switchgear and switchboard apparatus manufacturing	13	0	0.0%	0.0%	0.00
Relay and industrial control manufacturing	159	0	0.0%	0.0%	0.00
Storage battery manufacturing	180	0	0.0%	0.0%	0.00
Primary battery manufacturing	101	0	0.0%	0.0%	0.00
Communication and energy wire and cable manufacturing	96	0	0.0%	0.0%	0.00
Wiring device manufacturing	360	0	0.0%	0.0%	0.00
Carbon and graphite product manufacturing	25	0	0.0%	0.0%	0.00
All other miscellaneous electrical equipment and component manufacturing	393	0	0.0%	0.0%	0.00
Automobile manufacturing	27	0	0.0%	0.0%	0.00
Light truck and utility vehicle manufacturing	7	0	0.0%	0.0%	0.00
Heavy duty truck manufacturing	176	0	0.0%	0.0%	0.00
Motor vehicle body manufacturing	266	0	0.0%	0.0%	0.00
Truck trailer manufacturing	214	0	0.0%	0.0%	0.00
Motor home manufacturing	96	0	0.0%	0.0%	0.00
Travel trailer and camper manufacturing	350	0	0.0%	0.0%	0.00
Motor vehicle parts manufacturing	3,485	20	0.1%	0.0%	0.27
Aircraft manufacturing	3,270	0	0.1%	0.0%	0.00
Aircraft engine and engine parts manufacturing	4,954	0	0.1%	0.0%	0.00
Other aircraft parts and auxiliary equipment manufacturing	3,167	52	0.1%	0.1%	0.77
Guided missile and space vehicle manufacturing	7,201	0	0.2%	0.0%	0.00
Propulsion units and parts for space vehicles and guided missiles manufacturing	3,747	0	0.1%	0.0%	0.00
Railroad rolling stock manufacturing	6	0	0.0%	0.0%	0.00
Ship building and repairing	0	0	0.0%	0.0%	#DIV/0!
Boat building	230	22	0.0%	0.0%	4.48
Motorcycle, bicycle, and parts manufacturing	179	3	0.0%	0.0%	0.69
Military armored vehicle, tank, and tank component manufacturing	105	0	0.0%	0.0%	0.00
All other transportation equipment manufacturing	130	0	0.0%	0.0%	0.00
Wood kitchen cabinet and countertop manufacturing	3,264	28	0.1%	0.0%	0.40
Upholstered household furniture manufacturing	151	14	0.0%	0.0%	4.47
Non-upholstered wood household furniture	1,844	0	0.1%	0.0%	0.00

manufacturing					
Metal and other household furniture manufacturing	462	0	0.0%	0.0%	0.00
Institutional furniture manufacturing	85	0	0.0%	0.0%	0.00
Office Furniture	36	0	0.0%	0.0%	0.00
Custom architectural woodwork and millwork manufacturing	1,074	0	0.0%	0.0%	0.00
Showcase, partition, shelving, and locker manufacturing	474	15	0.0%	0.0%	1.45
Mattress manufacturing	662	0	0.0%	0.0%	0.00
Blind and shade manufacturing	486	0	0.0%	0.0%	0.00
Surgical and medical instrument, laboratory and medical instrument manufacturing	518	50	0.0%	0.1%	4.49
Surgical appliance and supplies manufacturing	3,007	2,102	0.1%	2.9%	32.72
Dental equipment and supplies manufacturing	19	0	0.0%	0.0%	0.00
Ophthalmic goods manufacturing	76	0	0.0%	0.0%	0.00
Dental laboratories manufacturing	1,243	8	0.0%	0.0%	0.31
Jewelry and silverware manufacturing	247	4	0.0%	0.0%	0.74
Sporting and athletic goods manufacturing	2,152	150	0.1%	0.2%	3.26
Doll, toy, and game manufacturing	318	10	0.0%	0.0%	1.41
Office supplies (except paper) manufacturing	56	0	0.0%	0.0%	0.00
Sign manufacturing	1,796	0	0.1%	0.0%	0.00
Gasket, packing, and sealing device manufacturing	55	0	0.0%	0.0%	0.00
Musical instrument manufacturing	92	16	0.0%	0.0%	8.10
All other miscellaneous manufacturing	1,757	8	0.1%	0.0%	0.21
Broom, brush, and mop manufacturing	0	0	0.0%	0.0%	0.00
Wholesale trade businesses	114,783	1,063	3.4%	1.5%	0.43
Retail Stores - Motor vehicle and parts	49,407	890	1.5%	1.2%	0.84
Retail Stores - Furniture and home furnishings	15,083	225	0.4%	0.3%	0.70
Retail Stores - Electronics and appliances	14,114	143	0.4%	0.2%	0.48
Retail Stores - Building material and garden supply	26,770	618	0.8%	0.9%	1.08
Retail Stores - Food and beverage	61,339	1,602	1.8%	2.2%	1.22
Retail Stores - Health and personal care	21,986	243	0.7%	0.3%	0.52
Retail Stores - Gasoline stations	17,636	752	0.5%	1.0%	2.00
Retail Stores - Clothing and clothing accessories	27,186	757	0.8%	1.0%	1.30
Retail Stores - Sporting goods, hobby, book and music	16,093	507	0.5%	0.7%	1.48
Retail Stores - General merchandise	68,107	1,436	2.0%	2.0%	0.99
Retail Stores - Miscellaneous	34,021	783	1.0%	1.1%	1.08
Retail Non-stores - Direct and electronic sales	44,664	980	1.3%	1.4%	1.03
Transport by air	15,370	29	0.5%	0.0%	0.09
Transport by rail	2,649	183	0.1%	0.3%	3.23
Transport by water	24	1	0.0%	0.0%	2.08
Transport by truck	28,707	460	0.9%	0.6%	0.75
Transit and ground passenger transportation	10,649	86	0.3%	0.1%	0.38
Transport by pipeline	253	44	0.0%	0.1%	8.09
Scenic and sightseeing transportation and support activities for transportation	10,857	456	0.3%	0.6%	1.96

Couriers and messengers	15,603	267	0.5%	0.4%	0.80
Warehousing and storage	8,846	461	0.3%	0.6%	2.44
Newspaper publishers	7,129	189	0.2%	0.3%	1.24
Periodical publishers	2,014	5	0.1%	0.0%	0.10
Book publishers	329	24	0.0%	0.0%	3.41
Directory, mailing list, and other publishers	426	2	0.0%	0.0%	0.25
Software publishers	3,545	0	0.1%	0.0%	0.00
Motion picture and video industries	5,733	125	0.2%	0.2%	1.02
Sound recording industries	182	0	0.0%	0.0%	0.00
Radio and television broadcasting	4,432	62	0.1%	0.1%	0.66
Cable and other subscription programming	1,226	0	0.0%	0.0%	0.00
Internet publishing and broadcasting	1,510	1	0.0%	0.0%	0.03
Telecommunications	18,286	167	0.5%	0.2%	0.43
Data processing, hosting, ISP, web search portals and related services	6,140	10	0.2%	0.0%	0.08
Other information services	1,581	0	0.0%	0.0%	0.00
Monetary authorities and depository credit intermediation activities	31,851	450	0.9%	0.6%	0.66
Non-depository credit intermediation and related activities	52,742	276	1.6%	0.4%	0.25
Securities, commodity contracts, investments, and related activities	38,268	436	1.1%	0.6%	0.53
Insurance carriers	22,533	118	0.7%	0.2%	0.25
Insurance agencies, brokerages, and related activities	25,505	355	0.8%	0.5%	0.65
Funds, trusts, and other financial vehicles	6,214	1	0.2%	0.0%	0.01
Real estate establishments	207,418	1,520	6.1%	2.1%	0.34
Imputed rental activity for owner-occupied dwellings	0	0	0.0%	0.0%	0.00
Automotive equipment rental and leasing	6,476	267	0.2%	0.4%	1.93
General and consumer goods rental except video tapes and discs	5,568	358	0.2%	0.5%	3.01
Video tape and disc rental	2,978	110	0.1%	0.2%	1.73
Commercial and industrial machinery and equipment rental and leasing	4,478	70	0.1%	0.1%	0.73
Lessors of nonfinancial intangible assets	2,276	18	0.1%	0.0%	0.37
Legal services	27,289	421	0.8%	0.6%	0.72
Accounting, tax preparation, bookkeeping, and payroll services	29,147	481	0.9%	0.7%	0.77
Architectural, engineering, and related services	46,631	558	1.4%	0.8%	0.56
Specialized design services	3,758	21	0.1%	0.0%	0.26
Custom computer programming services	23,373	86	0.7%	0.1%	0.17
Computer systems design services	16,796	53	0.5%	0.1%	0.15
Other computer related services, including facilities management	2,683	9	0.1%	0.0%	0.16
Management, scientific, and technical consulting services	28,250	248	0.8%	0.3%	0.41
Environmental and other technical consulting services	2,613	170	0.1%	0.2%	3.04
Scientific research and development services	6,529	255	0.2%	0.4%	1.83
Advertising and related services	12,745	233	0.4%	0.3%	0.86
Photographic services	2,040	6	0.1%	0.0%	0.14



Veterinary services	8,618	222	0.3%	0.3%	1.21
All other miscellaneous professional, scientific, and technical services	6,833	32	0.2%	0.0%	0.22
Management of companies and enterprises	28,563	83	0.8%	0.1%	0.14
Employment services	138,355	456	4.1%	0.6%	0.15
Travel arrangement and reservation services	8,697	59	0.3%	0.1%	0.32
Office administrative services	12,577	227	0.4%	0.3%	0.85
Facilities support services	5,053	5	0.1%	0.0%	0.04
Business support services	32,170	150	1.0%	0.2%	0.22
Investigation and security services	17,438	77	0.5%	0.1%	0.21
Services to buildings and dwellings	49,427	547	1.5%	0.8%	0.52
Other support services	3,946	68	0.1%	0.1%	0.80
Waste management and remediation services	4,910	77	0.1%	0.1%	0.74
Private elementary and secondary schools	19,681	411	0.6%	0.6%	0.98
Private junior colleges, colleges, universities, and professional schools	18,759	8	0.6%	0.0%	0.02
Other private educational services	17,442	209	0.5%	0.3%	0.56
Offices of physicians, dentists, and other health practitioners	88,301	2,087	2.6%	2.9%	1.11
Home health care services	19,759	135	0.6%	0.2%	0.32
Medical and diagnostic labs and outpatient and other ambulatory care services	32,860	747	1.0%	1.0%	1.06
Private hospitals	71,677	2,750	2.1%	3.8%	1.80
Nursing and residential care facilities	40,281	744	1.2%	1.0%	0.86
Child day care services	18,577	363	0.6%	0.5%	0.92
Individual and family services	24,959	704	0.7%	1.0%	1.32
Community food, housing, and other relief services, including rehabilitation services	11,629	291	0.3%	0.4%	1.17
Performing arts companies	7,141	235	0.2%	0.3%	1.54
Spectator sports companies	11,913	0	0.4%	0.0%	0.00
Promoters of performing arts and sports and agents for public figures	7,182	141	0.2%	0.2%	0.92
Independent artists, writers, and performers	2,699	102	0.1%	0.1%	1.77
Museums, historical sites, zoos, and parks	1,624	133	0.0%	0.2%	3.83
Fitness and recreational sports centers	10,454	262	0.3%	0.4%	1.17
Bowling centers	1,076	45	0.0%	0.1%	1.94
Amusement parks, arcades, and gambling industries	13,733	1,113	0.4%	1.5%	3.80
Other amusement and recreation industries	12,791	816	0.4%	1.1%	2.99
Hotels and motels, including casino hotels	31,704	3,131	0.9%	4.3%	4.62
Other accommodations	3,235	151	0.1%	0.2%	2.18
Food services and drinking places	204,946	7,606	6.1%	10.5%	1.74
Automotive repair and maintenance, except car washes	27,641	728	0.8%	1.0%	1.23
Car washes	6,972	102	0.2%	0.1%	0.68
Electronic and precision equipment repair and maintenance	4,409	47	0.1%	0.1%	0.50
Commercial and industrial machinery and equipment repair and maintenance	6,963	85	0.2%	0.1%	0.57
Personal and household goods repair and maintenance	5,004	221	0.1%	0.3%	2.07
Personal care services	18,942	330	0.6%	0.5%	0.81

Death care services	2,341	9	0.1%	0.0%	0.18
Dry-cleaning and laundry services	10,875	194	0.3%	0.3%	0.84
Other personal services	6,638	203	0.2%	0.3%	1.43
Religious organizations	8,985	272	0.3%	0.4%	1.42
Grantmaking, giving, and social advocacy organizations	10,630	455	0.3%	0.6%	2.00
Civic, social, professional, and similar organizations	20,180	312	0.6%	0.4%	0.72
Private household operations	38,122	1,119	1.1%	1.6%	1.37
US Postal Service	11,917	221	0.4%	0.3%	0.87
Federal electric utilities	0	0	0.0%	0.0%	0.00
Other Federal Government enterprises	2,101	194	0.1%	0.3%	4.31
State and local government passenger transit	763	6	0.0%	0.0%	0.38
State and local government electric utilities	162	4	0.0%	0.0%	1.10
Other state and local government enterprises	14,860	758	0.4%	1.1%	2.39
State & Local Government non-education	167,842	2,424	5.0%	3.4%	0.68
State & Local Government education	186,753	9,895	5.5%	13.7%	2.48
Federal Government non-military	41,110	2,087	1.2%	2.9%	2.38
Federal Government military	38,668	305	1.1%	0.4%	0.37

## Industry Sectors with the largest Location Quotients (> 1.0)

Description	AZ Employment	Coconino Employment	% AZ	% Coconino	LQ
Fluid power process machinery manufacturing	33	30	0.0%	0.0%	42.86
Dog and cat food manufacturing	211	185	0.0%	0.3%	41.09
Surgical appliance and supplies manufacturing	3,007	2,102	0.1%	2.9%	32.72
Sanitary paper product manufacturing	585	322	0.0%	0.4%	25.75
Turbine and turbine generator set units manufacturing	117	58	0.0%	0.1%	23.23
Heating equipment (except warm air furnaces) manufacturing	60	27	0.0%	0.0%	21.11
Laminated plastics plate, sheet (except packaging), and shape manufacturing	33	15	0.0%	0.0%	20.75
Cookie, cracker, and pasta manufacturing	359	133	0.0%	0.2%	17.30
Mining gold, silver, and other metal ore	20	7	0.0%	0.0%	17.03
Musical instrument manufacturing	92	16	0.0%	0.0%	8.10
Transport by pipeline	253	44	0.0%	0.1%	8.09
All other miscellaneous wood product manufacturing	231	34	0.0%	0.0%	6.93
Confectionery manufacturing from purchased chocolate	77	11	0.0%	0.0%	6.69
Hotels and motels, including casino hotels	31,704	3,131	0.9%	4.3%	4.62
Surgical and medical instrument, laboratory and medical instrument manufacturing	518	50	0.0%	0.1%	4.49
Boat building	230	22	0.0%	0.0%	4.48
Upholstered household furniture manufacturing	151	14	0.0%	0.0%	4.47
Other Federal Government enterprises	2,101	194	0.1%	0.3%	4.31
Industrial gas manufacturing	171	15	0.0%	0.0%	4.04
Commercial logging	694	60	0.0%	0.1%	4.03
Pottery, ceramics, and plumbing fixture manufacturing	132	11	0.0%	0.0%	3.88
Museums, historical sites, zoos, and parks	1,624	133	0.0%	0.2%	3.83
Amusement parks, arcades, and gambling industries	13,733	1,113	0.4%	1.5%	3.80
Urethane and other foam product (except polystyrene) manufacturing	151	12	0.0%	0.0%	3.71
Book publishers	329	24	0.0%	0.0%	3.41
Sporting and athletic goods manufacturing	2,152	150	0.1%	0.2%	3.26
Transport by rail	2,649	183	0.1%	0.3%	3.23
Environmental and other technical consulting services	2,613	170	0.1%	0.2%	3.04
General and consumer goods rental except video tapes and discs	5,568	358	0.2%	0.5%	3.01
Other amusement and recreation industries	12,791	816	0.4%	1.1%	2.99
Other plastics product manufacturing	2,188	117	0.1%	0.2%	2.51
State & Local Government Education	186,753	9,895	5.5%	13.7%	2.48
Warehousing and storage	8,846	461	0.3%	0.6%	2.44
Other state and local government enterprises	14,860	758	0.4%	1.1%	2.39
Federal Government Employment non-military	41,110	2,087	1.2%	2.9%	2.38

Other accommodations	3,235	151	0.1%	0.2%	2.18
Miscellaneous nonmetallic mineral product manufacturing	160	7	0.0%	0.0%	2.15
Transport by water	24	1	0.0%	0.0%	2.08
Personal and household goods repair and maintenance	5,004	221	0.1%	0.3%	2.07
Grantmaking, giving, and social advocacy organizations	10,630	455	0.3%	0.6%	2.00
Retail Stores - Gasoline stations	17,636	752	0.5%	1.0%	2.00
Scenic and sightseeing transportation and support activities for transportation	10,857	456	0.3%	0.6%	1.96
Bowling centers	1,076	45	0.0%	0.1%	1.94
Automotive equipment rental and leasing	6,476	267	0.2%	0.4%	1.93
Scientific research and development services	6,529	255	0.2%	0.4%	1.83
Other rubber product manufacturing	254	10	0.0%	0.0%	1.83
Private hospitals	71,677	2,750	2.1%	3.8%	1.80
Independent artists, writers, and performers	2,699	102	0.1%	0.1%	1.77
Food services and drinking places	204,946	7,606	6.1%	10.5%	1.74
Video tape and disc rental	2,978	110	0.1%	0.2%	1.73
Performing arts companies	7,141	235	0.2%	0.3%	1.54
Animal production, except cattle and poultry and eggs	1,048	34	0.0%	0.0%	1.50
Retail Stores - Sporting goods, hobby, book and music	16,093	507	0.5%	0.7%	1.48
Showcase, partition, shelving, and locker manufacturing	474	15	0.0%	0.0%	1.45
Other personal services	6,638	203	0.2%	0.3%	1.43
Cutting tool and machine tool accessory manufacturing	118	4	0.0%	0.0%	1.43
Poultry and egg production	57	2	0.0%	0.0%	1.42
Religious organizations	8,985	272	0.3%	0.4%	1.42
Doll, toy, and game manufacturing	318	10	0.0%	0.0%	1.41
Private household operations	38,122	1,119	1.1%	1.6%	1.37
Individual and family services	24,959	704	0.7%	1.0%	1.32
Water, sewage and other treatment and delivery systems	2,350	66	0.1%	0.1%	1.32
Retail Stores - Clothing and clothing accessories	27,186	757	0.8%	1.0%	1.30
Lighting fixture manufacturing	304	8	0.0%	0.0%	1.29
Newspaper publishers	7,129	189	0.2%	0.3%	1.24
Automotive repair and maintenance, except car washes	27,641	728	0.8%	1.0%	1.23
Retail Stores - Food and beverage	61,339	1,602	1.8%	2.2%	1.22
Veterinary services	8,618	222	0.3%	0.3%	1.21
Fitness and recreational sports centers	10,454	262	0.3%	0.4%	1.17
Community food, housing, and other relief services, including rehabilitation services	11,629	291	0.3%	0.4%	1.17
Soft drink and ice manufacturing	3,383	84	0.1%	0.1%	1.16
Cattle ranching and farming	4,114	98	0.1%	0.1%	1.12
Offices of physicians, dentists, and other health practitioners	88,301	2,087	2.6%	2.9%	1.11
State and local government electric utilities	162	4	0.0%	0.0%	1.10
Broadcast and wireless communications equipment manufacturing	898	21	0.0%	0.0%	1.10

Mining and quarrying stone	1,013	24	0.0%	0.0%	1.09
Retail Stores - Building material and garden supply	26,770	618	0.8%	0.9%	1.08
Retail Stores - Miscellaneous	34,021	783	1.0%	1.1%	1.08
Mining and quarrying sand, gravel, clay, and ceramic and refractory minerals	699	16	0.0%	0.0%	1.06
Medical and diagnostic labs and outpatient and other ambulatory care services	32,860	747	1.0%	1.0%	1.06
Retail Non-stores - Direct and electronic sales	44,664	980	1.3%	1.4%	1.03
Motion picture and video industries	5,733	125	0.2%	0.2%	1.02

## Location Quotient from BEA data NAICS Primary Industries

Location Quotient	AZ	Coconino	Flagstaff
Base Industry: Goods-Producing	1.0	1.0	1.0
NAICS 111 Crop production	0.95	ND	ND
NAICS 112 Animal production	1.08	0.08	0.20
NAICS 113 Forestry and logging	0.12	1.45	1.30
NAICS 114 Fishing, hunting and trapping	0.02	NC	NC
NAICS 115 Agriculture and forestry support activities	2.21	0.14	0.67
NAICS 211 Oil and gas extraction	NC	NC	NC
NAICS 212 Mining, except oil and gas	3.07	0.02	0.09
NAICS 213 Support activities for mining	0.01	NC	NC
NAICS 221 Utilities	1.37	0.31	0.07
NAICS 236 Construction of buildings	1.14	0.19	1.21
NAICS 237 Heavy and civil engineering construction	1.32	0.51	1.22
NAICS 238 Specialty trade contractors	1.41	0.10	1.20
NAICS 311 Food manufacturing	0.43	0.16	1.28
NAICS 312 Beverage and tobacco product manufacturing	1.16	0.27	1.30
NAICS 313 Textile mills	0.20	NC	NC
NAICS 314 Textile product mills	0.51	0.00	0.00
NAICS 315 Apparel manufacturing	0.07	0.03	1.30
NAICS 316 Leather and allied product manufacturing	0.65	NC	NC
NAICS 321 Wood product manufacturing	0.64	0.12	1.27
NAICS 322 Paper manufacturing	0.35	NC	NC
NAICS 323 Printing and related support activities	0.67	0.26	1.27
NAICS 324 Petroleum and coal products manufacturing	0.10	0.15	0.78
NAICS 325 Chemical manufacturing	0.33	NC	NC
NAICS 326 Plastics and rubber products manufacturing	0.38	0.18	1.30
NAICS 327 Nonmetallic mineral product manufacturing	0.99	0.07	1.30
NAICS 331 Primary metal manufacturing	0.66	NC	NC
NAICS 332 Fabricated metal product manufacturing	0.67	0.03	1.20
NAICS 333 Machinery manufacturing	0.38	0.12	1.07
NAICS 334 Computer and electronic product manufacturing	2.03	0.00	1.30
NAICS 335 Electrical equipment and appliance mfg.	0.37	NC	NC
NAICS 336 Transportation equipment manufacturing	1.55	0.02	NC
NAICS 337 Furniture and related product manufacturing	0.82	0.08	1.03
NAICS 339 Miscellaneous manufacturing	0.88	0.11	0.23
NAICS 423 Merchant wholesalers, durable goods	1.17	0.10	1.11
NAICS 424 Merchant wholesalers, nondurable goods	0.97	0.07	1.18
NAICS 425 Electronic markets and agents and brokers	1.26	0.00	1.30
NAICS 441 Motor vehicle and parts dealers	1.34	0.14	1.07

NAICS 442 Furniture and home furnishings stores	1.32	0.16	1.27
NAICS 443 Electronics and appliance stores	1.57	0.04	1.17
NAICS 444 Building material and garden supply stores	1.15	0.21	1.16
NAICS 445 Food and beverage stores	1.26	0.22	1.03
NAICS 446 Health and personal care stores	1.14	0.08	1.28
NAICS 447 Gasoline stations	1.18	0.17	0.75
NAICS 448 Clothing and clothing accessories stores	0.98	0.10	1.21
NAICS 451 Sporting goods, hobby, book and music stores	1.20	0.21	1.23
NAICS 452 General merchandise stores	1.30	0.12	1.12
NAICS 453 Miscellaneous store retailers	1.47	0.23	0.76
NAICS 454 Nonstore retailers	1.70	0.07	0.74
NAICS 481 Air transportation	1.90	0.01	0.81
NAICS 482 Rail transportation	3.45	73.76	1.30
NAICS 483 Water transportation	0.38	ND	ND
NAICS 484 Truck transportation	0.87	0.09	1.24
NAICS 485 Transit and ground passenger transportation	1.13	0.04	1.09
NAICS 486 Pipeline transportation	0.39	0.29	0.90
NAICS 487 Scenic and sightseeing transportation	1.38	3.54	0.88
NAICS 488 Support activities for transportation	1.00	0.09	0.96
NAICS 491 Postal service	2.47	4.06	0.94
NAICS 492 Couriers and messengers	1.03	0.08	NC
NAICS 493 Warehousing and storage	0.78	0.01	0.93
NAICS 511 Publishing industries, except Internet	0.70	0.10	1.17
NAICS 512 Motion picture and sound recording industries	0.76	0.03	1.30
NAICS 515 Broadcasting, except Internet	0.86	0.29	1.10
NAICS 516 Internet publishing and broadcasting	NC	NC	NC
NAICS 517 Telecommunications	0.96	0.03	1.23
NAICS 518 Data processing, hosting and related services	0.99	0.05	1.14
NAICS 519 Other information services	0.60	1.55	1.05
NAICS 521 Monetary authorities - central bank	0.46	NC	NC
NAICS 522 Credit intermediation and related activities	1.72	0.04	1.05
NAICS 523 Securities, commodity contracts, investments	0.98	0.07	1.27
NAICS 524 Insurance carriers and related activities	0.98	0.06	1.15
NAICS 525 Funds, trusts, and other financial vehicles	0.96	NC	NC
NAICS 531 Real estate	1.39	0.20	1.15
NAICS 532 Rental and leasing services	1.45	0.16	1.13
NAICS 533 Lessors of nonfinancial intangible assets	3.99	ND	ND
NAICS 541 Professional and Technical Services	1.02	0.10	1.25
NAICS 551 Management of companies and enterprises	0.88	0.02	0.03
NAICS 561 Administrative and support services	1.74	0.08	0.60
NAICS 562 Waste management and remediation services	0.77	0.14	1.07
NAICS 611 Educational services	1.14	0.49	0.82
NAICS 621 Ambulatory health care services	1.36	0.17	1.25

NAICS 622 Hospitals	1.01	0.07	0.27
NAICS 623 Nursing and residential care facilities	0.82	0.07	1.07
NAICS 624 Social assistance	0.93	0.17	1.10
NAICS 711 Performing arts and spectator sports	1.17	0.05	1.30
NAICS 712 Museums, historical sites, zoos, and parks	0.88	1.17	0.64
NAICS 713 Amusements, gambling, and recreation	1.03	0.40	0.73
NAICS 721 Accommodation	1.55	0.40	0.69
NAICS 722 Food services and drinking places	1.18	0.17	1.00
NAICS 811 Repair and maintenance	1.19	0.17	1.13
NAICS 812 Personal and laundry services	1.06	0.22	1.20
NAICS 813 Membership associations and organizations	0.92	0.50	1.01
NAICS 814 Private households	0.36	0.08	ND
NAICS 999 Unclassified	0.66	18.64	1.10

(NC) Not Calculable, the data does not exist or it is zero

(ND) Not Disclosable