

# Economic Base Studies

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# What is an economic base study?

- An economic base study is a descriptive tool used to analyze the composition of local economic activity.
- Economic base studies are often conducted to help guide local economic development activities and to help economic development officials make decisions such as what type of firms they should attempt to attract to local areas.

# Specific Purposes

- Understand regional economic growth
- Make short and long term forecasts
- Identify potential growth sectors
- Identify potential problem areas

# Basic versus Non-basic Industries

- Basic industries promote local economic growth by bringing jobs and income into the local economy.
  - Exporting goods and Services
- Non-basic industries serve local residents and provide support to basic industries.
- Locations Quotients (LQ) used to determine basic or non-basic classification

# Location Quotients (LQ)

- LQs are calculated as a single industry's percent of total local employment divided by that industry's percent of total state or national employment.
- Ex) A LQ for a single New Mexico industry (industry j) may be calculated as follows:

$$\text{LQ} = \frac{(\text{Employment in industry } j \text{ in NM} / \text{total employment in NM})}{(\text{Employment in industry } j \text{ in US} / \text{total employment in US})}$$

# Location Quotients (LQ)

- The LQ serves to illustrate the relative importance in the level of the local employment of that sector with respect to the benchmark economy, state or national.
- An LQ is a ratio. A LQ greater than 1.0 indicates that a particular industry employs proportionately more workers locally than it does at the state or national level. Conversely, a LQ of less than 1.0 indicates that the industry of note employs fewer workers locally as compared to the state or national average.

$$\text{LQ} = \frac{(\text{Employment in industry } j \text{ in NM} / \text{total employment in NM})}{(\text{Employment in industry } j \text{ in US} / \text{total employment in US})}$$

# Considerations when using LQs

- LQs are calculated with the most current available data
  - Currently 2014 data
- Data Source: Bureau of Economic Analysis (BEA)
- Data for smaller regions is difficult to get
  - (sometimes not available at all)
- LQs are a static measure (LQs in a region change over time)
- A base study analyzes just one area and no interaction with others
  - Ex. The Bernalillo county base study does not include information on its economic interactions with Los Alamos county.

# Other Information in a base study

- Geographical data
- Population data
- Employment data
- Per Capita Personal Income data
- Percentage change statistics
  - Per capita income for Bernalillo County grew 6.77% between 2010 and 2014.
- As percent of state and national data
  - Per capita income for Bernalillo County (\$38,690) in 2014 was 104.3 percent of the corresponding state figure of \$37,091 and 84.0 percent of the national average of \$46,049.



# DATA: United States (partial screenshot)

Table 6: United States Employment by Industry 2010-2014					
Number of jobs by industry	2010	2011	2012	2013	2014
<b>By type</b>					
Wage and salary employment	135,526,000	137,105,000	139,721,000	141,997,000	144,891,000
Proprietors employment	37,508,700	39,173,700	39,360,700	40,393,100	40,907,800
Farm proprietors employment	1,882,000	1,876,000	1,844,000	1,856,000	1,841,000
Nonfarm proprietors employment	35,626,700	37,297,700	37,516,700	38,537,100	39,066,800
<b>By industry</b>					
Farm employment	2,636,000	2,639,000	2,623,000	2,646,000	2,643,000
Nonfarm employment	170,398,700	173,639,700	176,458,700	179,744,100	183,155,800
Private nonfarm employment	145,726,700	149,350,700	152,356,700	155,707,100	159,125,800
Forestry, fishing, and related activities	855,400	860,600	886,400	913,100	937,000
Mining	1,268,000	1,244,000	1,551,200	1,605,000	1,692,000
Utilities	582,200	575,500	577,600	578,300	582,400
Construction	8,793,700	8,774,800	8,944,800	9,260,800	9,610,400
Manufacturing	12,102,900	12,385,700	12,605,200	12,765,200	12,993,400
Wholesale trade	6,024,000	6,160,300	6,243,500	6,342,100	6,419,700
Retail trade	17,591,600	17,954,300	18,085,800	18,391,100	18,710,900
Transportation and warehousing	5,474,200	5,684,800	5,872,400	6,004,800	6,225,000
Information	3,222,600	3,230,000	3,224,700	3,266,600	3,302,000
Finance and insurance	9,202,400	9,751,500	9,702,300	9,817,300	9,833,100
Real estate and rental and leasing	7,697,000	7,936,300	7,859,200	8,062,800	8,135,100
Professional, scientific, and technical services	11,755,800	11,970,100	12,211,200	12,540,300	12,822,700
Management of companies and enterprises	2,019,400	2,080,600	2,180,200	2,264,000	2,336,000
Administrative and waste management services	10,402,200	10,753,600	11,035,400	11,380,900	11,734,900

Source: Bureau of Economic Analysis at [www.bea.gov](http://www.bea.gov), table CA25N

# DATA: Albuquerque MSA (partial screenshot)

Table 1: Albuquerque MSA Employment by Industry 2010-2014					
Number of jobs by industry	2010	2011	2012	2013	2014
<b>By type</b>					
Wage and salary employment	389134	387050	386594	389059	392094
Proprietors employment	93431	94799	94449	94540	95811
Farm proprietors employment	3029	3445	3712	3729	3716
Nonfarm proprietors employment 2/	90402	91354	90737	90811	92095
<b>By industry</b>					
Farm employment	3521	3967	4283	4361	4274
Nonfarm employment	479044	477882	476760	479238	483631
Private nonfarm employment	390231	389612	389570	392440	397530
Forestry, fishing, and related activities	(D)	(D)	(D)	(D)	568
Mining	1,557	1,315	1,828	(D)	2156
Utilities	(D)	886	(D)	(D)	(D)
Construction	28920	27417	26480	27168	27608
Manufacturing	19453	19864	20045	19850	19172
Wholesale trade	14887	14132	14141	14027	14257
Retail trade	50162	50463	50309	50871	51370
Transportation and warehousing	10,295	10,628	10,783	(D)	(D)
Information	10,675	10,295	10582	10136	9870
Finance and insurance	19,028	19173	18723	18455	19081
Real estate and rental and leasing	20,711	20510	19893	19792	19721
Professional, scientific, and technical serv	42,592	42,323	41,880	(D)	(D)
Management of companies and enterprise	3478	3650	3654	3665	3667
Administrative and waste management ser	31,945	32,023	31,015	(D)	(D)

Source: Bureau of Economic Analysis at [www.bea.gov](http://www.bea.gov), table CA25N

<b>Table 2: Location Quotients for Albuquerque MSA (US Base) 2010-2014</b>					
<b>US Base</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>By type</b>					
Wage and salary employment	1.03	1.03	1.03	1.03	1.03
Proprietors employment	0.89	0.89	0.89	0.88	0.89
Farm proprietors employment	0.58	0.67	0.75	0.76	0.77
Nonfarm proprietors employment	0.91	0.90	0.90	0.89	0.90
<b>By industry</b>					
Farm employment	0.48	0.55	0.61	0.62	0.62
Nonfarm employment	1.01	1.01	1.01	1.01	1.01
Private nonfarm employment	0.96	0.95	0.95	0.95	0.95
Forestry, fishing, and related activities	N/A	N/A	N/A	N/A	0.23
Mining	0.44	0.39	0.44	N/A	0.49
Utilities	N/A	0.56	N/A	N/A	N/A
Construction	1.18	1.14	1.10	1.11	1.09
Manufacturing	0.58	0.59	0.59	0.59	0.56
Wholesale trade	0.89	0.84	0.84	0.83	0.85
Retail trade	1.02	1.03	1.04	1.04	1.05
Transportation and warehousing	0.67	0.68	0.68	N/A	N/A
Information	1.19	1.17	1.22	1.17	1.14
Finance and insurance	0.74	0.72	0.72	0.71	0.74
Real estate and rental and leasing	0.96	0.95	0.94	0.93	0.92
Professional, scientific, and technical services	1.30	1.29	1.28	N/A	N/A
Management of companies and enterprises	0.62	0.64	0.62	0.61	0.60
Administrative and waste management services	1.10	1.09	1.05	N/A	N/A
Educational services	0.83	0.81	0.77	N/A	0.81
Health care and social assistance	1.01	1.04	1.00	N/A	1.07
Arts, entertainment, and recreation	0.97	0.97	1.03	N/A	N/A
Accommodation and food services	1.06	1.06	1.07	N/A	N/A
Other services, except public administration	0.89	0.89	0.89	0.88	0.88
Government and government enterprises	1.29	1.33	1.35	1.36	1.36
Federal, civilian	1.88	1.97	1.97	1.95	1.96
Military	1.02	1.08	1.12	1.13	1.11
State and local	1.23	1.26	1.28	1.30	1.30
State government	1.70	1.72	1.76	1.81	1.86
Local government	1.05	1.09	1.10	1.11	1.10
<b>Total employment</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>

Source: Bureau of Economic Analysis at [www.bea.gov](http://www.bea.gov), table CA25N and author's calculation

**Table 1: Location Quotients for Bernalillo County (US Base) 2010-2014**

<b>US Base</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>By type</b>					
Wage and salary employment	1.04	1.05	1.05	1.05	1.05
Proprietors employment	0.84	0.82	0.83	0.82	0.83
Farm proprietors employment	0.16	0.18	0.21	0.21	0.21
Nonfarm proprietors employment	0.87	0.86	0.86	0.85	0.86
<b>By industry</b>					
Farm employment	0.13	0.15	0.17	0.17	0.17
Nonfarm employment	1.01	1.01	1.01	1.01	1.01
Private nonfarm employment	0.97	0.96	0.96	0.96	0.96
Forestry, fishing, and related activities	0.19	0.17	0.17	0.16	0.16
Mining	0.43	0.37	0.42	0.43	0.42
Utilities	0.47	0.53	0.56	0.66	0.68
Construction	1.16	1.13	1.09	1.09	1.08
Manufacturing	0.49	0.49	0.50	0.50	0.49
Wholesale trade	0.90	0.91	0.91	0.89	0.90
Retail trade	1.01	1.01	1.02	1.03	1.03
Transportation and warehousing	0.64	0.65	0.66	0.66	0.64
Information	1.24	1.21	1.26	1.21	1.18
Finance and insurance	0.76	0.74	0.74	0.74	0.78
Real estate and rental and leasing	0.98	0.94	0.94	0.93	0.92
Professional, scientific, and technical services	1.42	1.41	1.39	1.36	1.37
Management of companies and enterprises	0.69	0.72	0.70	0.67	0.66
Administrative and waste management services	1.17	1.11	1.05	1.06	1.03
Educational services	0.87	0.85	0.83	0.83	0.84
Health care and social assistance	1.06	1.09	1.10	1.11	1.13
Arts, entertainment, and recreation	0.96	0.96	1.03	1.03	1.02
Accommodation and food services	1.08	1.08	1.08	1.09	1.11
Other services, except public administration	0.87	0.88	0.87	0.86	0.86
Government and government enterprises	1.27	1.32	1.33	1.35	1.34
Federal, civilian	2.09	2.22	2.22	2.20	2.19
Military	1.07	1.13	1.18	1.18	1.16
State and local	1.16	1.20	1.21	1.24	1.24
State government	1.84	1.87	1.91	1.98	2.02
Local government	0.91	0.95	0.95	0.96	0.94
<b>Total employment</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>

Source: Bureau of Economic Analysis at [www.bea.gov](http://www.bea.gov), table CA25N and author's

# Bernalillo County basic sectors

- The data for 2014 suggest that in Bernalillo County, the following industries are to be considered basic:
- Professional, scientific, and technical services, accounted for 39,607 jobs (LQ=1.37).
- Information, accounted for 8,814 jobs (LQ=1.18)
- Accommodation and Food services, accounted for 33,674 jobs LQ=1.11.
- Federal government employment, including 13,800 federal/civilian jobs (LQ=2.19) and 5,185 military jobs (LQ=1.18) accounted for a total of 18,985 jobs.
- State government employment, accounted for 24,012 jobs (LQ=2.02).

# Export-base employment multiplier

- This employment multiplier is obtained by dividing total employment by total employment in the basic sectors.
- In Bernalillo County, the multiplier is equal to 3.35  
(418,815 / 125,092).
- In Catron County, the multiplier is 4.60  
(2,096/456)

Thank you  
Questions?