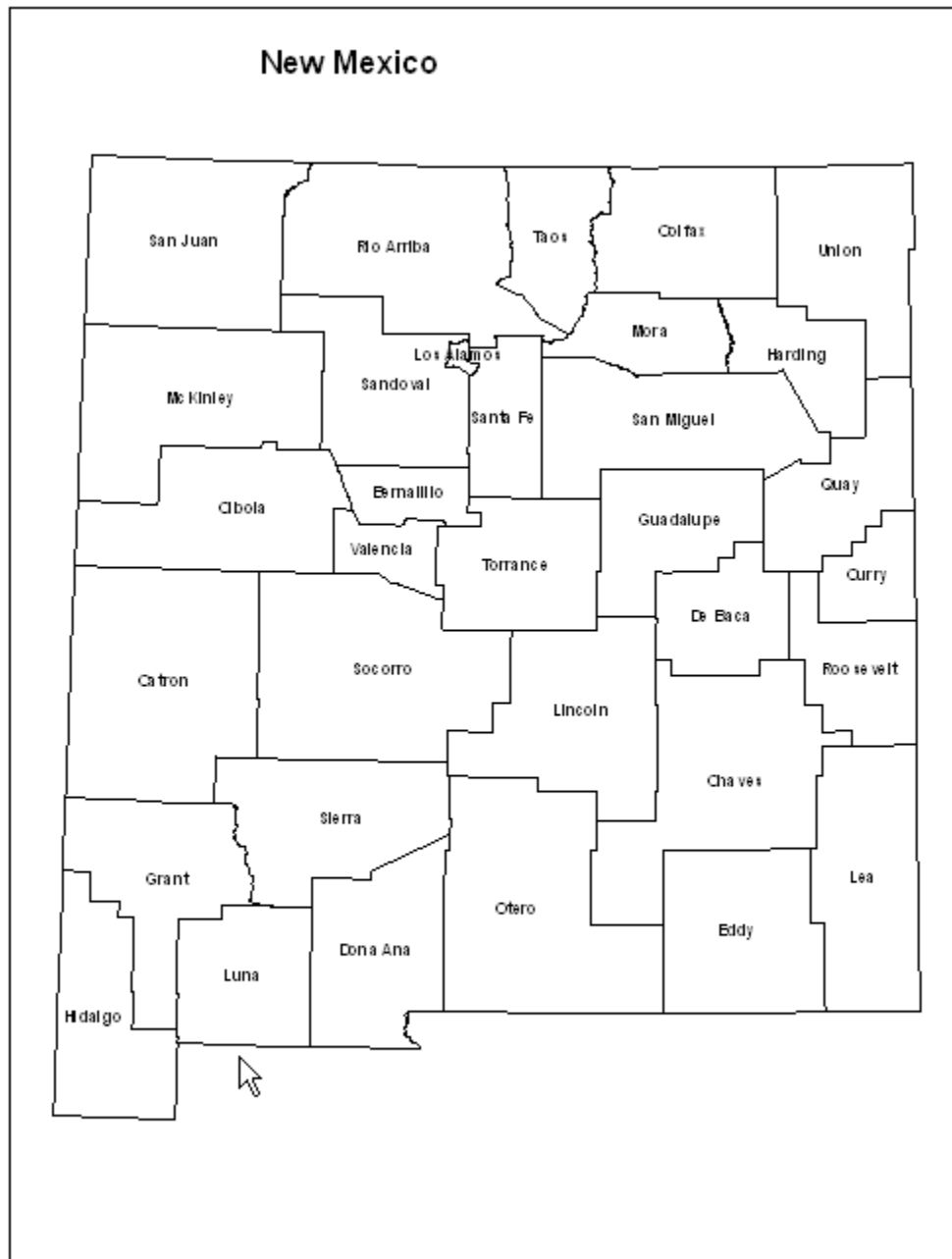




**The Economic Base of the State of New Mexico**

**PREPARED BY: Arrowhead Center,  
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## The Economic Base of the State of New Mexico

### Introduction

This report is one of 35 economic base studies prepared by the Office of Policy Analysis at New Mexico State University's (NMSU) Arrowhead Center. Of the 35 reports, 33 describe the economic base of New Mexico's counties. There are separate reports for the State of New Mexico and for the Albuquerque Metropolitan Statistical Area (MSA). New Mexico has three additional MSAs (Las Cruces, Santa Fe, and Farmington), all of which are single county MSAs; separate reports for these MSAs were not prepared. All 35 reports may be found at <http://arrowheadcenter.nmsu.edu/economic-and-policy-studies/>.

The reports have been prepared under the direction of James Peach. Theophilus Djaba and Erin Sumner, graduate students in the NMSU Doctorate of Economic Development program, did much of the work on the updates. Comments and suggestions are welcome and are to be sent to [jpeach@nmsu.edu](mailto:jpeach@nmsu.edu). Our intent is to update these reports on an annual basis.

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. Economic base studies can also help local and regional businesses better understand local and export product markets.

The specific purposes of economic base studies include:

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

According to economic base theory, any local economy may be divided into basic and non-basic industries. This theory also suggests that economic growth depends on sectors that export goods and services out of the region (basic industries), as opposed to those businesses whose services remain local, (non-basic industries). Basic industries promote local economic growth by bringing jobs and income into the local economy. Non-basic industries serve local residents and provide support to basic industries.

An industry classified as basic in one region may be identified as non-basic in another region. One common means of identifying local basic activity is through the use of location quotients (LQs). 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. For example, an LQ for a single New Mexico industry (industry j) may be calculated as follows:

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

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. 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. For additional information on LQs, see <http://arrowheadcenter.nmsu.edu/wp-content/uploads/2015/06/WhatisaLocationQuotient.pdf>.

A common criticism of economic base studies and the LQ approach to identifying basic industries is that the LQs often change over time. In this report, LQs are described for the most recent year for which data are available and the four preceding years (2013-2017). In this report, basic industries are identified using general knowledge about the structure of the local economy combined with LQs greater than 1.0. The data used in this report are from the U.S. Department of Commerce, Bureau of Economic Analysis (BEA), and the data can be found at [www.bea.gov](http://www.bea.gov).

## **New Mexico**

The State of New Mexico is located in the southwestern part of the United States and contains 121,298 square miles. The population of New Mexico in 2017 was 2,093,395 or 0.64 percent of the total U.S. population. The City of Albuquerque, with a population estimated by the U.S. Census Bureau to be 558,545 contained 26.68 percent of the state's population in 2017 and remains the most populated city in the state. Between 2013 and 2017, New Mexico's population increased by 0.03 percent, while the nation's population increased by 2.88 percent.

Per capita personal income in New Mexico in 2017 was \$39,709, or 76.76 percent of the national average of \$51,731. The growth rate of per capita income in New Mexico, between 2013 and 2017 (13.21 percent) was also lower than the nation's per capita growth rate of 15.34 for the same time period.

Estimates of Gross Domestic Product (GDP) by state indicate that New Mexico contributed \$94.20 billion (0.49 percent) to the nation's \$19.39 trillion-dollar economy in 2017. New Mexico's GDP increased by 6.59 percent between 2013 and 2017, which was lower than the national GDP growth rate of 16.47 percent over the same period.

Total employment in New Mexico in 2017 was 1,097,872. Total employment in New Mexico increased by 2.08 percent between 2013 and 2017, a lower rate of growth compared to the nation's employment growth rate which increased by 7.57 percent over the same period. New Mexico's 2017 employment to population ratio was 0.52, while the nation's ratio was 0.60.

The Private sector employed 78.60 percent of all workers in New Mexico in 2017, while Government and Government enterprises accounted for 18.79 percent, and Farm employment accounted for 2.61 percent of the total. The private industries with the highest percentages of total employment included: Retail Trade (10.15 percent of total employment), Health care and Social assistance (12.27), Accommodation and Food services (8.47), Construction (5.70), and Professional and Technical services (7.25). State and Local government were the largest employers in the public sector, at 5.25 percent and 9.29 percent of total employment, respectively. Federal/civilian and Military employment accounted for 2.67 percent and 1.58 percent of the total, respectively. New Mexico employment by sector is displayed in Table 2.

### **Basic and Non-Basic Industries in New Mexico**

Table 3 contains Location Quotients for New Mexico from 2013 to 2017 calculated using data for the United States as the basis of comparison. In this analysis, an LQ greater than 1.0 (shaded in Table 3) qualifies an industry to be considered a basic industry for the State of New Mexico. Industries with LQs very near to 1.0 as well as industries such as local government and construction that typically support the local economy rather than export goods and services outside the region are not included here as basic industries.

The importance of Mining to the economic base of New Mexico is represented in the LQ of 3.99 in 2017. This industry contained LQs higher than 3.80 over the past five years thus reflecting the significance of both mineral and non-mineral mining throughout the state. The State of New Mexico ranked 1<sup>st</sup> in the nation in potash production; 3<sup>rd</sup> in copper production; and 12<sup>th</sup> in coal production in 2017 (New Mexico Energy, Minerals, & Natural Resources Department, 2018, 32). Additionally, the Mining industry employed 33,725 total workers throughout the state in 2017. For more information regarding New Mexico's commodity production, New Mexico Energy, Minerals, & Natural Resources Department Annual Report can be found at:

<http://www.emnrd.state.nm.us/documents/bw2018AR30Feb.pdf>

Also due to the significance of energy mining to New Mexico, the utilities industry may be considered a basic economic activity within the state. The utilities sector had an LQ of 1.37 in 2017, and

LQs exceeding 1.35 in all years considered. These high LQs reflect the several very large power plants located throughout the state, including the Four Corners Power Plant and the San Juan Power Plant, both located in San Juan County, as well as the Cunningham Power Plant, located in Lea County. In 2017, the utilities sector accounted for 5,099 total jobs in New Mexico.

Agriculture and related industries, including Farm employees, as well as Forestry, fishing, and related activities, should be considered a basic economic sector in New Mexico. The LQ for Farm employment was 1.94 in 2017 and has been greater than 1.80 in all years considered. Forestry, fishing, and related activities had a LQ of 1.09 in 2017 and had LQs greater than 1.0 in 2014 to 2017. The LQ for 2013 was slightly below 1.0 and then above 1.0 in 2014. Forestry, fishing, and related activities industry is to be considered a basic sector for the state in 2017. In this analysis, Agriculture and related industries comprised of Farm as well as Forestry, fishing, and related activities employment for 2017. These two sectors accounted for 34,291 employees throughout New Mexico in 2017.

Accommodation and Food services, with an LQ of 1.13 in 2017 and LQs exceeding 1.10 in all years considered, can also be considered a basic industry in New Mexico. The consistently high LQs reflect the large tourism base of destinations such as Albuquerque and Santa Fe, ski areas including Ruidoso and Taos, and national parks and monuments such as Carlsbad Caverns National Park and White Sands National Monument. In 2017, the Accommodation and Food services sector accounted for 93,037 total employees.

Other industries in the private sector with LQs higher than 1.0 in 2017 include: Construction (1.05), Professional and Technical services (1.04), Arts, entertainment, and recreation (1.00), Health care and Social assistance (1.08), and Retail Trade (1.04). In general, the Construction and Professional and Technical Services industries are best viewed as a support industry. By providing skills and knowledge to business organizations, to the public, and other organizations in general, the professional and technical services industry makes these two attributes available on a project basis. The other industries are best viewed in the State as non-basic or support industries. Hence, for this analysis these industries are not included as basic economic sectors.

The entry labeled Government and government enterprises is not a separate industry but an aggregate of the other government categories. In 2017, all of the government sectors had LQs greater than 1.00. In each year considered, the LQ for federal civilian employment exceeded 1.80, and the LQ for Military employment exceeded 1.50, reflecting the large employment of Cannon, Holloman, and Kirtland Air Force Bases, as well as the White Sands Missile Range. Sandia National Laboratory, part of

the Department of Energy, also accounts for the high federal civilian employment LQ. Federal government employment is therefore classified as a basic industry in New Mexico.

State government employment had an LQ of 1.92 in 2017, and LQs exceeding 1.84 in all years considered, reflecting, in part, the large employment base of the numerous state colleges and universities in New Mexico, including the University of New Mexico, New Mexico State University, Western New Mexico University, Eastern New Mexico University, and the New Mexico Institute of Mining and Technology. The Los Alamos National Laboratory (LANL), a government-owned national security research laboratory, employs many state workers as well. Many of the LANL workers classified as state employees are actually employees of the State of California. For this analysis, state government employment is considered a basic economic sector.

The Local government industry had an LQ of 1.28 in 2017. However, local government is generally categorized as non-basic given that all local governments collect taxes from residents to provide for the services to the community, including employment. Following this practice, local government for the State of New Mexico will be considered as a non-basic industry.

The data and analysis suggest that the following industries should be considered basic industries in the State of New Mexico for 2017:

1. Mining, accounted for 33,725 jobs.
2. Utilities, accounted for 5,099 jobs.
3. Agriculture and related industries, 28,633 Farm employees and 5,658 Forestry, fishing, and related activities employees, accounted for 33,891 total jobs
4. Accommodation and Food services, accounted for 93,037 jobs.
5. Federal government employment, including 17,348 military jobs and 29,288 federal civilian jobs, accounted for 46,636 total jobs.
6. State government, accounted for 57,617 total jobs.

It is common in economic base studies to calculate an export-base multiplier. This multiplier is obtained by dividing total employment by basic sector employment. In the case of New Mexico, the multiplier is 4.07 (1,097,872/270,005). This ratio suggests that the addition of each basic sector job in New Mexico would be associated 4.07 additional non-basic sector jobs. Caution in the interpretation of this multiplier is appropriate. This ratio may or may not apply in future years. Further, since farm proprietors have been included in the basic sector, it should be pointed out that farm proprietors often have more than one occupation and this fact may bias the 'multiplier' upward.

The export base multiplier (4.07) calculated above reinforces the importance of basic (exporting) industries to the New Mexico economy. Local economic development policy actions such as the creation of industrial parks, tax abatement and financing, and workforce development projects are often used by local communities to expand an area's economic base. The appropriate mix of such policies is often a result of public and private sector interaction in the context of the development of a community economic development plan.

The economic landscape of New Mexico may change drastically in the coming years, due to the development of several new projects and research parks. The New Mexico Spaceport (NM Spaceport), broke ground on June 19, 2009 and completed construction in 2014. In 2011, NM Spaceport operations commenced with preview tours and flights launched by Armadillo Aerospace conducted at the facility. In 2013, Spaceport hired a full complement of contractors necessary in the pre-operations of the spaceport. This will have effects in Sierra County as well as surrounding areas. (For more information and a comprehensive analysis of the economic impact of the spaceport, see <http://arrowheadcenter.nmsu.edu/wp-content/uploads/2015/06/spaceportbusinessplan.pdf> ).

Further New Mexico economic development activities encompass the Santa Teresa Intermodal Terminal that began construction in August 2011 and was completed in May 2014. This new state-of-the-art rail facility will position New Mexico as a key inland port for the first time. Facilities will include an intermodal ramp, fueling facilities and an intermodal block swap/switching yard. It is expected that numerous transportation, logistical, and support industries might also develop around this intermodal terminal.

### **Summary of Changes from Prior Year**

This document has been revised to reflect data figures obtained from the BEA for the economic and population data. The population of New Mexico in 2017 was 2,093,395 an increase of 0.03 percent from 2,092,789 in 2016. Per capita personal income in New Mexico rose by 2.36 percent from \$38,793 in 2016 to \$39,709 in 2017.

**Tables 1 to 3 appear on pages 7-9**

**Table 1. United States Percent of Employment by Sectors 2013-2017**

Description	2013	2014	2015	2016	2017
<b>By type</b>					
Wage and salary employment	77.85	77.71	77.57	77.52	77.41
Proprietors employment	22.15	22.29	22.43	22.48	22.59
Farm proprietors employment	1.02	0.99	0.96	0.94	0.92
Nonfarm proprietors employment	21.14	21.30	21.46	21.53	21.67
<b>By industry</b>					
Farm employment	1.45	1.42	1.39	1.37	1.34
Nonfarm employment	98.55	98.58	98.61	98.63	98.66
Private nonfarm employment	85.36	85.66	85.92	86.07	86.22
Forestry, fishing, and related activities	0.50	0.51	0.48	0.48	0.47
Mining	0.88	0.86	0.82	0.75	0.77
Utilities	0.32	0.31	0.31	0.32	0.34
Construction	5.07	5.14	5.17	5.34	5.42
Manufacturing	7.00	6.93	6.87	6.79	6.78
Wholesale trade	3.48	3.61	3.58	3.34	3.30
Retail trade	10.07	10.05	10.03	9.93	9.80
Transportation and warehousing	3.30	3.37	3.64	3.83	3.91
Information	1.79	1.79	1.74	1.75	1.73
Finance and insurance	5.38	5.17	5.17	5.27	5.36
Real estate and rental and leasing	4.42	4.51	4.55	4.59	4.64
Professional, scientific, and technical services	6.88	6.91	7.01	6.98	7.00
Management of companies and enterprises	1.24	1.27	1.27	1.35	1.36
Administrative and waste management services	6.23	6.29	6.18	6.22	6.16
Educational services	2.38	2.42	2.42	2.40	2.39
Health care and social assistance	11.24	11.17	11.22	11.28	11.32
Arts, entertainment, and recreation	2.22	2.27	2.22	2.26	2.27
Accommodation and food services	7.18	7.28	7.34	7.45	7.49
Other services, except public administration	5.77	5.83	5.87	5.74	5.69
Government and government enterprises	13.19	12.92	12.69	12.57	12.44
Federal, civilian	1.55	1.50	1.48	1.47	1.46
Military	1.11	1.06	1.03	1.00	0.98
State and local	10.53	10.36	10.18	10.10	10.00
State government	2.91	2.86	2.81	2.77	2.74
Local government	7.62	7.49	7.37	7.33	7.27
<b>Total employment</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

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



**Table 2. New Mexico Percent of Employment by Sectors 2013-2017**

Description	2013	2014	2015	2016	2017
<b>By type</b>					
Wage and salary employment	78.71	78.67	78.77	78.84	78.54
Proprietors employment	21.29	21.33	21.23	21.16	21.46
Farm proprietors employment	2.00	1.98	1.96	1.95	1.95
Nonfarm proprietors employment	19.29	19.34	19.27	19.21	19.51
<b>By industry</b>					
Farm employment	2.72	2.61	2.64	2.71	2.61
Nonfarm employment	97.28	97.39	97.36	97.29	97.39
Private nonfarm employment	77.68	78.07	78.25	78.20	78.60
Forestry, fishing, and related activities	0.49	0.52	0.51	0.53	0.52
Mining	3.43	3.53	3.36	2.91	3.07
Utilities	0.43	0.42	0.43	0.45	0.46
Construction	5.50	5.50	5.47	5.49	5.70
Manufacturing	3.30	3.14	3.13	3.04	3.03
Wholesale trade	2.48	2.66	2.61	2.32	2.27
Retail trade	10.48	10.52	10.52	10.40	10.15
Transportation and warehousing	2.37	2.39	2.50	2.44	2.46
Information	1.49	1.45	1.43	1.46	1.40
Finance and insurance	3.26	3.21	3.16	3.27	3.35
Real estate and rental and leasing	3.57	3.61	3.63	3.65	3.70
Professional, scientific, and technical services	7.06	7.03	7.10	7.12	7.25
Management of companies and enterprises	0.51	0.52	0.54	0.58	0.59
Administrative and waste management services	5.08	5.02	4.85	4.93	5.04
Educational services	1.53	1.54	1.55	1.56	1.55
Health care and social assistance	11.51	11.52	11.88	12.29	12.27
Arts, entertainment, and recreation	2.21	2.24	2.22	2.21	2.26
Accommodation and food services	7.95	8.15	8.26	8.47	8.47
Other services, except public administration	5.04	5.10	5.11	5.07	5.05
Government and government enterprises	19.61	19.32	19.10	19.09	18.79
Federal, civilian	2.83	2.72	2.67	2.69	2.67
Military	1.71	1.62	1.55	1.57	1.58
State and local	15.07	14.99	14.88	14.83	14.54
State government	5.37	5.42	5.40	5.37	5.25
Local government	9.70	9.57	9.48	9.45	9.29
<b>Total employment</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100</b>	<b>100</b>

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

Table 3. Location Quotients for New Mexico (2013-2017)					
US Based	2013	2014	2015	2016	2017
<b>By type</b>					
Wage and salary employment	1.01	1.01	1.02	1.02	1.01
Proprietors employment	0.96	0.96	0.95	0.94	0.95
Farm proprietors employment	1.97	2.00	2.04	2.07	2.11
Nonfarm proprietors employment	0.91	0.91	0.90	0.89	0.90
<b>By industry</b>					
Farm employment	1.87	1.84	1.90	1.99	1.94
Nonfarm employment	0.99	0.99	0.99	0.99	0.99
Private nonfarm employment	0.91	0.91	0.91	0.91	0.91
Forestry, fishing, and related activities	0.98	1.04	1.05	1.10	1.09
Mining	3.89	4.11	4.11	3.88	3.99
Utilities	1.36	1.36	1.37	1.39	1.37
Construction	1.09	1.07	1.06	1.03	1.05
Manufacturing	0.47	0.45	0.46	0.45	0.45
Wholesale trade	0.71	0.74	0.73	0.69	0.69
Retail trade	1.04	1.05	1.05	1.05	1.04
Transportation and warehousing	0.72	0.71	0.69	0.64	0.63
Information	0.83	0.81	0.82	0.84	0.81
Finance and insurance	0.60	0.62	0.61	0.62	0.62
Real estate and rental and leasing	0.81	0.80	0.80	0.80	0.80
Professional, scientific, and technical services	1.03	1.02	1.01	1.02	1.04
Management of companies and enterprises	0.41	0.41	0.42	0.43	0.43
Administrative and waste management services	0.81	0.80	0.78	0.79	0.82
Educational services	0.64	0.64	0.64	0.65	0.65
Health care and social assistance	1.02	1.03	1.06	1.09	1.08
Arts, entertainment, and recreation	1.00	0.99	1.00	0.98	1.00
Accommodation and food services	1.11	1.12	1.12	1.14	1.13
Other services, except public administration	0.87	0.87	0.87	0.88	0.89
Government and government enterprises	1.49	1.50	1.51	1.52	1.51
Federal, civilian	1.82	1.81	1.81	1.83	1.83
Military	1.53	1.52	1.51	1.58	1.61
State and local	1.43	1.45	1.46	1.47	1.45
State government	1.85	1.89	1.92	1.94	1.92
Local government	1.27	1.28	1.29	1.29	1.28
<b>Total employment</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>
<i>Source: Author's Calculations based on Table 1 and 2</i>					