

A FEDERAL-STATE-COUNTY PARTNERSHIP

Analysis of Economic Base for Lyon County

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From 1990 to 1995, Lyon County experienced both economic and population growth. Total real county personal income (1992 = 100) increased by 25 percent and population in the county grew from 20,590 to 29,850 during the five-year study period. Given this economic and population growth, the role of the local economic base and how the economic base has changed though time is of interest to local decision makers. From analysis of the economic base in Lyon County, local economic development programs can be formulated.

Local Economic Sector Performance Measures

Personal income, employment and industry output are three measures of an economic

sector's importance in the local economy. The personal income measure used in this analysis includes only net income and earnings paid in the form of wages and salaries for a given sector. The employment measure used includes both full and part-time jobs. Industry output is a more comprehensive measure. Industry output represents the final production of goods and services and includes the value-added in terms of wages and salaries paid to labor in the productive process and also the value-added resulting from capital investment and other operating expenditures. The latest Bureau of Economic Analysis estimates of economic activity, which include data through 1995 are used. These estimates are shown in Table 1 for Lyon County economic sectors.¹

¹ County estimates of personal income and employment are available for each economic sector every year from 1969 to 1995 by the U.S. Department of Commerce, Bureau of Economic Analysis. State estimates of industry output for each sector are available every fifth year from the U.S. Department of Commerce, Bureau of the Census. Also, state and county estimates of industry output for the agriculture sector are available every year from the U.S. Department of Agriculture, National Agricultural Statistics Service.

Table 2. Sectoral Location Quotients for Lyon County, 1995

Sector	Location Quotient
Agriculture	2.5
Ag Services	2.0
Mining	3.6
Construction	1.6
Manufacturing	1.4
Transportation and Public Utilities	0.8
Wholesale Trade	0.5
Retail Trade	0.9
Finance, Insurance and Real Estate	0.6
Services	0.8
Federal Government, Civilian	0.3
Federal Government, Military	0.4
State and Local Government	1.1

Given the interpretation of location quotients, economic sectors in Lyon County can be classified as either export industries (i.e., those industries market much of their output outside the county in which they are located) or import industries (i.e., a large portion of the demand for goods and services is satisfied by producers outside the county).

The location quotient analysis of the economic base for Lyon County indicates that the local economy is highly dependent upon agriculture, ag services, mining, construction, manufacturing and state and local government related industries. This analysis can be used to target new industries or businesses for the community and formulate economic development strategies. One strategy, for example, might be to encourage the location of input suppliers for the agriculture, ag services, mining, construction, manufacturing and state and local government industries. Another strategy would be to investigate the expansion of economic sectors such as wholesale and retail trade, services, and finance, insurance and real estate which currently do not meet local demand.

Changing Economic Base of Lyon County

The location quotient results indicate the nature of the area's economy for a specific time period. Of additional interest is the change occurring in the county's economic base. To measure the changes, shift-share analysis is performed. Shift-share analysis, like location quotients, is a measure of a county's economic condition

relative to other communities and to the nation as a whole. The data used in this analysis were also used for the location quotient analysis. For this study, the shift in economic base was studied from 1990 to 1995.

The purpose of shift-share analysis is to determine the county's competitiveness and changing employment patterns in the industrial market place. Shift-share analysis assumes that there are three components to changes in employment: national component, industrial mix component and competitive share component.

The national growth component measures how much of the local employment change is due to the overall national growth trend. Also, a local economy's performance depends upon the mix of industries, that is, on whether its economic base is concentrated on faster or slower growing industries. The industrial mix component indicates the expected growth in local industries if they grow at the same rate as their national counterparts.

A local industry's employment grows or declines for a number of reasons, including changes in the national employment level, changes in employment by the same industry at the national level, and changes in local conditions. After the national component and industrial mix component have been calculated, the residual change, if any, is attributed to changes in the competitiveness of the local industry. Table 3 shows the results of the shift-share analysis for Lyon County.

Table 1. Personal Income, Employment and Industry Output for Lyon County, 1995

Sector	Personal Income (\$1,000's)	Employment (Jobs)	Industry Output (\$1,000's)
Agriculture	11,577	482	42,235.9
Ag Services	2,623	237	1,478.7
Mining	6,066	216	28,120.6
Construction	23,593	812	91,483.2
Manufacturing	48,451	1,698	223,920.0
Transportation and Public Utilities	13,703	374	49,674.3
Trade	27,654	1,659	72,386.1
Finance, Insurance and Real Estate	4,676	460	89,483.9
Services	40,990	2,401	122,200.8
Local Government	29,601	1,104	38,528.5
Total	208,934	9,253	759,512.0

From Table 1, the sector with the highest value of output is the manufacturing sector while the service sector has the highest employment and personal income levels in 1995. It is interesting that the manufacturing sector has the highest personal income but second highest employment level. When comparing the local manufacturing sector to the service sector this shows that the manufacturing sector provides more high-paying jobs.

Economic Base for Lyon County

The economic base of a county refers to the relative size of its industries. A county is said to have a diversified economic base if several industries are relatively large. Conversely, if one or a few industries dominate a local economy, the economy is said to have a concentrated economic base.

To estimate the degree of concentration of economic sectors in Lyon County, location quotients are calculated. Location quotients indicate the economic importance of each regional industry to the same industry at a national level. The primary focus of location quotients is the identification of industries which are either more or less important locally than nationally.

The interpretation of location quotients is as follows:

1. Every industry's output can be divided into two uses: export and local consumption (use).
2. The amount consumed (used) by a community is proportionate to the amount consumed nationally.
3. If the location quotient for an economic sector is less than one, goods and services must be imported to satisfy local demands.
4. If the location quotient for an economic sector is equal to one, then the economy is approximately fulfilling the requirements of the local households and firms.
5. Finally, if the location quotient is greater than one, for that particular economic sector, the community is producing more than it consumes and is capable of exporting excess goods for the purposes of bringing income into the community.

Location quotients shown in Table 2 were derived from employment levels in each economic sector at county and national levels from the U.S. Department of Commerce, REIS Regional Economic Information System for 1995.

Table 3. Shift-Share Analysis, Lyon County, 1990 – 1995

Sector	National Component	Industrial Mix	Competitive Share	Total
Agriculture	43	-77	-127	-161
Ag Services, Forestry & Fisheries	10	27	54	91
Mining	13	-35	48	26
Construction	45	-9	107	143
Manufacturing	86	-113	441	414
Transportation and Public Utilities	27	5	-54	-23
Wholesale Trade	12	-4	54	62
Retail Trade	72	38	240	350
Finance, Insurance and Real Estate	32	-44	2	-11
Services	125	170	240	535
Federal Government, Civilian	4	-8	0	-5
Federal Government, Military	4	-17	0	-12
State and Local Government	59	7	236	302
TOTAL	531	-59	1,239	1,711

From Table 3, the total change in employment in manufacturing sector from 1990 to 1995 was 1,711 jobs. Of this total change, if the employment in the local manufacturing sector changed at the overall national rate, local manufacturing sector employment would have grown by 86 employees. However, nationally the manufacturing sector was not a fast growing sector compared to overall national economic activity. The industrial mix factor for the local manufacturing sector would yield a loss of 113 jobs. However, the competitive share for the local manufacturing sector was an increase of 441 jobs. This shows that the Lyon County economy had a competitive advantage over other counties in the nation for manufacturing employment. This would mean that Lyon County may want to identify these competitive

advantages and enhance the advantages for further employment growth in the manufacturing sector.

Between 1990 and 1995, the shift-share analysis shows that the services, manufacturing, retail trade, construction and state and local government sectors provided the major impetus for economic growth in the Lyon County economy. Overall, employment growth in Lyon County was positive between 1990 and 1995 with a positive competitive advantage during the five-year study period.

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