

Old Economy Dominant in Central Indiana MSAs Through 1990s



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Central Indiana's Future:

Understanding the Region and Identifying Choices

Central Indiana's Future: Understanding the Region and Identifying Choices, funded by an award of general support from Lilly Endowment, Inc., is a research project that seeks to increase understanding of the region and to inform decision-makers about the array of options for improving quality of life for Central Indiana residents. The Center for Urban Policy and the Environment faculty and staff, with other researches from several universities, are working to understand how the broad range of investments made by households, governments, businesses, and nonprofit organizations within the Central Indiana Region contribute to quality of life. The geographic scope of the project includes 44 counties in an integrated economic region identified by the U.S. Bureau of Economic Analysis.

The Center for Urban Policy and the Environment is part of the School of Public and Environmental Affairs at Indiana University–Purdue University Indianapolis. For more information about the Central Indiana Project or the research reported here, contact the center at 317-261-3000 or visit the center's Web site at www.urbancenter.iupui.edu.



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EXECUTIVE SUMMARY

What are the important industries in Central Indiana's six Metropolitan Statistical Areas (MSA)? How reliant are these MSAs on old-economy industries such as manufacturing and retail? In this report, key industries in Central Indiana MSAs are identified based on three criteria: 1997 industry employment share, industry job growth from 1989 to 1997, and national competitiveness in 1997. Additionally, other notable industries that do not meet all three criteria but are important to their home MSAs are identified, allowing a broader analysis of economic strengths. The six MSAs analyzed are ordered by employment size: Indianapolis, Lafayette, Terre Haute, Kokomo, Muncie, and Bloomington. While 1997 is the latest year for which detailed industry data are available in the Standard Industry Classification (SIC) format, employment data are available in broader categories through 2000. Those data are analyzed for the 1997 through 2000 period.

The results of the analysis are not surprising. Based on employment share alone, manufacturing industries, which include motor vehicles and equipment, drugs, and household appliances, dominate the economic structure of the Lafayette, Kokomo, Bloomington, and Muncie MSAs, although there is a moderate manufacturing base in Terre Haute. The Lafayette MSA, with the most diverse manufacturing industries, is the only MSA to have drugs as a key industry. The Indianapolis MSA has a distinct set of key industries, which include air transportation and trucking services, business services, and manufacturing administrative and auxiliary services. Retail industries are an important economic factor in all MSAs, but are largest in the Terre Haute MSA. While the MSAs share common strengths in manufacturing and retail, there are no commonalities among MSAs in the services sector, which includes industries such as hospitals and business services.

Many of the key and notable industries in the MSAs are classified as high-tech industries, although with the exception of two industries, all high-tech industries are classified in the manufacturing sector. For example, the Lafayette MSA has six high-tech industries (drugs, motor vehicles and equipment, nonferrous rolling and drawing, management and public relations services, engines and turbines, and general industrial machinery), five of which belong to the manufacturing sector.

While it appears that the economies of Central Indiana's MSAs are moving toward high-tech manufacturing operations, it is still evident that old-economy manufacturing, retail, and service industries dominate the economic structure of these regions. To become less reliant on one major sector, decision makers should identify and pursue policies that will enable both a greater diversity in economic strengths and a continuing stability of advanced manufacturing strengths.





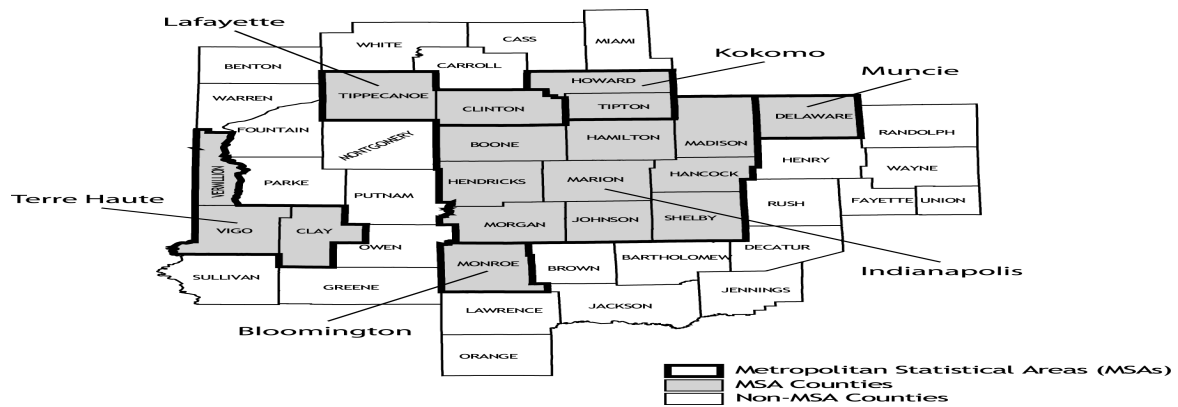
INTRODUCTION

Indiana's economy always has been reliant on its strong manufacturing base. Motor vehicles and equipment manufacturing is particularly strong in the Terre Haute, Muncie, and Lafayette MSAs, while medical instruments manufacturing in Bloomington and drugs in Indianapolis are strong components of these economies. Industries that rely on traditional means of production, or "old economy" industries, have continued to dominate Indiana's economic structure, even in times of manufacturing downturns. As recently as 1996, Indiana cities vied for larger automobile manufacturing facilities.

In recent years, however, it appeared as though the traditional old economy industries would become less important than "new economy" industries. These industries rely less on manufacturing and more on high-technology processes, e-business, and knowledge production. As Indiana struggles to find its place among new technologies, and as business leaders clamor for more aggressive policies to capture the benefits of the new economy it is important to have an understanding of Indiana's strongest industries. For better or worse, the path of the future economy of the state is in large part dependent on economic strengths that are in place now. What are Central Indiana's key industries? Are there competitive industrial sectors in Central Indiana? How far has Central Indiana come from being dominated by traditional manufacturing to diversifying its economic structure?



Map 1: Central Indiana





METHODOLOGY

This report identifies the major competitive industries that were in place in each metropolitan statistical area (MSA) in 1997, the last year for which detailed SIC data are available. The geographic unit of analysis is the MSA as defined by the U.S. Census Bureau. A MSA is defined as a central city and surrounding counties that share some economic or social relationship. Nationally, there are 316 defined MSAs, six of which are in the Central Indiana region. Identification of key industries in each MSA is based on three factors: industry size, job growth, and competitiveness. The first two factors are indicative only of the specified MSA, while competitiveness is based on national ranking. Map 1 shows the six MSAs of Central Indiana and the 44 counties included in the Bureau of Economic Analysis definition of Central Indiana used by the Center for Urban Policy and the Environment (Center). The Indianapolis MSA includes nine counties, the Terre Haute MSA includes three counties, the Kokomo and Lafayette MSAs each include two counties, and the Bloomington and Muncie MSAs each include a single county. Twenty-six Central Indiana counties are not included within any MSA.

Industry size is based on the proportion of total employment in an industry in 1997. For example, employment in Lafayette's drug industry was 1,345 or 1.9 percent of total MSA employment of 71,185. To be considered a key industry, industry employment must be at least 1 percent of all MSA employment.

The job growth criterion is a percent measure of job growth in a specific industry between 1989 and 1997. For example, during this period, the number of people employed in Terre Haute's plumbing, heating, and air conditioning industry grew by 314, or 0.6 percent of total 1997 employment. An industry is considered to be key if job growth exceeds 0.4 percent for the period.

Competitiveness, the only criterion that indicates industry strength on a national scale, is perhaps the most important indicator of key industries. The competitiveness measure is an employment share percentile. This is a measure of the rank of one industry in one MSA relative to the same industry in all other MSAs. The employment share for every industry in every MSA was calculated, ranked according to national standing, and then given a percentile rank. For example, Muncie's commercial printing percentile rank was 91, indicating that employment share in this industry in this MSA was greater than in 91 percent of all other MSAs with employment in the commercial printing industry. Only 9 percent of the 316 MSAs in the United States had a larger share of MSA employment in commercial printing. The assumption is that a large share of MSA employment means the industry is meeting a strong demand for its products and services and therefore must maintain a strong employment base.

An industry must have a percentile ranking of at least 80 to be considered a key industry. There are two important points to remember about this competitiveness score. First, MSAs with no employment in a given industry were excluded from the ranking process, as were industries with fewer than 100 employees. Second, the percentile score is a ranking among MSAs that are potential competitors with all other MSAs having that industry.

In addition to key industries, a list of notable industries is included for each MSA. In some cases, the notable industry list picks up industries that are obviously important but missing from a list of key industries within a MSA (e.g., motor vehicles and equipment in Muncie). A notable industry is included if either it is large with high job growth but does not achieve the 80 percentile competitiveness score, or if it is large and competitive but lost employment between 1989 and 1997. An industry could lose employment from 1989 to 1997



and still be highly competitive because it became more efficient, added capital equipment, or otherwise operated with fewer people. The Appendix includes all leading industries for each MSA. An industry is classified as leading if the industry meets at least one of the three criteria used to classify key industries.

The data used to compute all three criteria are taken from the U.S. Census Bureau's *County Business Patterns* (CBP) series for the years 1989 through 1997. CBP data report for every county in the United States the number of firms, employment, and earnings for all business operations at one location subject to unemployment insurance. Excluded from these data are local, state, and federal government employment, self-employed persons, sole proprietorships, all railroads, and most farms and ranches. Additionally, to protect the privacy of individual employers, in some cases instead of specific employment data, the number of firms in an employment size range is reported by the CBP. In these instances where data have been suppressed, an estimate based on the midpoint of the range multiplied by the number of firms in that employment size range is used.

CBP industry data are classified into four levels of detail. The detail comes from the industry definitions used in the Standard Industrial Classification (SIC) system. This system has been revised previously, with the last major revision in 1988. However, this system has been phased out and replaced with the new North American Industry Classification System (NAICS). Therefore, SIC data are used only for years 1989 to 1997. Beyond 1997, industry definitions are not comparable at the three-digit level.

Each MSA in the analysis will be discussed in terms of key industries (e.g., motor vehicles and equipment) and the corresponding sectors (e.g., manufacturing). The categorization of industries and sectors is based on the SIC system's four levels of detail. The broadest level, or one-digit SIC code, groups industries into familiar categories such as finance, insurance, and real estate (FIRE); construction; manufacturing; or services. The next level, two-digit codes, groups industries into about 80 narrower categories. The third level, three-digit codes, is the level used for this analysis. This level disaggregates industries into about 300 categories. Four-digit codes are more detailed still, perhaps too much for a useful analysis of local economies.

Because CBP data are used only until 1997, the analysis is augmented with U.S. Bureau of Labor Statistics (BLS) employment figures from 1997 to 2000. BLS data report employment figures only by sector and not by industry making it difficult to do a comparable analysis of industry employment growth over time, but it does aid in detecting trends in sector growth. The data provide a general indicator of sectoral employment strengths and weaknesses from 1997 to 2000. These data also include government employment, separating state and local governments.

There is no perfect way in which to classify industries, but the method used here is believed to be the best measure to identify large, high-growth, highly competitive industries. What this report attempts to do is classify the most important industries in the MSAs and to compare the competitiveness of Central Indiana's MSA industries with the competitiveness of the same industries across national MSAs. Furthermore, the diversity and size of the Central Indiana MSAs makes a direct MSA-to-MSA comparison difficult, but a discussion of the commonalities of the six MSAs is included at the end of the paper.

Each of the six MSAs is addressed separately, with a discussion of both key and notable industries. Accompanying tables provide more in-depth detail for each industry, giving 1997 employment share, employment growth from 1989 to 1997, and competitiveness score for 1997. The order the MSAs are presented is based on the total number of employees in 1997.



INDIANAPOLIS MSA KEY INDUSTRIES

The Indianapolis MSA has by far the most diverse MSA economy, but not in terms of number of key industries and sectors. The Indianapolis MSA encompassed 355 different industries in 1997, and because of its size this economy specializes in fewer industries than other MSAs, reflected in its set of industries and sectors. Four key industries are identified in Indianapolis: scheduled air transportation, manufacturing administrative and auxiliary, trucking and courier services, and miscellaneous business services (Table 1). It is interesting that missing from this list are motor vehicles manufacturing, drug manufacturing, and FIRE (finance, insurance, and real estate) industries, all thought to be the core of the Indianapolis economic landscape. The largest key industry is trucking and courier services, with a 2.7 percent share of MSA employment. Manufacturing administrative and auxiliary had a 1.3 percent job growth, and represents the location of manufacturing headquarters functions within the MSA. The most competitive industry in the MSA, with a score of 94, is scheduled air transportation. Miscellaneous business services, which includes security systems services, news syndicates, and photo finishing labs, was the least competitive of the four key industries. These key industries represent three sectors: transportation and utilities, manufacturing, and services.

Table 1: Key and Notable Industries, Indianapolis MSA

Key Industries	Sector	1997 Employment Share	Employment Growth 1989-1997	Competitiveness Score
Manufacturing administrative and auxiliary	Manufacturing	2.0%	1.3%	88
Miscellaneous business services	Services	1.8%	1.0%	81
Trucking and courier services, except air	Transportation and utilities	2.7%	0.4%	88
Air transportation, scheduled	Transportation and utilities	1.2%	0.9%	94
Notable Industries				
Department stores	Retail	2.4%	0.6%	42
Eating and drinking places	Retail	7.9%	1.8%	52
Computer and data processing services	Services	1.2%	0.5%	70
Hospitals	Services	6.1%	2.1%	69
Personnel supply services	Services	2.2%	0.6%	44
Religious organizations	Services	1.7%	0.8%	72

Adapted from U.S. Census Bureau. *County Business Patterns*, May 18, 2001.

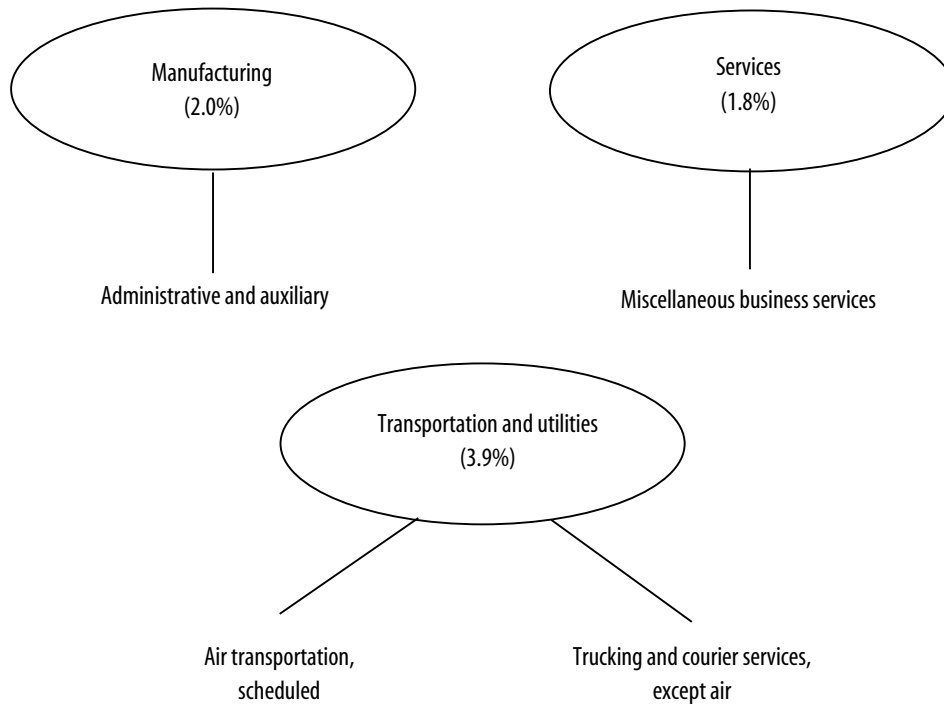
Notable industries in the Indianapolis MSA are quite different than those of other Central Indiana MSAs. Of all industries, eating and drinking places had the largest employment share (7.9 percent) but very low competitiveness score, while hospitals had the highest job growth (2.1 percent) and somewhat higher national competitiveness. Computer and data processing, a high-tech industry as defined



by the BLS, is the only high-tech industry among the key and notable industries.¹ Religious organizations, personnel supply services, and department stores round out the list of notable industries. The drug industry, one of the hallmark industries of the Indianapolis MSA, is not on the list because its job share was too small (0.5 percent of MSA employment), although it was competitive (86).

The central location of the Indianapolis MSA explains the strength in the transportation and utilities sector, as well as the manufacturing sector. None of the four key industries added a substantial amount of MSA employment in 1997 (7.7 percent). The notable industries contribute an additional 21.5 percent and the two categories taken together sum to 29.2 percent. In contrast, key industries total 38.1 percent in Terre Haute MSA, 34.1 percent in Lafayette MSA, and 28.2 percent in Muncie MSA. Adding in the notable industries for these three MSAs raises the total shares of employment to 42.2 percent, 48.5 percent, and 45.1 percent, respectively. The Indianapolis MSA economy is so much more diverse than those of the other five Central Indiana MSAs that techniques used here identify noticeably smaller shares of total employment (Figure 1).

Figure 1: Indianapolis MSA Key Sectors and 1997 Employment Share

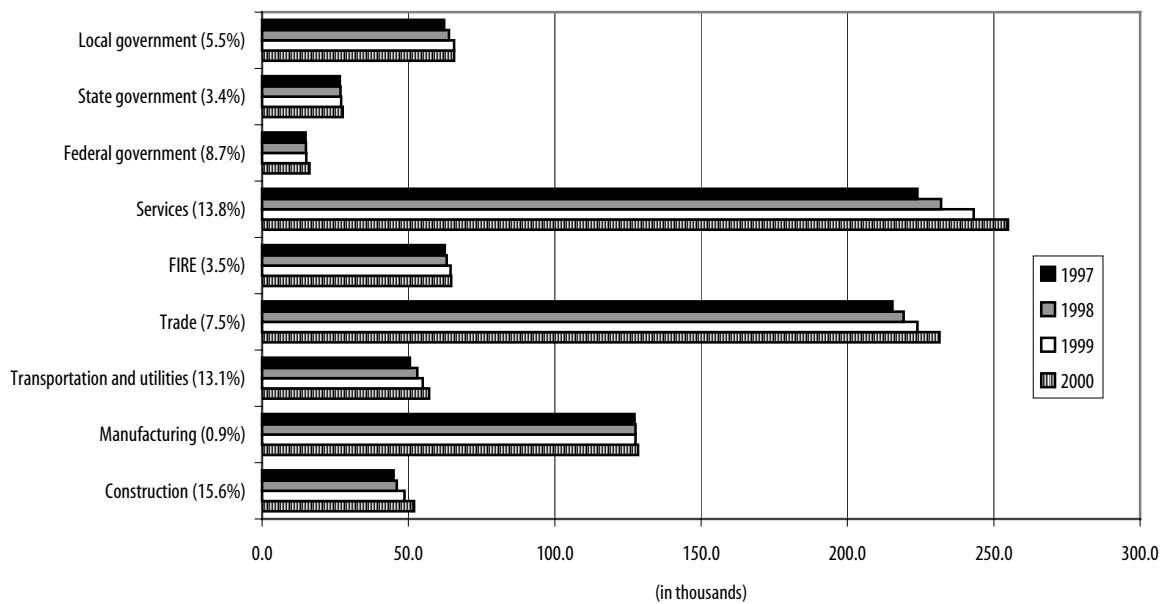


¹ No exact definition for high-technology industries exists, but several attempts have been made by the BLS to define and classify high-tech industries. One such effort, made by Haddock, Hecker, and Gannon in 1991, classifies high-tech industries based on the proportion of research and development employment relative to the average proportion of such employment in all industries. Industries with research and development employment of at least 50 percent greater than other industries were classified as high-tech. Other industries, meeting only the proportion of industry employment, were considered high-tech as well, but at a lesser degree. According to them, examples of high-tech industries include drugs, measuring and controlling devices, computer and data processing services, aircraft and parts, and motor vehicles and equipment.



As shown in Figure 2, since 1997, it appears that the key sectors (transportation and utilities, services, and manufacturing) all increased in employment, as measured by the BLS. Transportation and utilities grew by 13.1 percent while services grew by 13.8 percent. Manufacturing, the sector to which the administrative and auxiliary and drugs industries belong, grew the slowest with a 0.9 percent increase. The trade sector grew by 7.5 percent. FIRE, a sector thought to be strong in Indianapolis, grew by 3.5 percent.

Figure 2: Indianapolis MSA Employment, 1997-2000 (Percent Change 1997 to 2000)



Adapted from U.S. Census Bureau. *State and area current employment*, February 6, 2001.



Table 2: Key and Notable Industries, Lafayette MSA

Key Industries	Sector	1997 Employment Share	Employment Growth 1989-1997	Competitiveness Score
General building contractors	Construction	1.5%	0.6%	81
Fire, marine, and casualty insurance	FIRE	2.3%	0.4%	95
Commercial banks	FIRE	1.6%	0.7%	82
Motor vehicles and equipment	Manufacturing	9.1%	7.8%	98
Miscellaneous food and kindred products	Manufacturing	2.7%	1.7%	99
Drugs	Manufacturing	1.9%	1.8%	96
Engines and turbines	Manufacturing	1.8%	1.1%	96
Eating and drinking places	Retail	9.5%	1.7%	81
Department stores	Retail	3.7%	1.3%	91
Notable Industries				
Nonferrous rolling and drawing	Manufacturing	2.6%	-0.2%	97
General industrial machinery	Manufacturing	1.8%	-0.5%	98
Hospitals	Services	4.6%	0.7%	40
Personnel supply services	Services	3.2%	2.4%	74
Management and public relations	Services	1.1%	1.0%	73
Trucking and courier services, except air	Transportation and utility	1.1%	0.5%	27

Adapted from U.S. Census Bureau. *County Business Patterns*, May 18, 2001.



LAFAYETTE MSA KEY INDUSTRIES

Of the nine key industries identified in Lafayette, the strongest is motor vehicles and equipment (Table 2). Miscellaneous food and kindred products had a higher competitiveness score of 99, but motor vehicles and equipment had a much larger share of employment (9.1 percent compared with 2.7 percent) in 1997 and a much larger percent job growth between 1989 and 1997 (7.8 percent compared with 1.7 percent). Eating and drinking places had a larger share of employees than motor vehicles and equipment, but a much lower competitiveness score. The fire, marine, and casualty insurance industry had the smallest percent job growth of the nine key industries, growing at 0.4 percent between 1989 and 1997. The drug industry had the second highest job growth (1.8 percent). Lafayette had a total of 283 industries in 1997.

There are several notable industries that are not identified as key industries but still deserve attention. Nonferrous rolling and drawing and general industrial machinery, both classified as manufacturing sectors, were large industries and very competitive in 1997. However, both experienced negative job growth. It could be that even though these industries lost employment, they retain their competitive stature due to innovative processes that require fewer people. Four industries meet the industry size and job growth criteria, but not the competitiveness criterion. Two industries, hospitals and trucking and courier services with strengths in share and growth, ranked poorly on the competitiveness scale with scores of 40 and 27, respectively.

Manufacturing is the dominant sector in Lafayette, contributing nearly 20 percent of employment in key and notable industries alone, although retail industries are strong at over 13 percent of employment (Figure 3, page 12). The Lafayette MSA has the most high-tech industries: motor vehicles and equipment, drugs, nonferrous rolling and drawing (which includes aluminum and copper work), management and public relations services, engines and turbines, and general industrial machinery. Five of these high-tech industries are in the manufacturing sector.

Between 1997 and 2000, all sectors in the Lafayette MSA show employment growth according to the BLS, with the exception of FIRE, which did experience a 2.6 percent decline between 1997 and 2000, and no growth between 1999 and 2000 (Figure 4, page 12). The largest growth for the period belonged to the services sector (9.6 percent), which included the hospital and personnel supply services industries. Transportation and utilities employment grew by 8.7 percent. Manufacturing employment grew by 3.1 percent. The trade sector, which includes the retail industries, increased by 5.8 percent.



Figure 3: Lafayette MSA Key Sectors and 1997 Employment Share

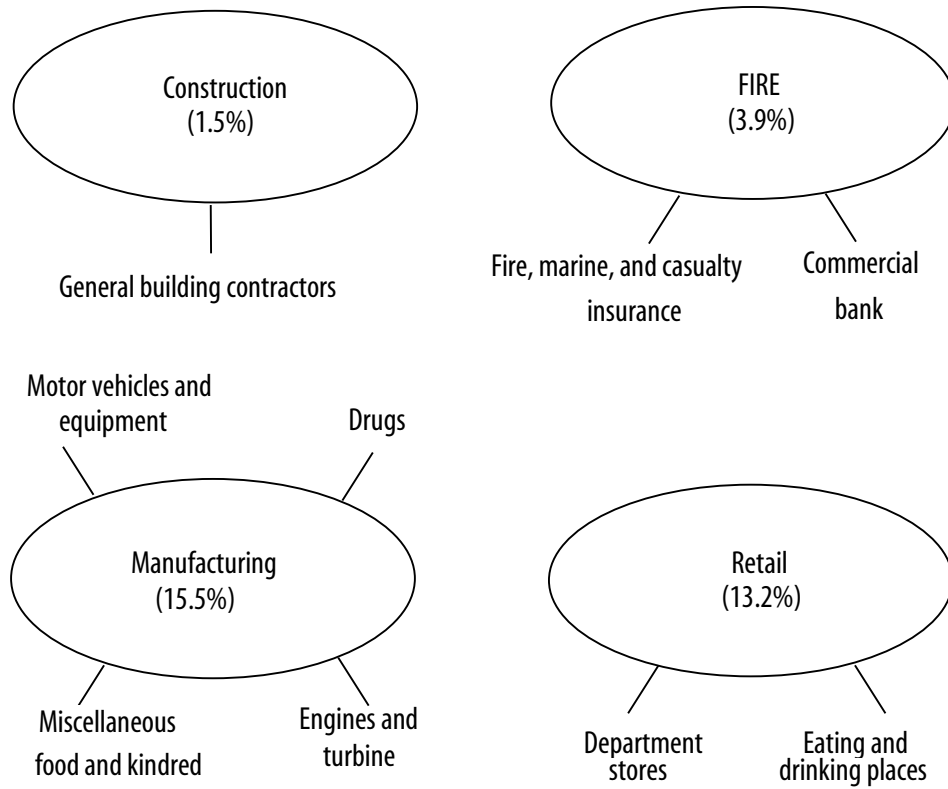
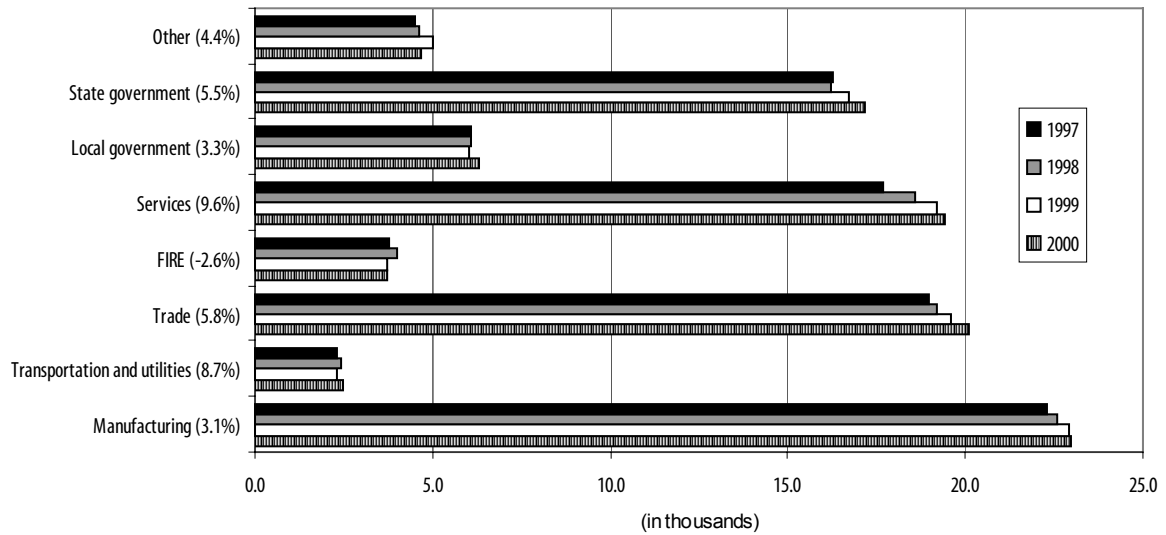


Figure 4: Lafayette MSA Employment, 1997-2000 (Percent Change 1997 to 2000)



Adapted from U.S. Census Bureau. *State and area current employment*, February 6, 2001.



TERRE HAUTE MSA KEY INDUSTRIES

The economy of the Terre Haute MSA, which encompassed 279 total industries, is the most diverse in terms of key industries, but includes the usual manufacturing, services, and retail sectors (Table 3). Two industries, eating and drinking places and hospitals, are clearly the largest industries with employment shares of 9.9 percent and 7.8 percent, respectively. Hospitals also had the highest employment growth (3.6 percent). The most competitive industry in 1997 was nonstore retailers, which includes businesses such as catalogue, mail order, and direct selling establishments. The importance and diversity of the manufacturing sector should not be overlooked, even though for key and notable industries it contributed just under 10 percent of employment. The strengths in manufacturing range from car bodies to storage batteries to laminated plastics. Miscellaneous electrical equipment and supplies is the strongest manufacturing industry, with a 2.4 percent employment share in 1997 and a competitiveness score of 98. Of the key and notable industries, only two industries are considered high-tech: motor vehicles and equipment and drugs.

Table 3: Key and Notable Industries, Terre Haute MSA

Key Industries	Sector	1997 Employment Share	Employment Growth 1989-1997	Competitiveness Score
Plumbing, heating, and air-conditioning	Construction	1.3%	0.6%	95
Commercial banks	FIRE	1.9%	0.5%	89
Miscellaneous electrical equipment and supplies	Manufacturing	2.4%	1.1%	98
Motor vehicles and equipment	Manufacturing	2.3%	0.8%	91
Miscellaneous plastics products, n.e.c.	Manufacturing	1.8%	0.4%	93
Eating and drinking places	Retail	9.9%	2.4%	85
Nonstore retailers	Retail	4.2%	0.6%	99
Department stores	Retail	4.0%	1.6%	95
Hospitals	Services	7.8%	3.6%	86
Colleges and universities	Services	2.5%	1.8%	88
Notable Industries				
Drugs	Manufacturing	3.1%	-0.5%	98
Home health care services	Services	1.0%	0.4%	71

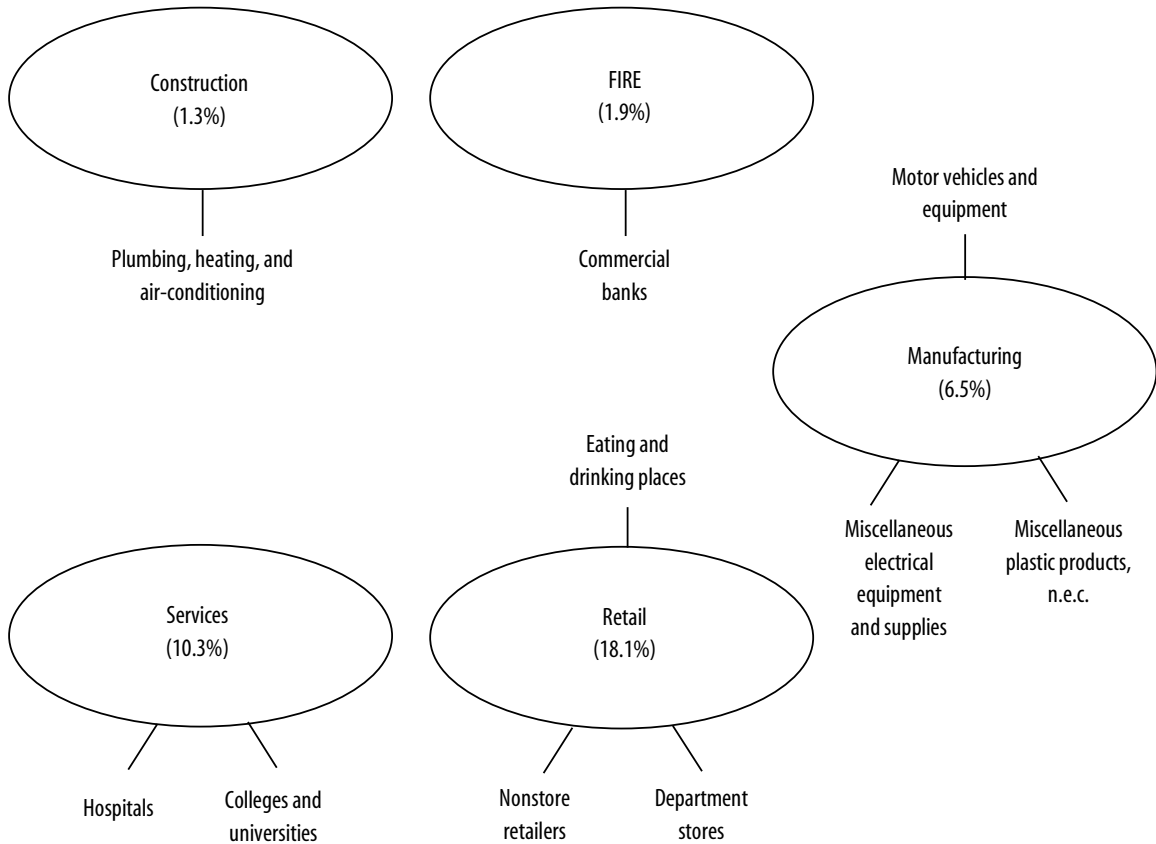
Adapted from U.S. Census Bureau. *County Business Patterns*, May 18, 2001.

Two other industries in Terre Haute are of some note to its economy. The drug industry, part of the manufacturing sector, had negative job growth between 1989 and 1997, losing 0.5 percent of employment. This loss of employment was of little consequence to the industry as it remained large (3.1 percent share of employment) and highly competitive (98). Home health care services was large with high employment growth, but was not competitive on a national scale.



Terre Haute's economy is the most diverse economy of all MSAs, with ten key industries in five sectors: retail, construction, manufacturing, FIRE, and services (Figure 5). Three industries are classified as retail which, given the fact this accounts for nearly one-quarter of key industry employment, makes Terre Haute a strong retail cluster (18.1 percent of key industry employment). Manufacturing, contributing just over 6 percent of key industry employment, appears to be less important in this MSA than in other MSAs.

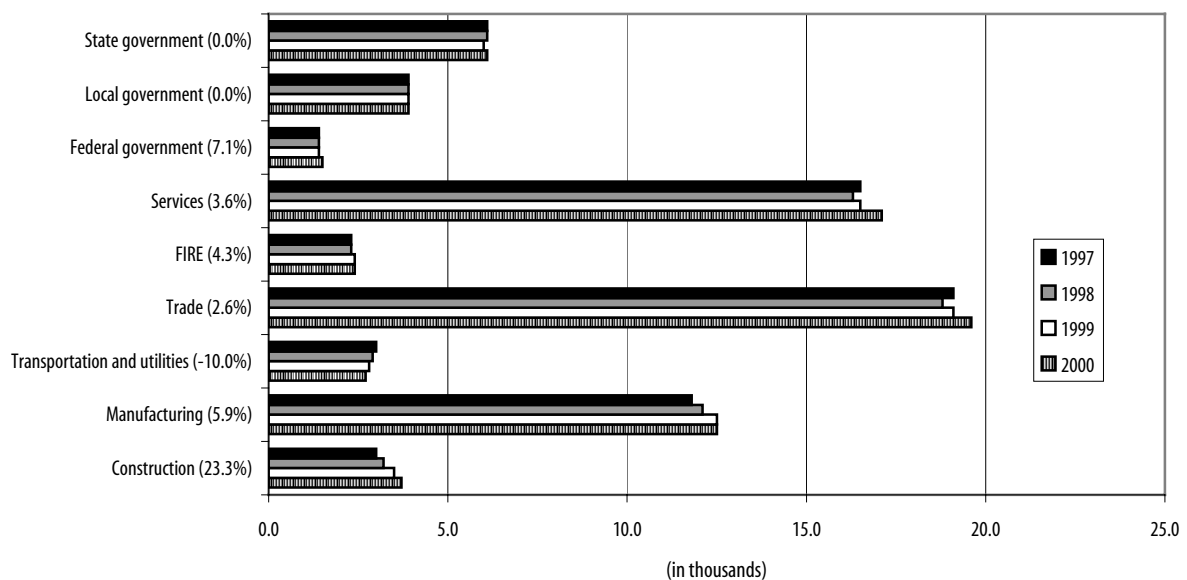
Figure 5: Terre Haute MSA Key Sectors and 1997 Employment Share





The construction sector, while employing only 3,700 people in 2000, grew by 23.3 percent between 1997 and 2000, the largest percent increase of any sector (Figure 6). Manufacturing, an important sector in the Terre Haute MSA, grew by 5.9 percent, while FIRE grew by 4.3 percent. Services, which includes hospitals, had employment growth of 3.6 percent. The trade sector, which includes the industries nonstore retailers and eating and drinking places, grew by just 2.6 percent. Transportation lost 10 percent, while state and local government neither gained nor lost employment.

Figure 6: Terre Haute MSA Employment, 1997-2000 (Percent Change 1997 to 2000)



Adapted from U.S. Census Bureau. *State and area current employment*, February 6, 2001.





KOKOMO MSA KEY INDUSTRIES

Kokomo's economy is much less diverse including only 250 industries in 1997, the fewest number of industries of all MSAs. Only three industries, motor vehicles and equipment, electrical work, and health and allied services, are identified as key (Table 4). Among these, motor vehicles and equipment is by far the largest (36.2 percent employment share), the highest growth (25.9 percent) and the most competitive (99) industry. Additionally, motor vehicles and equipment is defined as a high-tech industry. No other key industry comes close to matching the sheer size or growth of this industry, although the other two industries are highly competitive. Electrical work and health and allied services contribute minimal employment shares (1.2 and 1.1 percent, respectively).

Table 4: Key and Notable Industries, Kokomo MSA

Key Industries	Sector	1997 Employment Share	Employment Change 1989-1997	Competitiveness Score
Electrical work	Construction	1.2%	0.9%	97
Motor vehicles and equipment	Manufacturing	36.2%	25.9%	99
Health and allied services, n.e.c.	Services	1.1%	1.1%	96
Notable Industries				
General building contractors	Construction	1.0%	0.5%	36
Department stores	Retail	3.0%	1.2%	76
Eating and drinking places	Retail	8.2%	1.8%	57
Computer and data processing services	Services	1.0%	0.6%	66
Hospitals	Services	4.7%	3.1%	42
Personnel supply services	Services	1.3%	0.6%	17
Religious organizations	Services	1.8%	0.8%	74

Adapted from U.S. Census Bureau. *County Business Patterns*, May 18, 2001.

There are seven notable industries that do not meet all three key industry criteria. These industries are large, with high job growth, but none is competitive. Eating and drinking places was the second largest industry in 1997, with an 8.2 percent employment share. Hospitals had a rather large employment change at 3.1 percent but it remained noncompetitive. Computer and data processing, with a 1.0 percent employment share and a low competitiveness score of 66, is defined as a high-tech industry.

Clearly, motor vehicles and equipment manufacturing is the single most important industry in Kokomo's economy, with over one-third of employment for the entire MSA, although this may render Kokomo highly susceptible to the cyclicality of motor vehicle manufacturing. The other key and notable industries are but a footnote in this MSA's economy (Figure 7, page 18).

Examination of BLS employment data in the Kokomo MSA since 1997 reveals that the manufacturing sector actually lost one percent of employment between 1997 and 2000, making it the only sector to experience a decline (Figure 8, page 18). The largest employment gains were in the services (9.9 percent) and local government sectors (7.3 percent). Trade employment gained 3.6 percent.



Figure 7: Kokomo MSA Key Sectors and 1997 Employment Share

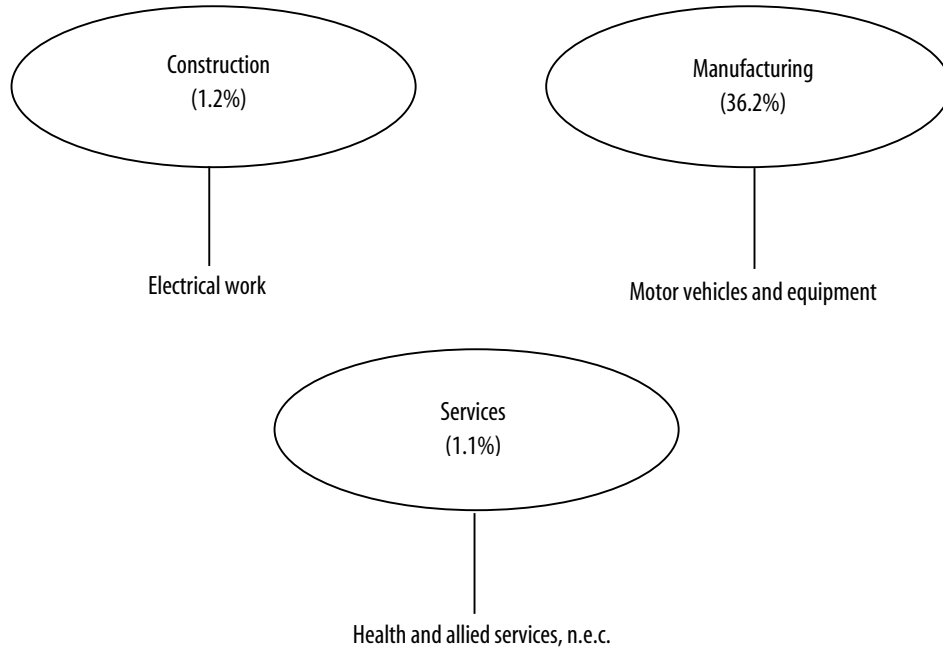
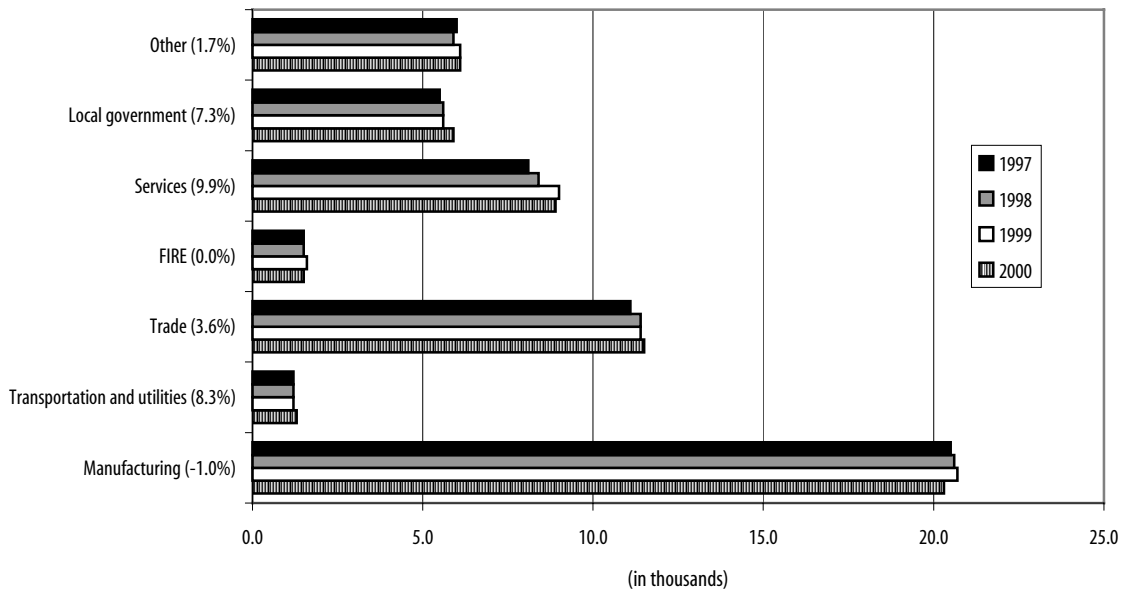


Figure 8: Kokomo MSA Employment, 1997-2000 (Percent Change 1997 to 2000)



Adapted from U.S. Census Bureau. *State and area current employment*, February 6, 2001.



MUNCIE MSA KEY INDUSTRIES

In 1997, total number of industries in the Muncie MSA was 267, and the most competitive industry was landscape and horticultural services, the only key or notable industry representative of the agriculture, forestry and fishing sector in the six MSAs (Table 5). However, this industry was not the largest or fastest growing industry in Muncie. The largest industry, based on its employment share of 9.9 percent, was eating and drinking places. This industry also had relatively high job growth (1.4 percent) and was fairly competitive (85). The trucking and courier services industry experienced the largest employment growth at 2.0 percent; the sector also was highly competitive with a score of 95. The wholesale end of motor vehicles, parts, and supplies, the only such key industry in the six MSAs, grew by 0.5 percent, had an employment share of 1.2 percent, and was very competitive with a score of 96.

Table 5: Key and Notable Industries, Muncie MSA

Key Industries	Sector	1997 Employment Share	Employment Growth 1989-1997	Competitiveness Score
Landscape and horticultural services	Agriculture, forestry, and fishing	2.9%	1.1%	99
Eating and drinking places	Retail	9.9%	1.4%	85
Department stores	Retail	3.7%	1.5%	90
Nursing and personal care facilities	Services	3.0%	0.8%	85
Offices and clinics of medical doctors	Services	2.4%	1.3%	90
Individual and family services	Services	1.3%	1.2%	89
Trucking and courier services, except air	Transportation and utilities	3.8%	2.0%	95
Motor vehicles, parts, and supplies	Wholesale	1.2%	0.5%	96
Notable Industries				
Metal forgings and stampings	Manufacturing	1.9%	-0.8%	97
Metalworkings machinery	Manufacturing	1.0%	-0.3%	91
Motor vehicles and equipment	Manufacturing	7.6%	-1.3%	97
Hospitals	Services	4.9%	0.5%	44
Miscellaneous business services	Services	1.5%	0.7%	68

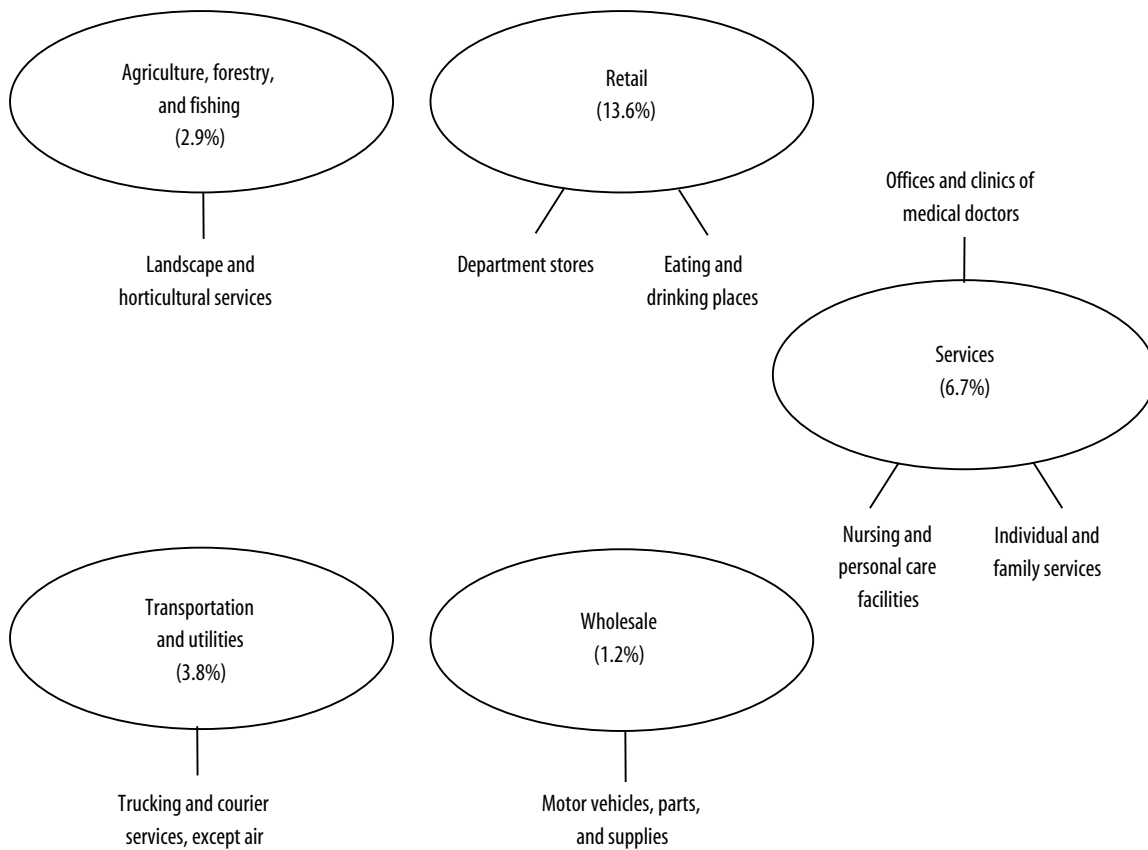
Adapted from U.S. Census Bureau. *County Business Patterns*, May 18, 2001.

As for notable industries, several stand out. Three manufacturing industries—motor vehicles and equipment, metal forgings and stampings, and metal working machinery—while all very competitive, experienced negative job growth between 1989 and 1997. Motor vehicles and equipment, which had the second highest share of employment (7.6 percent), had the greatest negative growth of key and notable industries (-1.3 percent). Again, however, this could reflect efficiencies linked to capital investment or innovative processes requiring fewer personnel. Two services sector industries, miscellaneous business services and hospitals, were large industries and had adequate job growth but were not especially competitive in the national percentile rankings.



Although eight separate industries are identified as key, the Muncie MSA economy appears to be reliant on two sectors, retail and services (Figure 9), which contribute 13.6 percent and 6.7 percent, respectively, of key industry employment. Even though key industries are classified into three other sectors, these sectors do not contribute a substantial amount of employment. Motor vehicles and equipment manufacturing had negative job growth, but its large employment share and highly competitive nature make it difficult to ignore its impact on Muncie's economy. Metal forgings and stampings and metalworking machinery, both tied to the motor vehicle industry, experienced decreasing employment from 1989 to 1997, perhaps signaling an overall decrease in manufacturing importance. Its services sector revolves primarily around health.

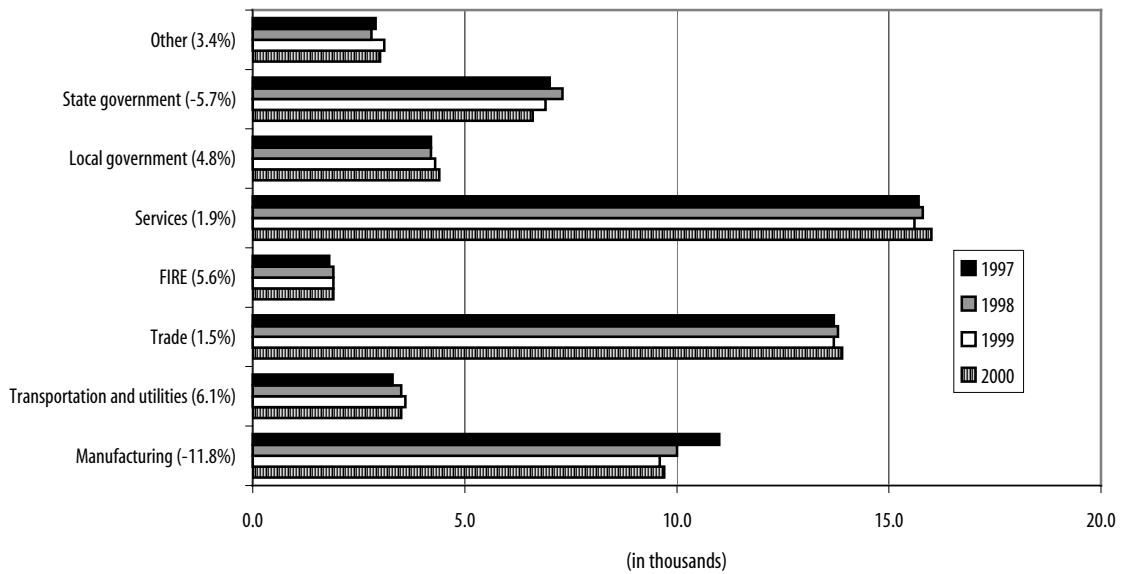
Figure 9: Muncie MSA Key Sectors and 1997 Employment Share





Muncie's employment between 1997 and 2000 was volatile (Figure 10). The manufacturing sector lost 11.8 percent of its employment for the period, while state government lost 5.7 percent. No sector gained more than the 6.1 percent increase in the transportation sector. As seen in Table 3, the transportation sector also had the highest employment growth between 1989 and 1997. The services sector grew by 1.9 percent, which is consistent with the sector having three key industries in 1997.

Figure 10: Muncie MSA Employment, 1997-2000 (Percent Change 1997 to 2000)



Adapted from U.S. Census Bureau. *State and area current employment*, February 6, 2001.





BLOOMINGTON MSA KEY INDUSTRIES

Even though in 1997 there were 279 industries in the MSA, the list of key industries in Bloomington is short: household appliances, medical instruments and supplies, and eating and drinking places (Table 6). As with other MSAs, the largest industry is eating and drinking places, with 12.2 percent employment share. Household appliances had the largest employment growth (3.8 percent) as well as the highest competitiveness score (99) prior to 1997, but its strength has been declining since Thompson Electronics (RCA) has continued to shift production activities to Mexico.

Table 6: Key and Notable Industries, Bloomington MSA

Key Industries	Sector	1997 Employment Share	Employment Growth 1989-1997	Competitiveness Score
Household appliances	Manufacturing	8.1%	3.8%	99
Medical instruments and supplies	Manufacturing	2.9%	1.8%	98
Eating and drinking places	Retail	12.2%	1.6%	96
Notable Industries				
Plumbing, heating, and air conditioning	Construction	1.0%	0.4%	72
Construction related machinery	Manufacturing	2.9%	-0.8%	98
Household audio and video equipment	Manufacturing	1.2%	-3.1%	99
Department stores	Retail	3.1%	0.6%	78
Hospitals	Services	5.0%	1.4%	47
Offices and clinics of medical doctors	Services	2.0%	0.9%	75
Personnel supply services	Services	1.2%	0.7%	15
Individual and family services	Services	1.1%	0.9%	79
Trucking and courier services, except air	Transportation and utility	1.1%	0.4%	24

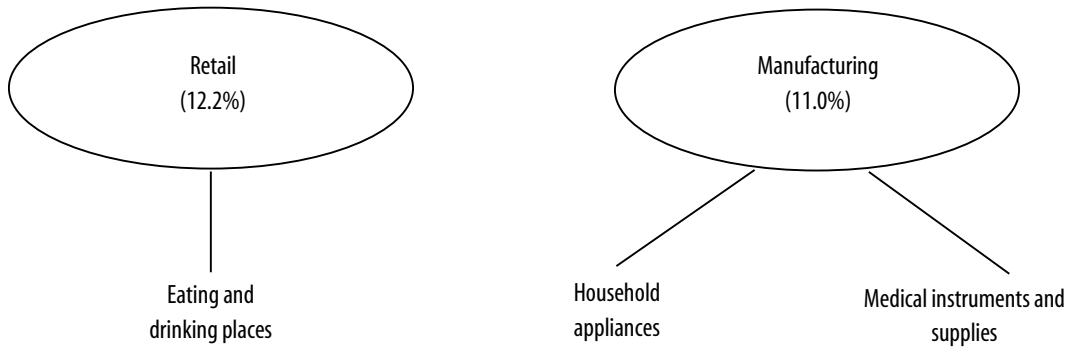
Adapted from U.S. Census Bureau. *County Business Patterns*, May 18, 2001.

However, the list of notable industries is quite extensive. While key industries are classified into two sectors—retail and manufacturing—notable industries include services, transportation and utilities, and construction. Hospitals, with a strong employment share of 5.0 percent and job growth of 1.4 percent was still in the lower half of the competitiveness ranking, with a score of 47. Two industries, construction related machinery and household audio and visual equipment, had negative employment growth but remained large (2.9 percent and 1.2 percent, respectively) and competitive (98 and 99, respectively). A number of other industries had good job growth and were large, but had low competitiveness scores.

As Figure 11 illustrates (page 24), while Bloomington MSA's key industries are the least diverse of all MSAs, it also reflects the importance of the manufacturing sector in the Central Indiana economy, despite its lack of vehicle manufacturing. Additionally, with over 15 percent of employment, the eating and drinking places and department stores industries create a retail cluster in Bloomington. Medical instruments and supplies is a high-tech industry and it appears to be very strong in the Bloomington MSA.

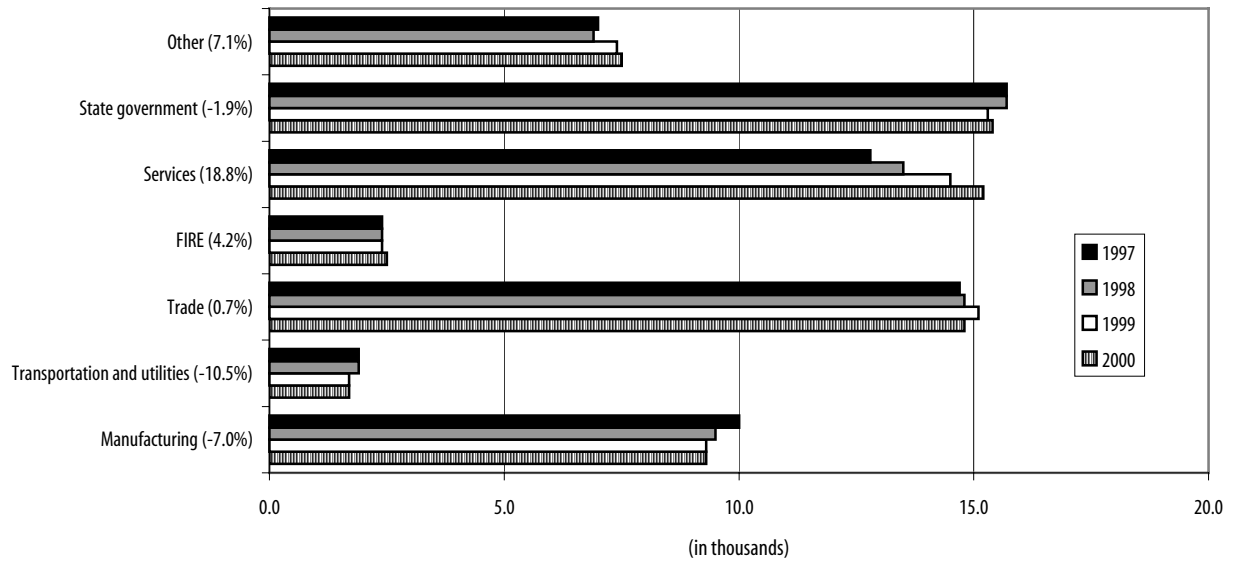


Figure 11: Bloomington MSA Key Sectors and 1997 Employment Share



BLS Employment figures for Bloomington reveal that between 1997 and 2000, the manufacturing (-7.0 percent), transportation and utilities (-10.5 percent) and state government (-1.9 percent) sectors all lost employment (Figure 12). Services gained 18.8 percent employment, which is surprising given that no key industry is classified as a service sector, and of the notable industries services provides just over 7 percent of jobs in 1997. Trade employment gained just 0.7 percent.

Figure 12: Bloomington MSA Employment, 1997-2000 (Percent Change 1997 to 2000)



Adapted from U.S. Census Bureau. *State and area current employment*, February 6, 2001.



CENTRAL INDIANA MSAS MAKING STRIDES TOWARD NEW ECONOMY

The economies of each of Central Indiana's MSAs are distinct from one another, but do enjoy common strengths, as an examination of key and notable industries reveals. Manufacturing is important throughout Central Indiana and is particularly strong in the Kokomo and Lafayette MSAs. In 1997, over one-third of all employment was in the manufacturing sector in Kokomo, the highest rate for any sector in all the MSAs. The motor vehicles and equipment industry is strong in the Terre Haute, Kokomo, and Lafayette MSAs. Lafayette's manufacturing sector is diverse, including drugs, miscellaneous food and kindred products, and engines and turbines. Lafayette is the only MSA to have drugs as a key industry in its economy as measured by these criteria. While manufacturing is represented in the Indianapolis MSA, it accounted for only 2.0 percent of key and notable industry employment in 1997. Additionally, Indianapolis is the only MSA with manufacturing administration and auxiliary as a key industry. This is not surprising given the number of manufacturing headquarter businesses in the MSA.

Retail is an important economic sector in all MSAs. The MSAs where those attending and working at colleges and universities represent a significant shares of the population, Bloomington, Lafayette, Muncie, and Terre Haute, have eating and drinking places among their key industries. Retail is particularly strong in Terre Haute, where it provided 18.1 percent of key employment in 1997.

The FIRE sector, to which the commercial banks and fire, marine, and casualty insurance industries belong, is represented as a key industry in just two MSAs, Lafayette and Terre Haute. Employment in this sector for these MSAs was 3.9 percent and 2.0 percent, respectively. While Indianapolis employment in this sector was 7.1 percent of leading industries, no FIRE industry was either key or notable (see Appendix). Employment in the construction sector ranges between .5 percent (Muncie) and 3.3 percent (Indianapolis) of employment of all leading industries for the six MSAs. Construction industry strengths are not shared among the MSAs; Kokomo's key industry was electrical work, Terre Haute's was plumbing, heating, and air-conditioning, and Lafayette's was general building contractors.

Indianapolis is the leader among MSAs in the transportation and utility sector, with key industries in trucking and courier services and scheduled air. In 1997, employment in this sector accounted for 3.9 percent of key Indianapolis employment. Muncie also has a strong presence in the trucking and courier services, as do Lafayette and Bloomington. The close proximity of these MSAs and the strengths in this transportation sector appear to create a cluster of trucking services in Central Indiana.

Muncie is the only MSA to have key industries in the agriculture, forestry, and fishing and wholesale sectors. Landscape and horticultural services is the only such industry represented in Central Indiana, even among the notable industries. All MSAs except Terre Haute have leading industries in the agricultural services, forestry, and fishing sector (see Appendix). The wholesale end of motor vehicles and parts is an interesting key industry for this MSA, given that the manufacturing end of motor vehicles and equipment lost employment between 1989 and 1997. Indianapolis had a larger share of leading industry employment (2.4 percent) in the wholesale sector than did Muncie (1.2 percent).

In no other sector are the differences of the MSA economies more apparent than in the services sector. None of the MSAs share any one key service industry. Indianapolis' key industry is miscellaneous business services, which represents the only such service category in the MSAs. Muncie's key industries are all health related: offices and clinics of medical doctors, nursing and personal care facilities, and



individual and family services. Kokomo has a key health and allied services industry. Hospital industries, part of the services sector, are a common strength among all MSAs. Terre Haute is the only MSA to have hospitals identified as a key industry, even though all other MSAs have hospitals as a notable industry because of high employment, high job growth but low competitiveness.

Spatially, it is of some note that the most diverse MSA in terms of the number of key industries, Terre Haute, is the MSA least centrally located in the Central Indiana region. The other five MSAs are contiguous and centrally located in the region as well as the state. It also appears that the industries in the Terre Haute MSA are more traditional, relying more on old-economy industries such as manufacturing and retail, than are the industries in the other MSAs. While it is true that the state economy continues to be predominately manufacturing, the individual central MSAs do have a larger number of high-tech industries than Terre Haute, indicating that a central location, and to some extent a symbiotic relationship, is beneficial to the research and development activities that drive high-tech industries.

Clearly, traditional manufacturing dominates the economies of Central Indiana MSAs. It is no surprise that motor vehicle and equipment manufacturing is one of the largest and most important industries in the region, nor is it a surprise that employment from 1997 to 2000 in manufacturing, services, and retail continued to climb, rendering these economies more reliant on such industries and less reliant on non-traditional economic drivers. While there appears to be a cluster of high-tech industries in the central region, these industries do not yet seem to be growing rapidly enough or becoming nationally competitive enough to meet the need for greater economic diversity in Central Indiana.



CONCLUSION

While Central Indiana's economy continues to be reliant on traditional industries to drive economic growth and stability, state-level initiatives are being formed to pursue and capture new-economy, high-tech industries. For example, in 1999 the state established the Twenty-First Century Research and Technology Fund to financially support policies that target high-growth, research and development, and high-tech firms. Additionally, the Indiana Economic Development Partnership Fund, effective July 1, 2001, will fund regional technology centers that agree to, among other things, expand high-tech business opportunities and employment, and to provide funding for support services to high-tech firms.

Because traditional manufacturing is highly pervasive throughout the state, policy makers must find a way to ensure that this sector of the economy remains viable. However, it is imperative that future policies allow Central Indiana—and the entire state—to not only build on strengths already in place but also to become nationally competitive in new economy industries.





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APPENDIX













































