

Where Indiana lost some manufacturing jobs in the early years of the decade, it had gained 45,600 such jobs (7.1%) by 1998. The nation, however, lost 271,400 manufacturing jobs between 1990 and 1998 (-1.4%) (see **Figure 6**).

Manufacturing workers have done well in Indiana during the 1990s. Figure 7 reveals that Hoosier manufacturing workers have increasing amounts of overtime work available and that the number of hours worked in Indiana, compared to the median state, is growing. In **Figure 8** and **Figure 9**, we see that Indiana manufacturing workers have increased their lead on manufacturing workers in the median state in average hourly earnings and in average weekly earnings. With employment growing in manufacturing, it is hard to argue that Hoosier workers are pricing themselves out of the market. These increased earnings may reflect increased productivity as a result of capital investment, effective training, and improved management.

Caution should be taken, however, since the higher level of earnings and the growing differential between Indiana and the nation could encourage firms to move their activities to other locations in the future. Thus, the ongoing concern for Indiana in the next few years will remain emphasis on continued improvements in labor productivity in the state's manufacturing productivity as well as an accelerated drive to bring other workers' earnings up to higher levels should some manufacturing jobs be lost.

Concluding Note

The evidence seems to support the idea that Indiana has *not* changed its relationship to the nation during the 1990s. Our relative surge in employment growth during the early years of the '90s was the result of slow growth in other states more than strong advances by Indiana. That may have been a consequence of declines in federal spending on defense following the end of the Cold War. Indiana is known for its consumer goods rather than its military outputs.

Manufacturing continues to be the major player in our state's economic base. The growth of services is not likely to contribute to the state's economic base. Hence, our attention must continue to focus on our existing strengths while we attempt to expand that base with new goods and services that will attract buyers from domestic and international markets alike.

Indianapolis

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The Indianapolis metropolitan (nine-county) economy will continue to grow in 2000 at a rate that is strong compared to the Midwest region but somewhat less than the national rate. The employment growth will be moderate—increasing 10,000 to 15,000 jobs. In 1999, the high rate of growth in consumer spending was a major source of strength nationally and locally. Is it sustainable?

In 1998 and part of 1999, consumer spending was very strong due to wealth gains from the stock and real estate markets, reduced prices for energy and imports, stable health care costs, and reduced monthly mortgage payments due to refinancing. National consumer spending will not be as strong in 2000. The reduced rate of spending will affect spending on cars/trucks. In 1999 in Indianapolis, construction and motor vehicle employment were engines of growth, but will make lesser contributions in 2000.

Exports nationally are expected to be stronger in 2000 and will benefit local firms. However, the data on exports are based on the zip code of the reporting unit, usually the marketing group at the corporate headquarters. An Indianapolis firm may have plants located in other parts of the country. Therefore, the positive production and employment effects arising from increased exports may occur elsewhere than Indianapolis—the reporting location of the exports. Expanding exports should offset some of the slowing consumer durables spending.

Entrepreneurial Momentum

As Indianapolis enters the 21st century, a high-tech initiative has been launched. In a national ranking, Indianapolis was ranked number 1 in entrepreneurship in the Midwest. Under former Mayor Goldsmith's initiative, a Central Indiana Technology Partnership was developed. The Lilly Endowment made a grant of \$29.9 million to the Indiana University Foundation for research in fundamental information technologies. Three research laboratories will be established in Indianapolis based on this grant. Central Indiana institutions and firms expect to be well-represented in the competition for the Indiana General Assembly \$50 million 21st Century Research and Technology Fund.

Indianapolis has been known as the crossroads of America with its many interstate highways passing through. Now, it is the crossroads of America in

Table 1
Growth Rates for Labor Force and Employment for Selected Metropolitan Areas, 1996 (2nd quarter) to 1999 (2nd quarter)

| Metropolitan Area | Labor Force Percent Change | Employment Percent Change |
|-------------------|----------------------------|---------------------------|
| Indianapolis | 3.5 | 4.7 |
| Charlotte | 4.4 | 5.9 |
| Cincinnati | 6.3 | 7.5 |
| Columbus | 5.6 | 6.1 |
| Fort Worth | 8.9 | 10.0 |
| San Jose | 9.3 | 9.6 |
| Orlando | 13.0 | 14.0 |
| Kansas City | 6.5 | 7.9 |
| Portland | 4.9 | 5.3 |
| San Antonio | 6.5 | 8.0 |
| Salt Lake City | 9.0 | 9.3 |
| Milwaukee | 0.9 | 1.3 |

Source: U.S. Department of Labor, Bureau of Labor Statistics

Table 2
Net Migration by Region and Selected States, 1997-1998, per 1000 population as of January 1st 1998

| Regions/States | Net Migration Per 1,000 People |
|---|--------------------------------|
| Regions | |
| Northeast | -5.7 |
| Midwest | -2.2 |
| South | 4.0 |
| West | 1.0 |
| States | |
| Illinois | -5.9 |
| Indiana | -0.2 |
| Kentucky | 2.0 |
| Michigan | -2.8 |
| Ohio | -3.3 |
| Wisconsin | -0.2 |
| * a negative sign means that outmigration exceeded immigration; a positive sign means immigration exceeded outmigration | |

Source: Population Estimates Program, U.S. Bureau of the Census

terms of the Information Superhighway because the operations centers for Abilene and TransPAC are located on the IUPUI campus. Abilene is the world's most advanced network for research and education; TransPAC is a high-performance research and education network connecting U.S. institutions with those in the Asian Pacific. Only time will determine to what extent the potential of these initiatives can be realized in terms of patents issued to Indianapolis residents and assigned to Indianapolis firms, and new research synergies, firms, and high-paying jobs.

Resource Endowment

Indianapolis is a place on the national economic landscape. How it responds to national economic forces depends on its resource endowment—labor, labor, capital, and entrepreneurship. Labor, capital, and entrepreneurship are mobile. Capital, in the form of corporate offices and plants, moves within the metropolitan area, state, nation, and globally. Labor, similarly, migrates internally within the U.S. and internationally. Because the property tax is the primary revenue source for local governments, local officials are especially sensitive about maintaining and increasing the property tax base. This means that attracting and holding labor, capital, and entrepreneurship become a primary concern. Highly-skilled individuals are especially mobile.

The way in which these resources are combined to produce goods and services depends on their relative prices. For example, land is relatively expensive in an urban area. In housing construction, increases in the price of land relative to other housing inputs have induced developers to economize on the use of land by reducing the size of the average lot. On the other hand, rapidly growing communities have used zoning to restrict the number of lots per acre as a way of constraining rising fiscal demands.

The availability and quality of labor have been widely discussed topics. One reason why employers have been concerned about the problems of attracting labor is the comparatively slow growth rate of the Indianapolis labor force. **Table 1** shows rates of growth for Indianapolis and selected metropolitan areas of similar size.

For each metropolitan area, the rate of employment growth exceeded the rate of the labor force growth. The unemployment rate fell because the labor force is the sum of the employed and the unemployed.

Labor force growth depends on the rate of population growth and the labor force participation rate—the proportion of the population that is in the labor force. The population growth depends on births minus deaths plus net migration. Let's look at migration at the state level for 1997-98, the most recent period

Table 3
Cost of Living Index

| Metropolitan Area | Fourth Quarter 1998 |
|------------------------------|---------------------|
| Indianapolis (Marion County) | 94.9* |
| Atlanta, GA | 103.3 |
| Phoenix-Mesa, AZ | 101.6 |
| Dallas, TX | 100.6 |
| Houston, TX | 93.6 |
| San Antonio, TX | 90.7 |
| Fort Lauderdale, FL | 107.7 |
| Miami, FL | 107.7 |
| Orlando, FL | 100.5 |

*Index based on average (=100) of participating areas; no taxes are included in the index.

Source: American Chamber of Commerce

Table 4
Per Capita State Tax Revenue and State Tax Revenue as Percent of Personal Income, 1998

| State | State Tax Revenue Per Capita | State Tax Revenue Rank | State Tax Revenue as a Percent of Personal Income | Rank |
|---------------------|------------------------------|------------------------|---|------|
| Indiana | 1,652 | 27th | 7.2 | 28th |
| Florida | 1,509 | 41st | 6.2 | 42nd |
| Georgia | 1,517 | 38th | 6.5 | 37th |
| Texas | 1,246 | 48th | 5.4 | 49th |
| Arizona | 1,488 | 42nd | 6.9 | 31st |
| All states combined | 1,761 | | 7.0 | |

Source: U.S. Bureau of the Census and Bureau of Economic Analysis

available in **Table 2**.

Indiana is in the Midwest region, a region in which more people moved out of the region than moved in. For Hoosier outmigrants, the South was the biggest draw followed by other Midwest states, and then the West. Migration is caused by both economic and noneconomic factors. From a cost of living perspective, Indianapolis compares well as shown in **Table 3**. Indianapolis' cost of living was 94.9 percent of the average of participating areas. Because taxes were excluded from the index in **Table 3**, information about state taxes is reviewed in **Table 4**. Population shifts affect the rate of household formation, an important demographic driver of the housing industry.

Housing

New home construction has been very strong for the past several years. The baby boomers (born 1946-64) played an important role in stimulating housing demand during the 1970s. However, the baby boomers' children, the echo boom, are considerably different. **Table 5** compares baby boomers and the echo boom at the national level based on each group at ages 18-22.

Those echo boomers who marry will more likely be dual-earners than their parents at the same ages. The echo boomers may have fewer children and will probably have wealthier parents, and might receive more help in making the downpayment on a home. Home prices have been rising. To help pay the higher prices, low downpayment loans have been expanded—the percent of loans with downpayments of five percent or less has increased from one percent in 1985 to seven percent in 1998 nationally. Debt-to-income ratios, cash reserve requirements, and documentation of credit history have been relaxed. In an economic slowdown, low-downpayment loans could pose some problems.

U.S. Housing and Urban Development (HUD) long-term subsidy contracts with owners of Section 8 project-based properties will be expiring. Owners will chose between renewing these contracts or opting out of them to convert to unsubsidized housing. Under a HUD initiative, market rents will be provided to below-market properties most likely to opt-out to minimize the numbers of renters who might be forced to relocate.

Efficiency and Equity Tradeoffs

Two major issues will face Indianapolis Mayor Bart Peterson in 2000. One is capturing wet weather discharges from the combined sewer system; the other is transportation.

Sewers

Capture of these flows is an economic efficiency is-

Table 5
Baby Boomers and the Echo Boom Compared, Percent in Each
Category at Ages 18 to 22, (national data)

| | Baby Boom | Echo Boom |
|-----------------------------|------------------|------------------|
| Population | | |
| Minority | 16.8 | 34.0 |
| Foreign-born | 3.4 | 10.1 |
| Second-Generation | 9.8 | 11.7 |
| Never Married | 67.0 | 88.4 |
| Women in Labor Force | 52.3 | 66.1 |
| Households | | |
| Single-Person | 13.7 | 23.1 |
| Married-Couple | 69.0 | 21.4 |
| Any Household with Children | 43.5 | 32.4 |
| Homeowner Rate | 16.2 | 15.2 |
| Single-Person | 8.5 | 11.4 |

Sources: *The State of the Nation's Housing, 1999*, Joint Center for Housing Studies of Harvard University

Table 6
Risk and Return Characteristics of Selected Nonbank Activities

| Relative to Banking | | |
|----------------------------|----------------------|-------------|
| Activity | Profitability | Risk |
| Securities | | |
| overall | higher | higher |
| underwriting | varies | higher |
| trading | higher | higher |
| Insurance | | |
| agency underwriting | higher | varies |
| property and casualty | higher | varies |
| life | varies | varies |

Source: Kwan and Laderman, "On the Portfolio Effects of Financial Convergence," *Economic Review of San Francisco Federal Reserve Bank*, 1999, No. 2, p.22.

sue—as the percentage of capture in gallons increases, the cost of capture increases at an increasing rate. The issue becomes: How much to capture at what cost, and how are these costs shared by homeowners and businesspeople? The City of Indianapolis is developing a long-term plan that will consist of a set of options to reduce the flows.

Transportation

A major transportation issue is the Northeast Corridor Transportation Study—how to deal with the projected increase in the number of trips in the area from downtown Indianapolis northeastward to Noblesville. In 2000, choices will be made from a list of alternative strategies including light rail transit, conventional bus, exclusive busways, high occupancy vehicle lanes, and road improvements. These strategies vary in their average operating speed (efficiency) and their cost (operating \$ per vehicle mile). Transportation is a multicounty issue. Both sewer and transportation issues will be costly to resolve and take time. Therefore, a broad base of political and economic support will need to be generated. How much are we willing and able to pay for the benefits of a better environment?

Industrial structure

The Indianapolis economy consists of a mix of industries. What happens to the area's economy depends on the performance of these industries. Two will be given attention.

Automotive

We might think of the automotive industry as an example of the traditional, industrial economy in comparison to the new information economy. The information economy has been characterized as one in which the fixed costs of production are large, but the variable costs of reproduction are small. Once the first copy of software is produced, many more can be produced at a very small unit cost. The information economy is one that places a premium on experiencing the good or service to find out what it is. So, it is distributed free via the Internet.

The traditional, industrial economy as represented by the automobile is one in which there are economies of scale too, but as capacity constraints are approached, the cost of producing an additional car will eventually increase. For the information economy, the economics of networks has become popular. However, the "network" is becoming important for automobile production and distribution too. Synchronization of the elements in the supply and demand chain is becoming critical for survival. The Internet in the automobile industry is becoming a powerful tool to facilitate this synchronization.

Financial services

During the 1990s, commercial banks have increased

their profit productivity substantially. Banks have offered wider varieties of financial services. These additional services or higher service quality may have increased costs but also increased revenues by more than the cost increases. Although the evidence is still being generated, it appears that those banks involved in merger activity had greater profit productivity improvements than other banks. Merging banks may have been able to shift their portfolios into higher risk and therefore higher expected return investments to exploit the advantage of diversification gains from the merger.

What will integration of financial services between banks, brokerages, and insurance companies mean? A review of the empirical evidence of the risk-return tradeoffs in increasing banking services to include other financial activities is summarized in **Table 6**. It is important to note that the evidence is based on nonbank financial institutions not affiliated with banks. It appears that by broadening banking firms' revenue base, earnings can be improved. On the other hand, we must be careful to not compromise bank safety and soundness.

As we move into the 21st century, public and private organizations in other cities and states are being as aggressive as Indianapolis in the promotion of new technologies and product development. As economist Hal Varian writes, "The great fortunes of the information age lie in the hands of companies that have successfully established proprietary architectures that are used by a large installed base of locked-in customers."

Fort Wayne

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Last year's *Outlook* article noted, "It is difficult to identify a likely source of significant growth for the area economy in 1999.... The twin problems from the Asian flu—lackluster demand for our exports and increased competition from imports—will be quite troublesome to the manufacturing sector...."

According to preliminary employment data, the six-county Fort Wayne area economy experienced no growth in 1999. Specifically, the preliminary estimate of employment in September 1999 was 274,900 versus 275,000 a year ago.¹

As forecast, the trouble spot has been manufacturing employment. It decreased 1,000 during the period. The preliminary estimate of manufacturing employment in September was 75,100. Wholesale and retail trade employment also declined 600 to 63,800 as of September.

According to the preliminary data, those losses were largely offset by an increase of 1,300 in the catchall services category. It includes both business and personal services employment.

Is the preliminary judgment of no growth in employment accurate? Housing construction data cast some doubt. Construction of new housing is at a record pace in 1999. Permits for new, single-family housing in Allen County in 1998 almost beat the record of 1,984 set 20-years earlier, and 1999 permits are currently on a pace to beat the record nominally.

Additionally, the previously moribund condominium and apartment construction has been resuscitated. Two years ago, there was essentially no new construction and now the record spending of approximately \$44 million set back in 1986 is being challenged (see **Figure 1**). Certainly, \$44 million in 1986 dollars produced more housing than \$44 million in 1999 dollars; however, the recovery is still impressive.

Factors favoring a robust new housing market abounded in 1999: favorable mortgage rates, appreciation in housing prices (causing equity to increase), and outsized gains in the stock market.

Not so understandable is who is occupying either the new houses and/or the older houses being traded in if the preliminary employment data are correct. The data suggest no increased demand from new hires. Are the preliminary employment data low, or is their some unusual phenomenon occurring

Figure 1
Annual Dollar Value of Condominium and Apartment Construction in Allen County, 1984 to 1999

