

ECONOMIC AND SOCIAL INDICATORS

State tax systems should be designed—and modified—with the state’s economic and social conditions in mind. The appropriate tax structure for Illinois, and for any state, depends on the structure of the state’s economy and the patterns of government services demanded by its citizenry. For this reason, it is important to assess the state of the Illinois economy, and how it has changed over the past several decades. It is equally important to assess various social indicators as a means of understanding the current quality of life in Illinois and how it has evolved over time. Such an analysis can provide useful insights into how tax and budget policies can promote greater social and economic well-being in the future. This chapter surveys the state of the Illinois economy—and assesses how its growth has affected various groups of Illinoisans. The chapter evaluates the quality of life in Illinois through analysis of the state’s economy and infrastructure, health indicators, educational achievement, environment, and crime. When possible, these indicators are compared to the national average, and to neighboring states. The chapter also places these economic and social indicators in historical context.

Our analysis reveals two broad patterns in the growth of the Illinois economy: relatively slow growth in the 1980s, followed by relatively rapid growth in the 1990s. The state’s economy grew during the 1980s—but at a slower rate than the nation as a whole. And different sectors of the economy fared quite differently: the state’s manufacturing sector declined dramatically, while the service, finance, insurance, and real estate sectors grew substantially. In 1979, most indicators of economic well-being suggested that Illinois ranked above most of the other 50 states. By the end of the 1980s, many indicators placed Illinois nearer the middle—and, sometimes, at the lower end—of the 50-state rankings.

Illinois fared much better in the 1990s. In keeping with the national trend, economic and social conditions improved significantly. But unfortunately, in most sectors the rebound in the 1990s was not sufficient to enable Illinois to regain all the ground it had lost relative to other states in the 1980s. Thus by 1999, although many measures

of economic and social attainment showed recent improvement, Illinois’s rankings were not as good as they were 20 years earlier. In addition, many of Illinois’s citizens did not share in the prosperity of the 1990s, creating inequalities that could prove costly during an economic downturn. The state continues to perform poorly on several basic indicators of social well-being such as infant mortality, child poverty and health insurance coverage. Finally, there are indications that the state’s recent healthy economic growth is slowing and perhaps even reversing itself.

I. General Economic Indicators

Over the last 20 years Illinois has experienced two distinct patterns of economic growth. The 1980s was a period of relatively slow growth while the 1990s was one of strong economic growth. As a result, the state economy generally lost ground compared to the rest of the nation during the 1980s, and regained some of this ground during the 1990s. The most recent data suggest that the state’s economic growth may be slowing once again.

Between 1979 and 1989, Illinois’s total personal

Real Per Capita Personal Income in 1999 Dollars

	1979	Rank	1989	Rank	1999	Rank
Illinois	\$23,505	7	\$26,379	14	\$31,145	8
Indiana	\$20,226	26	\$22,531	31	\$26,143	31
Iowa	\$20,914	22	\$22,252	33	\$25,615	34
Kentucky	\$17,532	41	\$19,618	43	\$23,237	42
Michigan	\$22,262	12	\$24,555	21	\$28,113	19
Missouri	\$19,994	29	\$22,952	27	\$26,376	30
Wisconsin	\$21,298	18	\$23,242	24	\$27,390	22
United States	\$21,181		\$24,944		\$28,542	
IL as % of US	111%		106%		109%	

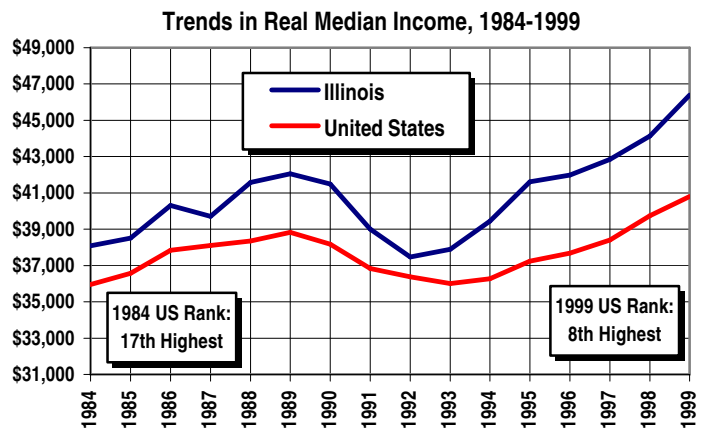
SOURCE: Bureau of Economic Analysis, US Dept of Commerce.

income grew at a rate that was less than half the national average, and slower than the rate in 40 other states. However, Illinois’s population hardly grew at all (0.1 percent) while the population of the country rose by nearly 10 percent during the decade. This

stagnation in Illinois's population was, to some extent, a reflection of the lack of opportunity in the state. But at the same time, the absence of population growth partially mitigated the effects of slow personal income growth. Thus, Illinois's **inflation-adjusted per capita personal income**, one of the most commonly used measures of the relative affluence of states, grew by 12.2 percent from 1979 to 1989, about 70 percent of the national average and slower than in 26 other states. Illinois's relatively slow growth was due in part to a regional slowdown, and relative to its neighbors Illinois did not fare badly. Indeed, Illinois's per capita income in the 1980s grew at a rate that was faster than that of all of its neighboring states, except Missouri.

During the 1990s, Illinois's personal income grew more than twice as fast as it did in the 1980s and almost as rapidly as the national average. The state's population grew by 6.3 percent, but this was only 60 percent of the nation's population growth rate. As a consequence, Illinois's per capita personal income grew faster than the national average and recovered some, but not all, of the ground it had lost in the 1980s relative to the national average. In 1979, Illinois's per capita personal income was 11 percent above the national average, ranking seventh in the nation. By 1989 it had fallen to just 6 percent above the national average, ranking 14th, but by 1999 it had risen to 9 percent above the national average, 8th highest nationally.

Per capita Gross State Product (GSP) is one of the best measures of the overall size of a state's economy. The changes in per capita GSP closely mirror those in per capita personal income. During the 1980s, Illinois's economy grew slowly relative to the national economy but, over the next decade per capita GSP in Illinois grew faster than the national average and much of the ground lost in the 1980s was recovered. In 1979, the state's per capita



GSP was 10 percent above the national average, ranking 8th among the 50 states. By 1989, its per capita GSP ranking fell to 13th, just 5 percent above the national average. By 1999, Illinois's per capita GSP recovered somewhat to 8 percent above the national average (\$36,746 versus \$34,138), ranking 11th nationally.

Median household income is another common measure of economic well-being. It reflects the income of the typical household—the household in the middle of the income distribution. Median household income data is only available after 1983. For the comparable years, the median income data is consistent with the GSP and personal income data. Illinois's median income grew faster in the 1990s than in the 1980s. In 1999 Illinois ranked 8th among the states with a median income almost 14 percent above the national average (\$46,392 versus \$40,816).

The aggregate data on personal income, Gross State Product and median income show that Illinoisans as a whole are better off than residents of many states. Yet these aggregate measures can be quite misleading as indicators of how different groups within an economy, such as the wealthy or the poor, are faring. For example, an increase in total per capita income can be the result of rapid income growth for a small number of wealthy citizens, combined with stagnant growth or an actual *decline* in the incomes of poor and middle-class taxpayers. There is evidence that this is exactly what occurred in Illinois. One analysis found that the average income of the wealthiest 5 percent of Illinois's population grew by more than 42 percent from the late 1970s to the late 1990s, while the average income of the poorest fifth of Illinois's

Gross State Product per capita as % of U.S. average

	1979		1989		1999	
	% of US	Rank	% of US	Rank	% of US	Rank
Illinois	110%	8	105%	13	108%	11
Indiana	94%	28	88%	32	90%	30
Iowa	101%	15	87%	35	87%	33
Kentucky	87%	37	81%	39	84%	40
Michigan	101%	17	92%	25	92%	27
Missouri	95%	27	92%	26	91%	28
Wisconsin	97%	23	90%	29	93%	26

SOURCE: Bureau of Economic Analysis.

population actually fell by 1 percent.¹ As a consequence, income is more unevenly distributed in Illinois than it is in 27 other states, including all of its neighboring states except Kentucky.

Employment growth is another key indicator of the relative health of an economy. The Illinois economy created only 1,500,000 new jobs between

Growth in Total Employment

	1979-99	Rank	1979-89	Rank	1989-99	Rank
Illinois	26.0%	41	9.2%	43	15.4%	38
Indiana	34.4%	33	11.7%	37	20.3%	27
Iowa	23.9%	45	3.5%	48	19.7%	28
Kentucky	38.0%	28	12.6%	34	22.6%	20
Michigan	31.6%	37	12.0%	35	17.5%	34
Missouri	34.8%	31	14.8%	30	17.5%	33
Wisconsin	37.7%	29	12.0%	36	23.0%	19
United States	44.6%		21.1%		19.3%	
IL as % of US	58.3%		43.4%		79.5%	

Source: Bureau of Labor Statistics

1979 and 1999. That 26 growth rate that was substantially below the 45 percent U.S. average, and was slower than in 40 other states. While job growth in Illinois was faster in the nineties than in the eighties, in both decades job growth in Illinois lagged behind the national average and job growth in most other states. Over the twenty-year period, job growth in Illinois was slower than in all of its neighboring states except Iowa.

A distressing aspect of the sluggish job growth in Illinois is that it has been caused in part by the collapse of manufacturing employment. Between 1979 and 1999, Illinois lost a quarter of all its manufacturing employment—some 320,000 jobs. This compares unfavorably to a 10 percent drop in manufacturing jobs in the nation as a whole. Most of these jobs were lost in the 1980s, a decade in which manufacturing employment losses were worse in Illinois than in almost every other state. During the 1990s, Illinois continued to lose manufacturing jobs but at a slower rate—down almost 3 percent in the 1990s compared to the 23 percent drop in the 1980s. Manufacturing jobs are important for economic vitality because such jobs tend to be higher paying than most. When manufacturing workers spend their relatively high salaries, sales and earnings are increased throughout the economy. Replacing manufacturing

jobs with lower-paying employment, on the other hand, stifles consumer demand in the state, hurting businesses that rely on local consumer spending.

Not surprisingly, the dramatic collapse in manufacturing jobs in Illinois has translated into lower pay for manufacturing workers both absolutely and relative to manufacturing workers in the rest of the country. Between 1979 and 2000, inflation adjusted manufacturing wages fell 17 percent in Illinois as compared to a 10 percent reduction nationwide. In 1979, Illinois's manufacturing wages were 9 percent above the national average and ranked 9th among the states. In 2000, Illinois's manufacturing wages were equal to the national average, ranking 22nd among the 50 states. To put these figures in more tangible terms consider that the average full-time manufacturing worker in Illinois earned about \$36,000 in 1979 and less than \$30,000 in 2000.

In 1979, the unemployment rate in Illinois was 5.5 percent, below the national average of 5.8 percent. However, due in part to sluggish employment growth and the collapse in manufacturing jobs, the Illinois unemployment worsened significantly as the 1980s began. The state's unemploy-

Average Hourly Wages in Manufacturing

	1979		1989		2000	
	Wage	Rank	Wage	Rank	Wage	Rank
Illinois	\$17.31	9	\$15.57	7	\$14.39	22
Indiana	n/a	n/a	\$16.25	6	\$15.83	5
Iowa	\$18.38	7	\$15.03	17	\$14.66	17
Kentucky	\$16.06	20	\$14.40	27	\$14.82	15
Michigan	\$20.71	2	\$18.76	1	\$19.20	1
Missouri	\$15.89	23	\$14.57	24	\$14.40	21
Wisconsin	\$17.24	10	\$14.96	19	\$14.85	14
United States	\$15.89		\$14.55		\$14.38	
IL as % of US	109%		107%		100%	

Source: Bureau of Labor Statistics

ment rate was above the national average in every year from 1980 to 1993, ranging from a low of 6 percent in 1989 to 11.4 percent in 1983. Between 1994 and 1999, however, the state employment picture brightened. More than 100,000 new jobs a year were created, and the unemployment rate fell from 5.7 percent in 1994 to 4.3 percent in 1999. In each year during this period, Illinois's unemployment rate was either roughly equal to or

¹ *Pulling Apart: A State-by-State Analysis of Income Trends*. P.8, Table 1, January 2000, Economic Policy Institute and Center on Budget and Policy Priorities.

Unemployment As a % of the Civilian Labor Force

	1979	Rank	2000	Rank
Illinois	5.5%	24	4.4%	37
Iowa	4.1%	8	2.6%	4
Indiana	6.4%	36	3.2%	12
Kentucky	5.5%	24	4.1%	30
Michigan	7.8%	49	3.6%	18
Missouri	4.5%	12	3.5%	15
Wisconsin	4.5%	12	3.5%	15
United States	5.8%		4.0%	
IL as % of US	94.8%		110.0%	

Source: U.S. Bureau of Labor Statistics.

lower than the national rate.

In the past two years, the trend in the state's unemployment rate has reversed itself once again. Illinois unemployment surpassed the national average in April of 1999, and has steadily increased since then. In June of 2001, the state unemployment rate was 5.2 percent, worse than all but six other states. The recent rise in unemployment is partially due to the large number of mass layoffs in the state: over the past two years the rate of mass layoffs per 1000 businesses has been higher in Illinois than in almost every other state.

The changing employment patterns over the past two decades appear to have had an impact on poverty rates in Illinois, as well. As the 1980s began, the state's poverty rate was generally below the national average. But as high-paying manufacturing jobs fled the state in the mid-1980s, the poverty rate in Illinois equaled—or exceeded—the

Percent of Persons Below Poverty Level

	1980	Rank	1990	Rank	2000	Rank
Illinois	12.3	24	13.7	29	11.6	34
Indiana	11.8	22	13.0	24	8.4	13
Iowa	10.8	18	10.4	14	7.1	4
Kentucky	19.3	44	17.3	44	11.8	35
Michigan	12.9	28	14.3	34	10.1	25
Missouri	13.0	30	13.4	28	7.8	7
Wisconsin	8.5	5	9.3	9	9.2	18
United States	13.0		13.5		11.3	
IL as % of US	95%		101%		103%	

Source: U.S. Bureau of the Census

national poverty rate. By 1985, the state's poverty rate was 11 percent above the national average. After 1992, as job creation in other sectors began to compensate for the lost manufacturing jobs, and as the state's manufacturing job loss itself slowed, Illinois was able to reduce its poverty rate and, until recently, keep it significantly below the national rate. In 1998, the state's poverty rate was just 80 percent of the national average. But Illinois has lost its advantage over the nation in the past two years. In 2000, the state's poverty rate was 11.6 percent, 3 percent *above* the national average. More than 1.4 million Illinois residents lived in poverty in 2000. Among Illinois's neighbors, only Kentucky had a larger percentage of its people living in poverty in 2000. Especially worrisome is that the percentage of children who live in poverty in Illinois remains stubbornly high at 15 percent (in 1999): this represents some 500,000 Illinois children.

Average Earnings as percent of United States average

	1981	Rank	1989	Rank	1999	Rank
Illinois	108%	6	107%	8	109%	6
Indiana	100%	16	93%	23	90%	24
Iowa	91%	33	82%	43	81%	38
Kentucky	93%	28	84%	40	83%	34
Michigan	116%	2	110%	7	107%	8
Missouri	95%	26	93%	24	90%	25
Wisconsin	94%	27	90%	27	89%	27

Source: Bureau of Labor Statistics

The picture with regard to earnings in Illinois is mixed. The good news is that between 1981 and 1999 the increase in average annual earnings was greater in Illinois than it was in the nation as a whole (16.8 percent versus 15.9 percent). Only 16 states did better than Illinois and every state in the region fared far worse. While Illinois increased its average annual earnings from 108 percent of the national average in 1981 to 109 percent in 1999, all of its neighbors saw their earnings decline relative to the national average.

The bad news has several aspects. First, nearly three quarters of the annual average earnings growth in Illinois took place in the second half of the 1990s, as the unemployment rate dropped sharply. This suggests that short-term labor market conditions (i.e. low unemployment), rather than fundamental long-term structural changes, may

have been the source of the improvement. If this is the case, then a downturn that raises the unemployment rate, such as may have begun in 2000, could quickly dissipate the earnings gains.

**Share of jobs paying below the poverty line
(\$8.19/hr) for full time work.**

	1979	1989	1999
Illinois	17.6	25.5	23.9
Indiana	24.2	34.8	24.3
Iowa	25.7	35.4	25.1
Kentucky	26.8	36.5	31.4
Michigan	17.9	27.2	22.9
Missouri	26.2	33	24.7
Wisconsin	21.6	30.3	22.7
United States	23.7	28.5	26.8

Source: Economic Policy Institute

Second, changes in average annual pay have not reflected well what is happening to the earnings of different groups of workers in the Illinois economy. It has already been pointed out that manufacturing wages plummeted in Illinois. In addition, in 1979 Illinois stood out among its neighbors and in the US as having few poverty wage jobs. But, between 1979 and 1999 the share of jobs in Illinois that paid less than the federal poverty line increased 6.3 percentage points (from 17.6 percent to 23.9 percent) while the national rate increased only 3.1 percentage points (from 23.7 percent to 26.8 percent). And while average annual pay performed well recently, median hourly wages had yet to reach 1979 levels by 1999. In 1979 the median worker in Illinois made \$13.33 per hour, while in 1999 the median worker made merely \$12.43. Wages for workers in the bottom fifth of the income scale tell a similar story, falling from \$8.44 to \$7.35 per hour between 1979 and 1999.

The increase in average annual pay, along with the increase in the number of jobs paying below poverty wages and the decrease in both median wages and the wages of the lowest earners, implies that the growth in earnings has been unevenly distributed. Indeed, income gains have accrued largely to those at the top of the income scale as increases in demand for highly skilled, highly paid employees rose sharply relative to the supply of such workers. As firms competed for these workers, they were forced to pay higher wages. Meanwhile, those workers in the bottom half of the income scale were forced to work longer hours to maintain

income levels. Obviously, however, workers whose hourly wages are falling cannot endlessly compensate by increasing their working hours. At a certain point, if hourly wages do not rise, then their incomes stagnate or fall.

Over the past two decades, Illinois has experienced relatively slow employment growth and even slower population growth. This combination has helped reduce the unemployment rate, particularly in the latter half of the 1990s, but not as much as might have been anticipated—and not enough to raise wages at the middle and lower end of the income scale. The potential tightening of the labor market in Illinois has been mitigated to some extent by a swift increase in the proportion of adults participating in the workforce. Between 1979 and 1999, the labor force participation rate in Illinois rose dramatically from 64.6 percent to almost 70 percent. Only 11 states, including Iowa and Missouri, enjoyed a greater increase in labor force participation rates over this period. In 1979, Illinois's labor force participation rate already exceeded the national average and Illinois ranked 28th among the 50 states. By 1999 Illinois's lead over the national average had grown and its ranking rose to 17th.

Labor Force Participation Rates, 1979-1999

	1979	Rank	1989	Rank	1999	Rank
Illinois	64.6%	28	68.1%	26	69.7%	17
Indiana	66.1%	18	68.3%	23	68.3%	25
Iowa	66.5%	14	70.2%	10	71.9%	11
Kentucky	61.3%	38	62.3%	47	64.3%	43
Michigan	64.2%	31	65.7%	37	68.5%	24
Missouri	63.1%	36	66.8%	32	68.7%	22
Wisconsin	68.2%	7	71.2%	6	72.3%	6
United States	63.7%		66.5%		67.1%	

Source: Bureau of Labor Statistics

If the growth in the labor force participation rate in Illinois over the last two decades had been slower, then it is possible that the unemployment rate would have been lower and wages would have been higher. But higher wages, unaccompanied by increases in labor productivity or reductions in the other costs of doing business in Illinois, might have encouraged some firms to move out of state in search of cheaper labor. Thus, the reduction in the unemployment rate and the increase in wages may have been undermined by slower job growth.

The scenario outlined above illustrates a dilemma that the state of Illinois may face in the future. In order for the citizens of the state to achieve the

highest possible levels of economic well-being, unemployment will need to be low and wages will need to be high. High wages, however, may make it difficult for the state to retain, let alone attract, businesses and jobs.

Employment Growth for Non-Farm Sectors

	Avg annual pay in 1998	1979-99	1979-89	1989-99
Services	\$ 31,609	94%	43%	36%
Construction	\$ 41,806	43%	16%	22%
Fin., insur., real estate	\$ 53,217	40%	18%	19%
Transportation	\$ 41,510	29%	9%	19%
Retail	\$ 17,391	27%	14%	10%
Government	\$ 34,483	9%	2%	7%
Wholesale	\$ 45,696	7%	11%	-4%
Manufacturing	\$ 42,425	-25%	-23%	-3%

Source: Bureau of Labor Statistics

This potential tension between low unemployment and high wages and job growth is not inevitable. If Illinois is proactive in making investments in its labor force, infrastructure and other assets, then the effect of rising wages pushing firms out of state can be countered. Increasing the productivity of the labor force and the efficiency of the economy will both *encourage* employers to expand employment opportunities and *enable* employers to pay higher wages. Firms are willing to pay high wages in a particular location as long as that location provides sufficient productivity and efficiency gains to justify the high wages. A high wage economy, in turn, promotes a “virtuous cycle” as workers spend their additional earnings in the state and stimulate demand, sales, and, ultimately, profits.

Illinois does not seem to be on a high-wage trajectory. The manufacturing jobs that were lost in the 1980s have largely been replaced by jobs in the service sector. Across the state, employment in services expanded by an impressive 36 percent between 1989 and 1999, compared to an overall job growth rate of 15.4 percent. While the service sector is broadly defined, and includes many high-paying occupations, service employment is, on average, one of the lowest-paying sectors in the Illinois economy: in 1998, Illinois service employees made, on average, less than workers in every other sector of the economy except the retail sector.

Illinois has also enjoyed substan-

tial employment growth in some high-wage sectors of the economy. During the past decade, employment in construction, transportation, and financial services each grew by about 20 percent, but none of them came close to matching the size and growth rate of the service sector.

II. Infrastructure

The physical infrastructure of an economy is fundamental to its health and growth potential. The infrastructure’s role in the economy is similar to the role of the skeletal, nervous, and cardiovascular systems in the human body: each needs to be in good condition in order for the body to function well. Likewise, the various components of the physical infrastructure (roads, bridges, sewage systems, telecommunication networks, etc.) need to be adequately developed and well maintained in order for an economy to grow rapidly and efficiently.

Infrastructure is key to attracting and retaining business. In particular, the adequacy and quality of roads, bridges, and sewage systems are among the primary factors that businesses consider when making investment location decisions. Infrastructure is especially important in developing a high-wage economy, since high quality infrastructure can help a firm to be profitable even when faced with a relatively high cost for labor.

Illinois’s performance in terms of infrastructure is mixed. Only 15.1 percent of Illinois’s highways were considered in poor condition in 1999, better than in 34 other states, and below the national average of 20.1 percent. This represents a slight improvement over 1992, when 16.8 percent of Illinois’s highways were rated as deficient, better than only 31 other states. Illinois’s bridges paint a more complex picture. Although only seven states,

	Highway Miles at or below 2.5 PSR, 1999		Area of Bridges Deemed Deficient,		Sewage needs, next 20 yrs, 1996	
	% deficient	rank	% deficient	rank	\$m/capita	rank
Illinois	15.1%	16	27.6%	31	940.87	48
Indiana	30.8%	39	20.3%	8	903.83	46
Iowa	0.4%	3	24.6%	26	437.06	24
Kentucky	18.8%	25	24.9%	28	644.42	36
Michigan	28.4%	37	40.1%	46	528.37	29
Missouri	4.6%	6	31.1%	37	595.84	33
Wisconsin	26.8%	34	20.1%	7	441.60	25
United States	20.1%		28.0%			

Source: Dept. of Transportation, EPA

and none of its neighbors, have a smaller proportion of deficient bridges, when the square-footage of the bridges in question is taken into account, Illinois does worse than 30 states, including all but two of its neighbors: Michigan and Missouri. Finally, Illinois's sewage system is in dire need of investment. By one measure, in 1996 only two states had a greater unmet need for sewage treatment systems than Illinois. This can be a serious threat to future growth because many businesses will not be able to locate in areas with inadequate sewage facilities.

Although these measures indicate the condition of the existing infrastructure, they do not indicate whether this infrastructure is sufficiently comprehensive. Unfortunately, no good statistics are available to provide that information. However, data on the congestion of transportation systems in the greater Chicago area suggest that the transportation infrastructure is not meeting the needs of businesses and commuters in the Chicago metropolitan area.

III. Education

Education is arguably the single most important factor determining long-term economic growth. The productivity and growth of an economy are directly related to the level of education and training of its workforce. In order for a state to maintain its economic competitiveness it must develop a workforce that has the basic skills needed by employers. The workforce, furthermore, must be able to adapt rapidly to ever changing economic circumstances. Education and training are the best ways to provide these skills. In light of the employment data discussed earlier, it is important for Illinois to improve the skills of a broad section of its labor force if it hopes to maintain a high-pay, high-skill economy in the future.

Perhaps the broadest indicators of the skill levels of the workforce are measures of educational attainment. In today's economy, most jobs require at least a high school or college degree. Illinois's record in providing its citizens with these requirements is, once again, mixed.

Slightly more residents of Illinois, 25 years of age or older, have high school diplomas than do residents of the nation as a whole (85.5 percent versus 84 percent). Unfortunately however, the ratio in Illinois is higher than the ratio in only 21 other states including only two of its neighboring

High school graduates as % of 9th grade enrollment

	1989	Rank	1999	Rank
Illinois	75.6	21	76.5	14
Indiana	76.3	19	70.4	27
Iowa	85.8	5	84.7	3
Kentucky	69.0	39	67.8	32
Michigan	73.6	29	68.9	30
Missouri	74.0	28	70.6	26
Wisconsin	84.9	7	79.5	8

Source: Brizius and Foster and State Policy Research, Inc.

states. This makes the Illinois workforce unattractive compared to neighboring states. The percentage of those holding high school diplomas has increased substantially since 1979, but the increase in Illinois has been virtually indistinguishable from the rise nationwide.

Illinois has shown marked improvement compared to other states in bachelor's degree attainment. In 1989, 21.1 percent of people over age 25 in Illinois had a four-year college degree: better than in 28 states, including all of Illinois's neighbors except Missouri, but equal to the national average. By 2000, Illinois had reached 27.1 percent of its residents with a bachelor's degree, higher than the national average and ahead of 34 other states.

Educational attainment, however, includes people well past the conventional age of most students, and therefore depends heavily on decisions made in the past, often the distant past. A better measure of current commitment to educational attainment and for projecting the quality of the workforce in the future is high school graduations as a percent of 9th grade enrollments four years earlier. By this measure, Illinois improved only slightly, from 75.6 percent in 1989 to 76.5 percent in 1999. But largely due to poor performance by other states, Illinois climbed from 21st among the states in graduation rate to 14th.

Average Teacher Salary, 1999 dollars

	1979	Rank	1989	Rank	1999	Rank
Illinois	\$37,927	10	\$41,870	12	\$45,569	8
Indiana	\$32,801	22	\$39,203	20	\$41,163	14
Iowa	\$32,574	24	\$34,655	32	\$34,927	34
Kentucky	\$30,241	32	\$33,515	37	\$35,526	31
Michigan	\$41,341	4	\$46,609	5	\$48,207	5
Missouri	\$29,187	39	\$34,961	31	\$34,746	36
Wisconsin	\$34,227	19	\$41,378	13	\$40,657	15
United States	\$34,517		\$39,744		\$40,582	

Source: National Education Association

The fact that more students in Illinois are finishing high school and that the workforce as a whole is getting more educated, especially with regard to post-secondary education, is clearly a positive development. Of course, this tells one little about the quality of the education that the students are receiving. Assessing quality is extremely difficult, especially as Illinois declined to participate in the National Assessment of Educational Progress. Nevertheless, there are other measures by which to evaluate Illinois commitment to quality education.

A basic measure of commitment to quality in education is expenditures per pupil. Although there is considerable controversy over the importance of funding compared to other factors, there can be no doubt that the amount of resources available plays an important role. By this measure, Illinois has done poorly relative to the nation. Expenditures per pupil fell from 113 percent of the national average in 1979 to 95 percent in 1999. Illinois's rank among the states fell from 12th in 1979 to 24th in 1989, and fell again to 28th in 1999.

Spending per Pupil as % of United States Average

	1979	rank	1989	rank	1999	rank
Illinois	113%	12	95%	24	95%	28
Indiana	87%	33	94%	25	107%	18
Iowa	109%	16	97%	22	91%	34
Kentucky	80%	41	77%	40	99%	23
Michigan	116%	9	112%	13	121%	7
Missouri	83%	36	85%	33	83%	38
Wisconsin	111%	13	114%	12	114%	11

Source: U.S. Department of Education, NCES

Numerous studies have shown that students benefit from small class size and individual attention from school staff and teachers. Over the past decade, Illinois has improved both its pupil-staff ratio and its pupil-teacher ratio. In terms of the pupil-staff ratio, Illinois moved from slightly behind the national average to parity with the national rate and its state ranking rose from 38th to 32nd. Despite the improvement in its pupil-teacher ratio, Illinois has fallen behind the national average pupil-teacher ratio and dropped in the state rankings from 26th to 34th. Thus, despite improvements, these statistics show that there is still much to do to make Illinois competitive. In both measures Illinois is in the bottom half of states, and in the latter it is falling behind. If Illinois wishes to move into a high-wage

economy, it cannot rest below the middle and be content with modest improvements.

	Students per Teacher		Students per Staff	
	1999	rank	1999	rank
Illinois	16.20	34	8.30	32
Indiana	16.80	39	7.89	26
Iowa	14.90	17	7.54	16
Kentucky	15.40	28	6.94	5
Michigan	18.00	44	8.19	31
Missouri	14.30	15	7.74	20
Wisconsin	14.40	13	7.98	27
United States	16.10		8.34	

Source: U.S. Department of Education, NCES

Teachers' salaries are another indicator of a state's commitment to education. They reflect the state's willingness to pay competitive wages to recruit talented professionals to teach its children. By this measure, Illinois has done well. Salaries increased 20 percent in real terms between 1979 and 1999, compared to 18 percent in the nation. Teacher pay in Illinois ranked 8th in the nation in 1999, ahead of all of its neighbors except Michigan, and equaled 112.3 percent of the national average.

As pointed out earlier, Illinois has a moderately high, and, more importantly, increasing rate of college level educational attainment, but it has yet to turn that into a high-skilled work force. For example, in 1999 Illinois exceeded its neighbors in employed doctoral scientists and engineers per 1,000 workers, at 1.83, but this is below the national average of 2.03 and ranks only 22nd among the states. Also, although Illinois increased its university research and development budget from \$51.85 per capita to \$90.79 between 1989 and 1999, it failed to keep up with the rest of the country and dropped from 27th place to 31st.

Nevertheless, Illinois has a large potential supply of highly trained workers because its institutions of higher learning train a great number of scientists and engineers. Between 1989 and 1999, Illinois expanded its population of science and engineering graduate students per million population from 1,664 to 1,862, a 12 percent increase. In 1999 only five states had a higher proportion of these students. During this same period, the United States as a whole reduced its proportion from 1,551 to 1,508 per million. All of Illinois's neighbors experienced declines except Kentucky, which after an 11 percent increase, still

	Number of Employed Doctoral Scientists and Engineers per 1,000		University R&D Expenditures per Capita	
	1999	rank	1999	rank
Illinois	1.83	22	\$ 90.79	31
Indiana	1.49	36	\$ 77.47	35
Iowa	1.54	33	\$130.79	6
Kentucky	0.98	48	\$ 69.15	39
Michigan	1.68	29	\$ 93.21	28
Missouri	1.72	28	\$100.56	22
Wisconsin	1.58	31	\$106.78	18
United States	2.03			

Source: National Science Foundation

had only 954 science and engineering graduate students per one million population. Illinois needs to create job opportunities so that these students will stay and work in the state after they complete their studies.

These job opportunities are not likely to develop, however, without a renewed commitment to education for the broad base of the population. High technology relies not only on the scientists and engineers at the top, but on a large, educated network of support workers, from administrators to accountants. Where the broad population is not well educated, high tech firms will be reluctant to locate, fearing a shortage of adequately skilled workers. An important step, therefore, toward building a successful, high-wage economy is to provide excellent primary and secondary education.

Illinois does well on some measures and poorly on others when it comes to education. Such a mixed record in education will make it difficult for Illinois to preserve the recent gains it has made in wages and employment, especially in the face of an economic slowdown. Stable increases in pay must be based on greater productivity, not simply a tighter state labor market, and the best way to improve workforce productivity is to improve education.

IV. Health

Health is fundamental to well-being. To the extent that states want to improve the quality of life of their citizens, therefore, they need to deal with health related issues. Because health conditions affect the quality of life, they influence decisions about where to live and where to start a business. Health conditions and availability also affect the quality and productivity of labor. Hence,

health is one of the keys to economic growth and development.

Health is especially important for the future of Illinois given that health impacts the quality of labor. For as noted earlier, it is essential for Illinois to improve the productivity of its labor force in order to permit the transition from a medium skill, medium wage economy to a high wage, high skill economy, and thereby preserve the gains of recent years.

Statistics on health and health care cover a wide variety of issues. We have selected indicators that reflect the average health of states' populations and the availability of care at the state level. Unfortunately, data for life expectancy, one of the best indicators of a population's health, are not available at the state level.

Health statistics for Illinois are not very impressive. Even in areas where Illinois has posted significant gains, Illinois does not rank high compared to other states, and there are some areas where Illinois compares very unfavorably. Nevertheless, there have been some encouraging improvements that could be studied in order to broaden and deepen the successes.

Two of the broadest measures of the health conditions of a state's population are the death rates from heart disease and cancer, the two leading causes of death. The death rates in Illinois due to heart disease and cancer are both higher than the national average, yet there have been some improvements. In 1978, 379.6 people were dying of heart disease for every 100,000 residents

	Deaths by Cause, per 100,000 Population					
	Heart Disease			Cancer		
	1978	1997	rank	1978	1997	rank
Illinois	379.6	274.3	27	186.8	205.8	24
Indiana	334.2	284.1	30	179.3	210.3	31
Iowa	380.5	319.4	41	187.5	222	40
Kentucky	379.1	318.8	40	183.4	229.5	44
Michigan	321	278.8	28	166.5	200.6	18
Missouri	380.2	341.7	47	200.5	221.4	38
Wisconsin	349	264.9	23	177	204.6	23
United States	334.3	271.6		181.9	201.6	

Source: National Center for Health Statistics

of Illinois, compared to 334.3 in the nation as a whole. Between then and 1997, Illinois posted the third best improvement of any state in the country, reducing its heart disease death rate by 28 percent

to 274.3 compared to a national rate of 271.6, and moving from 43rd to 27th among the states: better than any of its neighbors except Wisconsin. Cancer rates, on the other hand, have worsened, but not as fast as in the nation as a whole. In 1978, the death rate from cancer in Illinois was 186.8 per 100,000 residents, compared to 181.9 in the nation as a whole. By 1997, Illinois had a rate of 205.8, while the national average had risen to 201.6. Therefore, despite Illinois's increase in cancer deaths, it moved from 33rd to 24th among the states, posting a smaller increase than all of its neighbors.

Infant Deaths per 100,000 Live Births				
	1989	Rank	1999	Rank
Illinois	10.9	45	8.3	41
Indiana	9.4	34	4.7	2
Iowa	8.2	16	7.2	29
Kentucky	8.7	23	7.2	29
Michigan	10.5	43	8.5	42
Missouri	9.7	38	7.6	35
Wisconsin	8.4	17	6.9	25
United States	9		7.2	

Source: National Center for Health Statistics

These statistics should be interpreted with some caution because they are not age adjusted, and it is well known that older populations suffer from heart disease and cancer at rates that are higher than younger populations. However, the percent of Illinois's population that is over 65 is slightly lower than the nation as a whole, 12.3 percent to 12.7 percent in 1998, so these statistics may actually understate the relative death rates from these diseases in Illinois.

Infant mortality rates are another good indicator of health conditions. These rates are strongly negatively correlated with the health of mothers, especially their nutrition. They are also negatively correlated with the availability of prenatal and postnatal infant care. Illinois has done rather poorly by this measure. Although Illinois reduced its infant mortality rate substantially (from 10.9 to 8.3 deaths per 100,000 live births between 1989 and 1999 as the national average fell from 9.0 to 7.2) and its ranking climbed (from 45th to 41st place among the states), Illinois still sits near the bottom of the state rankings, with only Michigan among its neighbors doing worse.

Percent of Births with Low Birth Weight						
	1980	rank	1989	rank	1996-98	rank
Illinois	7.2	33	7.7	38	8.0	36
Indiana	6.3	19	6.6	22	7.8	31
Iowa	5.0	3	5.4	8	6.4	12
Kentucky	6.8	27	6.9	24	7.9	35
Michigan	6.9	30	7.6	37	7.7	30
Missouri	6.6	23	6.9	24	7.7	29
Wisconsin	5.4	9	5.8	15	6.4	13
United States	6.8		7.0		7.5	

Source: National Center for Health Statistics

A good indicator of not just current but also future health conditions is the percent of births with low birth weight. Low birth weight is associated with the poor health of mothers and the lack of prenatal care. Low birth weight is also a good predictor of future health problems for babies. Here too, Illinois has fared poorly, and has in fact lost ground relative to the other states. While the rate nationally rose from 6.8 percent to 7.5 percent between 1980 and 1998, the rate in Illinois rose from 7.2 percent to 8.0 percent, pushing it down from the 18th worst rate in the nation to the 15th worst, and worse than every other state in the region.

An important determinant of health conditions is the availability of health care. Here too Illinois has a mixed record. Although Illinois has kept pace with the United States average on physician density, and perhaps even improved on the geographic

Physicians per 100,000 population						
	1981	rank	1990	rank	2000	rank
Illinois	186	13	217	12	263	10
Indiana	129	41	158	41	201	38
Iowa	126	44	154	42	199	42
Kentucky	136	38	170	37	212	37
Michigan	161	24	184	27	258	12
Missouri	165	20	198	20	252	16
Wisconsin	160	25	188	25	230	25
United States	185		216		261	

Source: Medical Marketing Service, Inc.

dispersal of its physicians, the number of people who are without health insurance is growing at a rapid rate.

**Percent of Population Living in
Primary Care Shortage Areas**

	1989	Rank	2000	Rank
Illinois	7.6	39	7.1	11
Indiana	3.6	20	9.8	26
Iowa	3.5	18	9.3	22
Kentucky	5.2	29	13.2	36
Michigan	4.5	25	11.9	33
Missouri	5.8	31	16.7	43
Wisconsin	4.2	22	9.8	25

Source: U.S. Dept. of Health & Human Services

One way to measure the availability of health care is to calculate the number of physicians per 100,000 of population. Illinois does well on this measure. Although Illinois is only slightly ahead of the national average (263 in Illinois versus 261 in the US as a whole) there are only 10 states that exceed the national average. Furthermore, between 1981 and 2000, Illinois kept pace with the US increase in physician density of 41 percent. None of Illinois's neighbors exceed the national average for physician density.

**Percentage of Non-Elderly Population
without Health Insurance**

	1989	Rank	1999	Rank
Illinois	11.2	17	15.7	25
Indiana	14	27	12.3	12
Iowa	8.4	2	9.5	3
Kentucky	15	29	16.3	28
Michigan	9.2	3	12.4	13
Missouri	13.3	24	9.6	4
Wisconsin	10.2	12	12.2	9
United States	15.3		17.4	

Source: Census Bureau

A second measure suggests improvement in health care coverage in Illinois. Between 1989 and 2000, the percent of the population without primary care within easy economic and geographic reach declined from 7.6 percent to 7.1 percent while this indicator got worse in all of its neighboring states. Illinois climbed from 39th place to 11th place, from behind all of its neighbors to first among them. This statistic should be used with caution, however, because a place is reviewed for

designation as a health care shortage area only after an application is made on its behalf by a state or local government. Thus the "decline" in health care shortage areas in Illinois may reflect bureaucratic inaction rather than a real reduction in areas without primary care.

Health insurance coverage is another good measure of the availability of health services. Illinois is losing ground rapidly by this measure, although as of 1999 it still fared better than the national average. Between 1989 and 1999, the percentage of non-elderly residents not covered by health insurance rose from 15.3 percent to 17.4 percent nationwide and from 11.2 percent to 15.7 percent in Illinois. Thus, the rate in Illinois grew more than twice as fast as in the nation as a whole. Illinois tumbled from 17th to 25th among the states in health insurance coverage, worse than any neighboring state except Kentucky. Although health insurance coverage in Illinois is still better than the national average, if the trend of the past decade continues it threatens to lower the productivity of a large segment of Illinois's workforce as well as burden the health care system by draining expensive emergency room resources.

V. Summary

Improvements in a state's economic well-being are a function of *extensive* and *intensive* development. *Extensive* development refers to growth that results from increases in the various factors of production. In simple terms, this means that output generally expands in response to increases in employment, factories, machinery, tools, equipment and infrastructure. *Intensive* development refers to growth that results from improvements in the quality of the existing factors of production. For example, improvements in the health, education and training of workers, infrastructure enhancements, and technological innovations, could be considered intensive development.

Some aspects of extensive development are by their very nature limited. For example, increases in employment are limited because as employment grows the pool of potential workers is gradually exhausted: at any given moment there are only so many people available to work. Once full employment is achieved, output expansion due to employment growth generally proceeds only if population grows. On the other hand, there are no known limits to intensive development. The health,

education, and training of workers can always be improved. Technological advances and infrastructure enhancements have no apparent bounds.

While state and local governments in the United States play a role in promoting extensive development (through, for example, investment in roads, bridges and other forms of infrastructure) they are generally more able to influence the pace of intensive development, through investments in the health, education, and physical and social environment of their people. These investments can be important stabilizers in a market economy. Market fluctuations can put great strain on business investment decisions and, thus, the availability of jobs. Government investments in education, efficient infrastructure, and quality health care provision, on the other hand, need not be decimated by economic downturns as long as the state and its citizens maintain their commitment to them. Making these investments when times are good and maintaining them when times are bad is one of the best ways to ensure that a slowdown will be brief and mild.

Finally, these investments make for a more productive workforce, allowing wages and quality of life to rise. When workers spend these wages in the state, they promote the growth of numerous sectors of the economy and particularly aid businesses and others that rely on local consumer spending. This virtuous cycle—rising worker productivity encourages firms to expand production, hire more workers and pay higher wages, which, in turn generates greater consumer demand and businesses sales and rising standards of living—is key to the development of a high-skill, high-wage economy in Illinois.

Along with the rest of the nation, Illinois has seen a period of great economic growth over the past decade. That period presented an opportunity for the state to invest in its economy in ways that would improve the quality of life and the long-term health of its economy. Indeed, Illinois has had advances in both intensive and extensive development. The high labor force participation rate in Illinois has been an important extensive factor driving the state's economy, just as Illinois's well-maintained roads and high rate of adults with college degrees have been an important intensive factor. However, with unemployment rising, an economic slowdown in progress, and a recession possible, it is unclear that Illinois has done enough.

Despite the great economic growth of the 1990s, Illinois has fallen behind many other states in education funding. In addition, an increasing number of state residents are without adequate health care. Infant mortality is high and low birth weight babies are numerous, suggesting that prenatal and postnatal care is inadequate. Poverty—particularly child poverty—remains high, negatively affecting the quality of life of hundreds of thousands of citizens and portending ill for the quality of the workforce in the future. Finally, the income gains of the past decade have not been enough, or distributed evenly enough, to reverse many of the wage losses of the 1980s, leaving many of the state's workers worse off than they were twenty years ago. Without appropriate investments in health, education, infrastructure, and the environment, an economic downturn could force firms to leave the state for areas with more productive workers or to cut wages or reduce payrolls. These actions would hurt consumer spending and, possibly, roll back many of the recent economic gains. A willingness to make investments, however, even in these uncertain times, could prevent further lost opportunities and allow Illinois and the Illinois workforce to comfortably weather an economic slowdown and prosper in the future.