

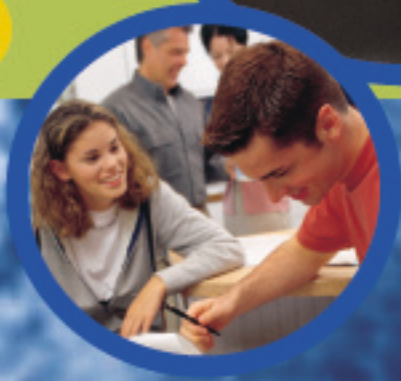


21st CENTURY

Workforce: Central Illinois



Talent drives prosperity



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"Economic Development and Workforce Development Are One"

**Other recent books and studies by Richard W. Judy,
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Workforce 2020: Work and Workers in the 21st Century (Richard Judy, coauthored with Carol D'Amico; published by Hudson Institute, 1997)

NetWork: Maximum Access to Career Resources on the Internet

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The Future of the Vending Industry

Workforce Development in the Tri-State Area

Training Needs in the Orange County Tourism Industry

Workforce 2020 Conference Proceedings

Workforce Analysis for Palm Beach County

The Workforce Development System of the Tampa Bay Region

Workforce Analysis for the American Zoological and Aquarium Association

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Preface and Acknowledgements

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It was Bashir's idea that a thorough study at the same level of scholarship as *Workforce 2020* could and should be done at the local level: more specifically, it should be done for Central Illinois. The rest, as they say, is history. But this book is no mere imitation. It is an original and unique study that goes deeper and well beyond our original *Workforce 2020*. To Dr. Loucks and to Bashir Ali, therefore, we owe a special debt of thanks.

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Richard W. Judy

Jane M. Lommel

Workforce Associates, Inc.

May 20, 2002

Executive Summary

At the crossroads. Facing a critical juncture. Before a great divide. These are the geographical metaphors so often employed to evoke the idea of alternative paths to the future, of roads that lead to happy destinations and those that lead elsewhere. But the crossroads metaphor is misplaced and misleading. The future is unlike a road map because such a map presumes knowledge of the terrain ahead and the roads that lead over it. In reality, the road to the future remains to be built.

To build a road, an engineer needs two bits of information. The first, and the most important, is the ultimate destination: Where do we want to go? The second is topographical intelligence of the territory ahead. Where are the valleys and level spots? Where are the dangerous chasms and precipices? Where are the mountain ridges and where are the passes through or over them?

To build a good road to the future of Central Illinois, its leaders and its citizens first need to know where they want to go and, it must be stressed, how determined they are to get there. No outsider can decide either of those things, and none should even attempt to do so.

What an outsider *can* do—and what this study hopes to do—is to provide topographical intelligence of the territory that lies ahead. Such intelligence can help Central Illinoisans to see which destinations are feasible and, perhaps, which are not. It can also spotlight some of the challenges that lie across the terrain over which the road to the future must be built.

So, this study is a kind of map making, but the map is a topographical map in the process of being made, not an already-laid-out road map. The study reconnoiters the forces of change that will impact Central Illinois economy in the early 21st century. It explores the workforce implications of this changing economy and describes the kind of workforce needed to prosper in it. It assays the size and quality of the Central Illinois workforce, outlining its challenges and opportunities for improvement. It surveys the institutions of workforce development in Central Illinois and charts their strengths and weaknesses. Finally, it points up some promising ways that other communities are engineering their roads to their 21st century economic and workforce futures

This study is *not* a plan. A plan is like a road that leads from here to there. A plan presumes knowledge of where to go and of how determined folks are to get to that desired future. Those are for Central Illinoisans to decide and determine. Because this study is not a plan or a set of prescriptions, it contains few recommendations beyond

This book is like a map...

... a topographical map that shows the terrain that lies ahead.

The roads to Central Illinois' future can be built only by the people of Central Illinois.

The book asks many questions:

Which forces will impact Central Illinois' economy in the 21st century?

What kind of workforce will it take to prosper?

Will there be enough of the right kinds of workers?

How good is Central Illinois' workforce?

Which "promising practices" are worth examining?

*So, this book is **not** a plan.*

It aims to supply some of the intelligence information that Central Illinoisans will need to build a plan.

Central Illinois' economy has grown in recent years...

...but not as fast as the state or nation.

The area's population growth has been very slow for the past quarter century.

That's partly because few immigrants have chosen to locate here.

Central Illinois has had three historical eras of economic development, namely:

Farming;

Agricultural processing;

those that point out major dangers to be avoided or opportunities to be seized. Readers seeking nostrums will not find them in the pages that follow.

This study is, to repeat, an offering of intelligence that—if it is useful—will help the leaders and citizens of Central Illinois to plan and reach a better future than they would without it. Think of Louis Joliet and Père Jacques Marquette; they explored the territory that became Central Illinois. Other people, those who eventually came to live there, actually built it.

Looking backwards before looking ahead. The past quarter century was a bad-news/good-news story for Central Illinois' regional economy. From the mid-1970s to the mid-1980s, the region's economy declined or stagnated. A recovery began in the late 1980s that continued, with a brief pause in 1991, until the dawn of the 21st century. Despite that recovery, this region has not shared fully in America's economic growth of recent years. Two interlocking reasons explain why.

First, Central Illinois' economic growth has been and is more reliant on manufacturing than either the entire state or the nation, both of which have far more diversified economies. Since manufacturing employment everywhere has been growing more slowly than other industrial sectors, it follows that those areas that are heavily reliant on manufacturing have also grown more slowly.

The second reason for Central Illinois' sluggish economic growth has been demographic. The population of the Midwest as a whole, and of Illinois, grew very slowly in the last quarter of the 20th century, and the population of Central Illinois grew even more slowly. Between 1990 and 2000, for example, it grew by only 2% compared to 8.6% for the state of Illinois as a whole. Much of the nation's population growth in recent decades was due to foreign immigration and the fact that immigrants tend to have larger families than native-born Americans. Since Central Illinois has attracted relatively few immigrants in recent decades, the region's population growth has been negligible.

Bygone eras of economic development. Central Illinois has traversed three eras of economic development, each of them dominated by a single industrial cluster that "exported" products to the state, nation, and beyond. The first era was that of farming, when raw agricultural goods were the region's main exports. Then came the era of agricultural processing, when Central Illinois not only produced but also processed farm goods for export. Brewery and distillery products were famous exports of that era. The third era, which lasted more than a half a century and continues flaggingly today, is that of

heavy equipment manufacturing. During this era, many of Central Illinois export products have been painted yellow.

The dawn of the 21st century finds the Central Illinois economy—particularly its “export” sector—facing a major challenge. Much of the region’s recent economic growth has been in trade, services, and other activities catering mainly to “domestic” markets. People and companies within Central Illinois have increasingly been producing goods and services for other people within Central Illinois. The area’s traditional export industries have either withered or found that their future growth seems problematic.

The key conclusion emerging from our review of Central Illinois’ economic history is this: *Central Illinois’ critical economic development challenge for the early 21st century will be to diversify even further away from dependence on a few major employers and to develop new competitive advantages in industrial clusters that can and will profitably export goods and services to markets outside the region.*

What to export? Which industries or mix of industries will become Central Illinois’ 21st century export earners? Which will become the successors to the farming, agricultural processing, and heavy equipment manufacturing that were the main drivers of regional growth and prosperity in the 19th and 20th centuries?

We do know that yesterday’s leading industries are unlikely to be tomorrow’s locomotives of economic growth and employment. Agriculture has had its day in the sun; the value of farm output in Central Illinois will probably remain high but threatened by low prices, and farm employment will continue its long slide downhill. Food processing, too, is not a likely competitor. What about manufacturing? Here the picture is more complex. Manufacturing will continue as a mainstay of the Central Illinois economy, but its nature is changing rapidly.

Globalization and the rapidly growing workforce of developing nations like China mean that most labor-intensive manufacturing will soon be gone from these shores. The total number of Central Illinoisans employed in manufacturing is likely to remain steady at best; more likely, it will gradually decline. Meanwhile, the manufacturing that remains in the area will demand greater skills and knowledge on the part of workers than in the past. Engineers, designers, information technologists, and other “knowledge workers” will comprise a larger share of Central Illinois’ manufacturing workforce, while the share of production workers will shrink.

A prominent candidate to become an important 21st century exporter from Central Illinois is the health services industry. This study

And heavy equipment manufacturing.

Each of these has been a huge “exporter” to markets outside Central Illinois.

The big challenge for economic development in Central Illinois is to develop new industrial clusters...

...that can drive economic growth in the area and compete effectively in markets beyond Central Illinois.

Yesterday’s leading industries are unlikely to be tomorrow’s engines of economic growth and employment.

China and other populous developing countries will offer ever greater competitive challenges.

Health services is a fast-growing industry.

Health services is already strong in Central Illinois...

...and implementation of the Regional Bioscience Strategy could make it a major "export" industry.

But Central Illinois needs "more than one vine to climb."

America's 21st century economy will be a "knowledge-based" economy.

Spurring economic development means creating the right conditions.

and others indicate that this industry enjoys a strong competitive advantage in the region. Health services in Central Illinois employ proportionally more people than in either the state or nation. The industry already is the largest single employer in the region and has grown rapidly during the last quarter century. As the Regional Bioscience Strategy for Central Illinois moves from concept to implementation, health services and allied bioscience-based industries have a real opportunity to become major export industries.

Other industries in which Central Illinois appears now to hold some competitive advantage include trucking and warehousing, financial services, fabricated metal products, and printing and publishing.

Create the right conditions and it will happen. Most probably, there will be no *single* engine to power Central Illinois' economic development in the 21st century comparable to the ways that farming, agriculture, and heavy equipment manufacturing did in the 19th and 20th centuries. It is also quite likely that many of tomorrow's economic powerhouses are low on today's horizon. The 21st century American knowledge-based economy is highly dynamic, one in which today's small startup company may become tomorrow's corporate giant.

To spur economic development, it is vital to create the conditions that will attract businesses from the outside to move into Central Illinois—conditions that will support and encourage existing businesses to grow and prosper, and stimulate new entrepreneurial businesses to start and thrive. Briefly summarized, those conditions include:

- Great schools;
- Physical infrastructure, which includes a good highway system, a first-class airport, plenty of affordable high speed telecommunications capabilities, an even more attractive downtown and riverfront, and other visible signs of great community pride;
- A taxation system that is fair and favorable to business;
- Institutional and governmental coherence. Businesses need streamlined processes to obtain necessary public approval and services. The "One-Stop" concept could well be applied here;
- Regional cooperation among governmental units. Parochially minded officials who see economic development as a zero-sum game are obstacles to regional progress;
- First class public services, from crime prevention to esthetic cityscapes and beyond;

- A workforce that is adequate in quantity and high in quality. Workforce development, of course, is the central focus of the present study.

Forces that will shape Central Illinois' 21st economy. The path from the past to the present cannot help but influence the path from the present to the future—but to influence is not to determine. Other forces, some inside Central Illinois and some outside the area, will also exert major influences on the course of 21st century economic development. Among the most important are rapid technological change, globalization, a changing national economy, and profound demographic change.

Technology: Among the technologies likely to impact Central Illinois significantly in the years immediately ahead are these:

- Computer hardware and software;
- Telecommunications that support the Internet, e-business, geographically dispersed enterprises and design teams, virtual collocation of people, and distance learning;
- Advanced manufacturing including, among many others, robotics, advanced machining, powder metallurgy, fuel cells, rapid prototyping, flexible manufacturing, embedded sensors and transponders, and nanotechnology;
- Logistics supporting globally integrated supply chains;
- Biosciences and biotechnology, including genetics, pharmacology, biopharmaceuticals, and genetics engineering;
- Health care delivery systems.

Globalization: In recent decades, technological advances in telecommunications and transportation have combined to shrink the globe. Some speak of the “death of distance.” Producers and consumers worldwide now share a common information system. Anyone anywhere who has the capacity to use it has access to vast amounts of technological, product, and financial information. With national borders increasingly porous to the flow of information, markets that once were limited to localities or countries are rapidly becoming global in scope.

Globalizing trends have wrought a remarkable shift in the composition of U.S. foreign trade. The United States is increasingly an importer of goods and an exporter of services. Among the goods where the nation's trade deficit is highest are petroleum products, computers, automobiles, and other consumer goods. High value-added,

A workforce of the right size and quality is key to the area's economic development.

Powerful forces will help shape Central Illinois' future.

Forces coming from outside Central Illinois include...

...rapid technological change and innovation and....

...globalization which brings the further integration of the U.S. and Illinois economies into the global economy.

China and other nations will offer stronger competition in manufacturing and some services.

Demographic forces operate both within and outside Central Illinois.

Most global population growth comes outside the developed nations.

Most U.S. population growth will come outside the Midwest.

The U.S. is graying, especially in the Midwest.

Immigrants and their progeny—especially Hispanics—swell the nation's workforce pool.

The Midwest faces a "worker dearth."

manufactured capital goods, including aircraft and heavy machinery, are areas in which the United States still enjoys a modest export surplus. But labor-intensive, low value-added manufacturing in America is in deep trouble that promises to get even worse in the years ahead.

Serious foreign competition no longer is confined to low-skill industries. Some large, developing countries are quickly climbing the value-added ladder. China, for example, is moving rapidly into sophisticated manufacturing, while India's software industry is fast carving itself a competitive global niche. In the future, fewer and fewer parts of the American economy will be sheltered from intense foreign competition.

Profound demographic change and its workforce implications. World population and workforce growth in the early 21st century will come mainly in developing countries such as China and India. These mushrooming markets and industrial workforces will present both opportunities and growing competitive challenges to the world's established industrial economies, including that of Central Illinois.

Within the United States, population growth will come mainly in the South and West during the early 21st century, just as it did in the latter decades of the 20th century. Illinois and the rest of the Midwest will grow more slowly than the national average.

The U.S. population and workforce are aging. This is particularly true in the Midwest and of white non-Hispanics. While the number of older and retiring workers is on the increase, the number of workers in their thirties and early forties will drop sharply in the present decade. This applies especially to the white, non-Hispanic portion of the workforce.

U.S. immigration is now at an all-time high; that is likely to continue. Immigrants and their progeny will account for much of U.S. population and workforce growth in the early 21st century.

Hispanics are projected to comprise fully half of the net new entrants into the nation's workforce in this decade. Illinois' Hispanic population and workforce are growing rapidly too, most noticeably in Chicago and the collar counties, which are the most rapidly growing parts of the state.

As the pool of younger workers contracts, the Midwest will need to retain the older workers in the workforce. At the same time, the aging baby boomer generation will exercise an increasing demand for health services and other products geared toward an older population.

Maintaining a workforce that is adequate in size will not be easy in Illinois because there is a large outflow of the state's residents to other states, principally to the South and West. That outflow is particularly notable among white non-Hispanics. The problem will be most acute outside the Chicago metropolitan area.

A changing national economy. As the pace of technological innovation accelerates, the U.S. economy is moving rapidly beyond the service economy in the direction of becoming a “knowledge-based” economy. The main traits of a 21st century knowledge-based economy are these:

- Much greater prominence of “knowledge-intensive” industries – industries in which the quantity and quality of firms’ intellectual property are critical to competitive success;
- High and rising “knowledge content” of everyday goods and services;
- High levels of research and development at all levels, governmental, university, and corporate;
- Insistent pressures on companies to innovate or lose competitive position, which means shorter life spans for both products and services;
- Intense competition in markets where both buyers and sellers are very well informed by the Internet and other telecommunications media;
- A major need for rapid responsiveness and adaptability to ever-changing customer needs and other market circumstances;
- A high incidence of entrepreneurial activity, accompanied by high levels of “creative destruction” in which established technologies (and the companies based on them) are constantly threatened by newcomers, both from within and outside their industries as previously defined;
- Many “gazelles” – recently formed and very rapidly growing companies based on new or transformed intellectual property.

By its very definition, “knowledge” is central to the “knowledge-based economy.” Competitive success for firms and individuals depends on the ability to produce new ideas, transform old ones, combine and codify that information into intellectual property, and incorporate it into new products and processes. In short, business success will depend on individual and collective abilities to produce and use knowledge.

Worker dearth—especially among white non-Hispanics—will be most serious in Illinois outside the Chicago area.

The American economy is transforming itself

America's knowledge-based economy of the 21st century will be very different than yesterday's economy.

Knowledge and human capital will be the essential ingredients for competitive success in America's 21st century economy.

Companies and communities that have lots of top-quality human talent will thrive. Those that do not will not.

Manufacturing that survives and thrives in 21st century America will be much more knowledge-based than yesterday's metal benders.

That point is well-illustrated by looking at Caterpillar.

CAT is now a global company whose hourly-paid workforce is growing most rapidly outside Central Illinois and even outside the U.S.

CAT's knowledge workers, i.e., its well-educated and highly skilled workers, will expand in numbers in the early 21st century.

The message is this: *the knowledge economy places a high premium on human talent. A company's or a community's competitive strengths in the 21st century will be determined increasingly by the quantity and quality of its human talent, i.e., its workforce.* Companies and communities that successfully build their talent bases and develop their workforces will thrive. Those that do not will not. The message for Central Illinois should be loud and clear.

Implications for manufacturing in Central Illinois. While most sectors of American manufacturing have shed jobs in recent years and many have cut production, there are significant exceptions. Among those exceptions two manufacturing industries stand out: (1) The "Electronic and Other Electrical Equipment" and (2) the "Industrial Machinery and Equipment" industries. Both added jobs and increased output by large percentages during recent years.

These two industries are both very high tech and incorporate copious quantities of information technology into their products. Both are heavily knowledge-based in the sense that engineering and other intellectual capital play key roles in both their design and their production. They represent the kinds of manufacturing in which American producers remain highly competitive in national as well as in global markets.

The trend toward the knowledge economy and the trend toward globalization are well illustrated in one prominent Central Illinois company: the Caterpillar Corporation. For the past several decades, Caterpillar has been on the path of global growth and diversification. About half of Caterpillar's total sales now originate outside the United States, with the Asia/Pacific share growing most rapidly of all.

Caterpillar's broadening global markets bring a concomitant broadening of its employment profile. Countering a slight decline in the company's stateside employment has been a significant rise among those working elsewhere in the world. In 2000, 45% of Caterpillar's global workforce worked outside the United States, compared with 39% in 1998.

To remain competitive in the global market place, Caterpillar increasingly stresses excellence of product design, ergonomics, and customer support, all of which will necessitate more and more highly qualified knowledge workers. In Central Illinois, Caterpillar's blue collar workforce has shrunk substantially in the past few years, a fact much lamented in the region. At the same time, Caterpillar's high value-adding workforce (e.g., in engineering, design, marketing, and management) has expanded, which should be cause for regional exultation.

Today, Central Illinois is the locus of the highest concentration of Caterpillar's knowledge workers. The region clearly has a vital interest in building on that strength. But it cannot and will not happen automatically.

Central Illinois must have the ability to produce, attract, and retain the quantity and quality of human talent that Caterpillar and other knowledge-based manufacturing companies require to become and remain globally competitive. The message for Central Illinois workforce development is obvious.

America's Changing Occupational Mix. Accompanying our economy's changing industrial structure is a radically changing occupational mix. The most recent occupational projections produced by the Bureau of Labor Statistics indicate that many of the fastest growing occupations in this decade will offer high compensation and require education and training beyond the high school level. Many of those occupations are new; they did not even exist in 1990.

We can be certain that many more new occupations requiring new kinds of education and training will emerge by 2010. Young Americans looking to careers in tomorrow's jobs in the knowledge economy will need the proper K-12 preparation and the requisite post-secondary education to fill these jobs. *Perhaps the most important thing that a young person can learn is how to learn.*

Although many of the fast-growing occupations will require some post-secondary education or training, far from all of tomorrow's jobs will require higher education at the bachelor's level or above. In fact, the largest share of job growth expected in the U.S. economy in this decade will come in occupations where on-the-job training is the primary means of developing the required workplace qualification. A strong system of job training, therefore, is of inestimable importance for the proper development of America's workforce.

Of course, economic growth will not be the only source of job openings during the period 2000-2010. This decade will see a rising tide of retirements from the workforce as members of the Baby Boomer generation move into their fifties and sixties. Fresh supplies of workers also will be needed to replace workers who exit some occupations to enter other occupations.

In fact, over three-fifths (62%) of total projected job openings in the U.S. economy during this decade will come about because of the need to replace workers who have switched occupations or left the workforce for one reason or another. Among the occupations where replacement needs will be great are these:

A large portion of CAT's knowledge workers now live and work in Central Illinois.

That must continue.

The occupational profile of the American workforce is changing rapidly, too.

New kinds of work and new occupations are constantly springing up.

Workers of 21st century must be prepared for a life full of job changes.

New and different jobs require new and different skills to match.

That makes a worker's ability and willingness to learn new things quite critical to his or her employment success.

Many jobs will open up because Boomers and others will leave the workforce or change their occupations.

Worker dearth will hit hard at some very important occupations...

...and especially in Central Illinois.

We look ahead and imagine three very different scenarios for the rest of this decade.

A “nightmare” scenario...

...could come about if Central Illinois fails to confront and solve the challenges facing its K-12 educational system...

...and would have nightmarish consequences.

The area’s best and brightest would depart and the “brain drain” would worsen.

- Registered nurses;
- Post-secondary teachers;
- Elementary school teachers;
- Secondary school teachers.

Recruiting and retaining enough properly educated and qualified persons to meet the nation’s growing needs for nurses and teachers will present a mounting challenge during this decade. For Central Illinois, with its aspirations for bioscience-led economic development and its acute needs for educational improvement, this challenge will be especially sharp.

Scenarios for Central Illinois’ Economic Future. To visualize the future economic development of Central Illinois, we create three different scenarios for the year 2010. All three are sketched here in very broad strokes.

#1 A Dismal Scenario: Things Slide Downhill. This is a “nightmare” scenario, which means that some important things go wrong and trends or forces turn out much worse than we expect. A favorite nightmare in Central Illinois is that the Caterpillar Corporation pulls its headquarters out of the area and gradually downsizes its production operations here. This disaster is unlikely but not altogether impossible. What happened to Seattle with Boeing’s exit could happen elsewhere.

Central Illinois could fail to cope with the challenges facing its K-12 educational system. Such a failure would produce at least three nightmarish consequences:

1. The costs reckoned in forgone human potential and personal tragedy would be incalculable;
2. Employers would be unable to recruit and retain a qualified workforce;
3. The ensuing racial and other social tensions could make life in Central Illinois much less pleasant than it now is.

Workforce Implications of the Nightmare Scenario. If this scenario were to come to pass, it would see a “hollowing out” of most of the skilled portion of Central Illinois’ workforce. Large numbers of professional and managerial workers would leave the area or would not be recruited to it in the first place. The best and the brightest of Central Illinois youth would leave the area never to return. Those who stayed would find themselves in modestly skilled and low-paying service sector and retail jobs. Such jobs would grow both in

absolute numbers and as a percentage of the workforce. As economic growth stagnated or reversed, total employment would shrink as well.

The “model” for this dismal scenario can be seen in the depressed areas of the Northeast and Appalachia—or even in the depressed small- and medium-sized towns of the agricultural Midwest—where the principal industry has dried up or departed and nothing has replaced it. It is not a pretty picture. It is a scenario to be avoided.

#2 A So-So Scenario: Things Go On As They Are. Scenario Number Two is a “surprise-free” scenario, which means simply that it describes a state of affairs (for our purposes, projected for the year 2010) that would surprise us the least if it actually came true. Essentially, it is a scenario in which things continue along “predictable” lines, pretty much as they are at present.

To the casual eye, “surprise-free” Central Illinois in 2010 would look very much as it did at the beginning of the decade. Major improvements to the transportation infrastructure, urban amenities, and the riverfront would be made, and economic growth would continue throughout the decade, albeit slowly.

As in the previous quarter-century, however, the region’s income growth could be expected to lag behind that of the state, and especially, that of the nation as a whole.

It would not be surprising if Caterpillar were to retain its international headquarters in Central Illinois, but continue to reduce its hourly employment in the area as it shifts actual production to lower-cost locations and locations closer to its global markets.

Most of this job loss would likely come through attrition and the retirement of many veteran hourly employees. Unfortunately, it would also not be surprising if Caterpillar and many other employers were to experience growing difficulty in recruiting qualified talent. Salaried employment at headquarters could remain stable even as Caterpillar decentralized more of its engineering and design work to other global locations.

Under this scenario, Business services, sparked by the rapid growth of the staffing industry, are likely to account for nearly half of all service sector job growth and almost a quarter of all net employment growth in Central Illinois during the decade.

The Regional Bioscience Strategy for Central Illinois launched in 2001 should make serious progress during the decade. Unfortunately, a shortage of funding combined with persisting governmental and institutional rivalry could impede more rapid gains.

Real-life models for the dismal scenario exist in America today.

Look no farther than Appalachia.

A “what-you-might-expect” scenario...

...leaves Central Illinois looking much the same in 2010 as in 2000...

...except lagging more behind the state and nation.

CAT’s headquarters could still be here...

...but fewer of its workers would be.

Recruitment of knowledge workers would be very difficult.

Business services, led by temp jobs, would grow rapidly.

The Bioscience Strategy could show modest progress.

The IDES projects occupational employment for 2008.

The most rapidly growing jobs in Central Illinois will require a good K-12 plus some post-secondary education.

Skills requirements for tomorrow's jobs are rising rapidly.

Most workers will need retraining to keep up with the constantly changing knowledge and skill requirements of new jobs.

That means that workers must have basic education that is good enough to enable them to learn new things.

The quality of K-12 education in Central Illinois is a major concern today and could still be that at the end of the decade.

Workforce Implications of the So-So Scenario. The Central Illinois workforce implications of this “surprise free” scenario derive directly from the projections produced by the Illinois Department of Employment Security. In general, these mirror the projections cited earlier for the United States in that *the rapidly growing occupations in this area also will require much more education and training than yesterday's occupations. In order to be able to fill these jobs and to grow into them as their careers progress, young people in Central Illinois will find the proper K-12 preparation and the requisite post-secondary education an absolute necessity.*

Analysis of the skills required for tomorrow's jobs in Central Illinois indicates that the skills required for the jobs that are growing most rapidly in Central Illinois are much higher than the skills typically required for the jobs that are disappearing in the regional economy. Most noticeable is the rising requirement for better “soft” skills. The requirements for teamwork, customer service, and other interpersonal skills are much higher for tomorrow's jobs than for yesterday's.

Locally as well as nationally, occupations requiring on-the-job training (OJT) will bear the brunt of both job losses and job gains. That means that workers in OJT-requiring occupations will require retraining on an ongoing basis. Three points emerge from this fact:

- Workers with modest formal education more than anyone else must be able to adapt and grow to meet the changing requirements of the workplace.
- The formal education that these workers bring to the workplace, however modest it may be, must be good enough to prepare these workers to grow and adapt to changing workplace circumstances that affect them more than other groups in the workforce. If it is not, then these workers will be left in a hopeless position.
- Effective training and retraining becomes critically important to the employability and earning ability of the workers who fill these “churning” occupations that typically do not require a great deal of formal education.

Unfortunately, it would not be surprising if the quality of K-12 education in Central Illinois were still to be a major concern at the end of this decade. Student scores on Illinois' standardized tests should show some modest improvement during the decade, but not enough to qualify the area's young people for the region's or the nation's most rapidly growing and best paying jobs. It would be very sad, but not surprising, if Central Illinois were to remain as undistinguished for its K-12 education in 2010 as it was in 2000.

If that were the case, then the inadequate preparation of high school graduates would continue to frustrate employers' efforts to build a qualified workforce. It would also continue to saddle post-secondary educational institutions and their students with heavy remediation burdens. Finally, the perception of educational mediocrity can be expected to make it difficult to attract highly skilled professionals to jobs in the area.

One additional workforce reality to be expected in this decade is a return of tight labor markets to Central Illinois. The Recession of 2001, short and brief as it was, temporarily obscured the worker dearth that so plagued area employers in the five years previous. But recession did not banish demographic realities. To maintain the pace of economic growth of the past decade (the pace assumed by official projections), job growth must continue at a rate that threatens to outpace the growth of Central Illinois' workforce pool. *From 2003 onward, it would hardly be surprising if the specter of worker dearth were to return to haunt area employers and human resource managers.*

In summary, it would not be surprising at the end of the first decade of the 21st century to find Central Illinois still looking for a successor to heavy manufacturing as a locomotive to drive economic growth. No single industry or industrial cluster may by then have emerged to propel income and employment to significantly new levels. Nevertheless, life could still be going reasonably well in the view of many older area residents, the age group that would by then dominate Central Illinois' demographic scene.

#3 A Sunny Scenario: The Dawning of a Bright, New Era. In this case, some key things turn out well or go better than they appear to be going at present.

In this scenario, Central Illinois in 2010 exudes the optimism and dynamism of success. Two new engines accelerate the region's economic growth:

- The phenomenally successful Regional Bioscience Strategy for Central Illinois that was launched in 2001 (RBS); and
- The equally impressive Central Illinois Center for Advanced Manufacturing (CAM), initiated in 2006.

By 2010, it could genuinely be said that these two initiatives have "played very well in Peoria" and elsewhere in Central Illinois. Four factors deserve credit for the programs' successes:

- The vision and perseverance of their leadership;

If so, then area businesses would face severe problems in recruiting and retaining enough quality workers.

It would not be surprising if slow growth of Central Illinois' working age population put the brakes on the areas economic growth.

But a more-or-less unchanged Central Illinois might be quite agreeable to many area residents.

Finally, a sunny scenario.

New engines of economic growth include:

A highly successful Bioscience Strategy

And a New Center for Advanced Manufacturing.

Four factors make this sunny scenario possible.

Vision.

Regional cooperation.

Conducive conditions.

Great strides by Central Illinois' education and research institutions at every level.

The results are great.

Rapid growth of the area's cadre of knowledge workers creates brisk demand for up-scale products and services.

Service sector pay scales rise.

Manufacturing employment is stable but there are many more knowledge workers.

Average pay in manufacturing rises.

Real estate values rise.

The future looks even brighter.

- The willingness of all key participating institutions and governmental bodies to bury past rivalries and to combine their efforts to surmount the financial and organizational difficulties that might otherwise have doomed the effort;
- Conducive conditions including (i) rapid technological progress in biotechnology, pharmacology, medical science, and health care delivery; and (ii) an aging regional population requiring more and better health care;
- Focused efforts by the region's educational and research institutions—with the help and support of community leaders and employers—to craft suitable curricula and to raise the quality of education and professional training at every level, from pre-school and kindergarten to post-graduate programs.

The successes of the both RBS and CAM are beginning to be seen in the numbers by 2010. The growth of regional per-capita income in Central Illinois has broken the trend of the late 20th century and now is increasing more rapidly than either the state or the nation.

The recruitment and employment of a larger proportion of high value-added professionals in Central Illinois is generating a gratifying spurt of demand for locally provided goods and services. These span a broad spectrum from residential construction to restaurants to up-scale retail establishments. The quality (and pay) of service sector jobs is beginning to improve noticeably as small and medium-sized service firms spring up to serve businesses and consumers with higher disposable incomes.

In terms of numbers, manufacturing employment is stable. Qualitatively, however, it is changing rapidly. Caterpillar not only retains its world headquarters in Central Illinois but is significantly expanding its research, engineering, and managerial operations in the area. Due to greater automation and the growth of its global operations, however, the number of hourly Caterpillar employees continues a gradual downward drift. The positive side of that change, however, is that the remaining hourly jobs require much higher skills and pay much better than those that have been lost.

Real estate values in many areas of Central Illinois are climbing twice as rapidly as in the preceding decade, and several rundown urban neighborhoods are being renewed and gentrified. Downtown and riverfront enhancement has accelerated, to the delight of the area's growing population of young professionals.

As the second decade of the 21st century dawns, Central Illinois looks to the future with greater hope and optimism than it has in many decades.

Workforce Implications of the Sunny Scenario. This scenario differs from Scenario Number Two (“Things Go On As They Are”) chiefly in its assumption that the Central Illinois RBS “takes off” in a very significant way. Of course, to cause things to turn out better than they might be expected to carries serious workforce implications.

Much more aggressive building of the health care and related bio-science sectors of the Central Illinois economy implies the need to recruit and retain many more physicians and supporting health-care professionals than if things simply go on as they are now (Scenario Number Two). For the purposes of benchmarking, Rochester MN is taken as the “gold standard,” a place where the provision of health services is area’s principal “export.” But even aspiring to reach half of Rochester’s present concentration of physicians and surgeons by the year 2020 suggests that by 2010, Central Illinois would need considerably more than twice as many doctors as it has now.

It will take more than just more doctors to make Scenario Number Three happen, though. Just as vital will be more nurses, pharmacists, and a wide of other health professionals, paraprofessionals and technicians.

Scenario Number Three also implies the more rapid growth of many other professional and “knowledge technologist” occupations. The success of the Center for Advanced Manufacturing, an idea broached at the end of Chapter One of this study, would require and attract an impressive concentration of engineers, technicians, and information technology professionals to Central Illinois. World-class manufacturing companies could be expected to locate more of their design and training activities in the area.

In short, Central Illinois would become a Mecca for knowledge economy brainpower and expertise with special relevance to manufacturing, a sector in which the area already has impressive strengths.

The skills and knowledge required by the Central Illinois workforce under Scenario Three are also another notch higher than under Scenario Two.

Summing Up the Scenarios and Their Workforce Implications: The differences between Scenarios Number Two and Number Three are primarily ones of degree. Both of these scenarios see Central Illinois participating in the nation’s movement toward a “knowledge economy.” Both scenarios shout loudly that a workforce that supports and makes possible a 21st century economy is one that differs very significantly from one that was appropriate to the economy of the last century.

The workforce must change to make the sunny scenario a reality

Recruitment of key knowledge workers, especially in the biosciences and health care services, must be sustained and supported.

Many more highly trained paraprofessionals and technicians will be needed.

Central Illinois could become a Mecca for knowledge economy brainpower and expertise.

The area’s workforce will need to be much better educated and trained.

We expect Central Illinois to be a part of America’s 21st century knowledge economy. The question is, “how big a part?”

To thrive, or even to survive, in the 21st century workforce, workers will need to have...

...a proper set of personal qualities and attitudes...

...a well-developed kit of basic tools...

...and superior thinking skills.

To thrive—or even to survive—in the 21st century workplace, every worker in Central Illinois will need a set of personal qualities and attitudes, basic tools, and thinking skills of the following kind:

- Personal qualities and attitudes:
 - ⇒ Integrity and honesty;
 - ⇒ Personal responsibility and self discipline;
 - ⇒ Sociability, including understanding of others, friendliness, empathy, and teamwork skills;
 - ⇒ Curiosity – the desire to understand and learn;
 - ⇒ Flexibility and adaptability – a positive attitude toward change;
 - ⇒ Self-motivation, initiative, and self-management.
- Basic tools:
 - ⇒ Communication skills, including language proficiency (at least in English and, desirably, in Spanish or another foreign language), reading, writing, and speaking;
 - ⇒ Quantitative skills – mastery of arithmetic and a sufficiently solid foundation in high school mathematics to learn more mathematics as may be required by work and additional study.
- Thinking skills:
 - ⇒ Knowing how to learn – the ability to apply what one already knows to the task of learning what one does not;
 - ⇒ Information search skills – the ability to determine what information is required for a particular task, to locate that information, and to use it appropriately;
 - ⇒ Problem solving skills – the ability to diagnose a problem, determine causal linkages, and break big problems down into smaller, solvable parts;
 - ⇒ Decision making skills – the ability to conceptualize objectives, identify constraints, elaborate alternative courses of action, and choose well from the set of available options;
 - ⇒ Pattern recognition skills – the ability to discern commonalities, differences, and connections among seemingly disparate phenomena, and to build coherent mental models of their interrelationships;
 - ⇒ Critical skills – the ability to see possibilities for improvement;

⇒ Creative skills – the ability to think “outside the box,” to find new and better ways to approach problems and situations.

These attitudes, tools, and skills comprise the foundation upon which Central Illinois’ 21st century workforce must be built.

Central Illinois’ Population and Workforce Growth. Twentieth-century population growth in Central Illinois and its neighboring counties showed two very significant patterns:

- Rapid growth of Peoria and Tazewell counties during the first eight decades of the century, followed by two decades of decline or stability;
- Stagnating or declining population in virtually all other counties of the area.

One very important result of demographic stagnation or actual depopulation in rural areas of Illinois and Iowa throughout the first eight decades of the 20th century was the creation of what seemed to be an ever-present reservoir of potential workers for the region’s growing manufacturing sector. Young people who were no longer needed on the farms or in the villages serving farming communities flocked to Greater Peoria (Peoria and Tazewell counties) and to urban centers beyond Central Illinois.

By the 1980s, however, the population flight from the countryside had subsided, for two major reasons. First, the population was aging rapidly, but many older rural residents were choosing to “age in place” by simply moving from the farm to local towns. Second, there were ever fewer young people available to migrate to the cities. The result was a drying up of the workforce pool that had seemed so inexhaustible in earlier decades.

For their population growth in the 21st century, the urban areas of Central Illinois will need to rely increasingly on their own internal growth and their ability to attract migrants from places other than the rural areas of Illinois, Iowa, and other communities of the Midwest.

Central Illinois is ethnically much less diverse than the state of Illinois. Whereas only 68% of the state’s population is white and non-Hispanic, the comparable number for Central Illinois is 86%. Hispanics comprise a tiny 2% of Central Illinois population, compared to 12% for the state. African-Americans, also, are about half as numerous, proportionally, in Central Illinois as in the state as a whole.

The size of the Central Illinois Workforce grew little during the last quarter of the 20th century. Indeed, the area’s workforce growth is lagging seriously behind that of the nation and state. Given the re-

If Central Illinois’ workforce has all these in good measure, then economic development will take care of itself.

Population growth in Central Illinois is stagnant.

Its traditional sources of new workers are drying up.

Large Midwestern cities, like Chicago, have grown because of their ability to attract an influx of newcomers....

...notably, Hispanics.

Central Illinois has not done this.

Central Illinois' workforce grew very little in recent years.

Expect continued slow population growth in this decade.

Worker dearth in Central Illinois?

Job growth has been outpacing the growth of the working age population.

That mismatch cannot be sustained for long.

Conclusion: Yes, Central Illinois does face a worker dearth of growing seriousness.

Higher productivity per worker is the best way to cope with worker dearth.

gion's stagnant population growth, it could hardly have been otherwise.

What of the future? Official projections of Central Illinois' prime working age population (i.e., ages 16 to 64) show extremely slow growth for first two decades of the 21st century. In this decade, from 2000 to 2010, the area's population is likely to grow by only 2%. The working age population of the entire state of Illinois, meanwhile, is projected to grow by as much as six percent.

The Threat of Worker Dearth in Central Illinois. Consider this question: *Will there be enough workers to sustain economic growth in Central Illinois?* The official data are disturbing. Indeed, a potentially serious mismatch appears between official projections of Central Illinois' employment growth on the one hand, and the official projections of the area's population growth among the prime working ages on the other. The IDES projects employment in Central Illinois to grow by more than 23,000 from 1998 to 2008. Scenario Number Two (Things Go On As They Are) is built around those same projections. Meanwhile, the working age population is projected to grow by fewer than 6,000 persons. Are these two sets of projections consistent or is the region looking at a worker shortfall of nearly 18,000 individuals?

The two sets of official projections can be made compatible *only if workforce participation rates in Central Illinois sharply increase*. In 1998, the ratio of persons employed to the working age population was about 76%. That would need to rise to about 84% by 2008 in order for employment growth to reach the level projected by IDES. Can this be done? Yes, but it will require a major effort to bring people into the workforce who are not presently in it.

In short, workforce growth appears to be outstripping the growth of the working age population. *Central Illinois faces a workforce challenge of a quantitative nature that seems unrecognized by most people. Worker dearth resulting from continued stagnation of the area's working age population could constitute a serious threat to its continued economic growth.*

Workforce Quality in Central Illinois. As the rate of workforce growth slows, the best way to maintain buoyant economic growth in the Central Illinois region is to increase worker productivity. This can be accomplished in various ways, including greater and better use of technology, more and better capital equipment for workers to work with, and more efficient use of all factors of production, including labor. Productivity growth can also be greatly enhanced by constantly improving workforce quality.

How good is the Central Illinois workforce now? Unfortunately, the measures of workforce quality and its rate of improvement in Central Illinois are incomplete, imperfect, and imprecise. Better data are sorely needed. Nevertheless, some indirect evidence is available.

Census data on the level of educational attainment of the adult population is one indicator of overall workforce quality. The percentage of Central Illinois' adult populace that has a high school education, some (incomplete) college education, or an associate's degree is higher than in the entire state or the nation. On the other hand, the percentage of Central Illinoisans with graduate or professional degrees is much lower.

Worrisome is the fact that 14% of local adults lack at least a high school education. That the situation is worse in both the state and nation makes that fact only slightly less foreboding. To lack a high school education in America's 21st century workforce is to be virtually condemned to a life with few opportunities to earn a decent living and even fewer attractive life-style options.

One other set of data points directly to the high loss of human talent in Central Illinois. During the academic year 2000-2001, nearly 700 of Central Illinois' high school students *dropped out of school*. Even if some dropouts eventually return to school or earn a GED, it is probably conservative to estimate that 500 of last year's dropouts will never receive their high school diploma or the equivalent. *Over the course of ten years, that comes to roughly 5,000 Central Illinois youngsters who are condemned to adult lives of dismal jobs and meager earnings. Furthermore, a large portion of these will be members of ethnic minorities. Neither the individuals nor the community can tolerate this waste of human potential.*

Employers' perceptions of employee and job applicant deficiencies are another indicator of workforce quality. Interviews with employers, and a very large employer survey conducted during the summer of 2001, tell much about worker quality in Central Illinois as seen through the eyes of employers and human resource (HR) managers.

When asked, employers told surveyors that they found the lack of "soft" or "people" skills to be the greatest deficiency among recently hired employees. Those soft skills include customer service skills, communication skills and teamwork skills. Employers in the most rapidly growing industrial sectors (e.g., business services, finance, hospitality, and other services) most acutely perceive this critical need for "soft" skills.

Employers and HR managers interviewed during the course of this study stressed how vital it is for workers to be able and willing to

Improving workforce quality is critical to raising productivity.

So how good is the Central Illinois workforce?

Good direct measures of worker quality do not yet exist.

So we must use surrogate measures.

Adult educational attainment in Central Illinois compares fairly well with the Illinois average.

But far too many local adults lack at least a high school diploma.

Dropout rates in some Central Illinois high schools are extremely high.

In this decade, more than 5,000 Central Illinois youngsters will emerge from the area's high schools with no diploma.

Employers call loudest for better "soft" skills.... especially in the most rapidly growing sectors of the economy.

More critical than what a worker knows now is his or her ability to quickly learn what he or she does not yet know.

All workforce development is divided into three parts:

Augmenting the size of the workforce pool.

The size of the workforce pool depends on...

The number of people who could work;

The share of them that actually do work; and

Commuters.

learn new material. In a dynamic and ever-changing business environment, a valuable worker will have great powers of flexibility, creativity, and the capability to quickly acquire new skills and knowledge. *More critical than what a worker knows now is his or her ability to quickly learn what he or she does not yet know.* A good basic education is the essential prerequisite for that ability. Competence in mathematics, in particular, turns out to be a reliable predictor of a worker's or a job applicant's ability to master new skills and knowledge.

Developing the Central Illinois Workforce.

Workforce development emerges as a necessary response to the quantitative and qualitative challenges facing the 21st century workforce in Central Illinois. We see workforce development happening in three major ways:

- Augmenting the size of the workforce pool;
- Raising workforce quality; and
- Improving the matching of workers with jobs.

We consider each in turn.

Increasing the size of Central Illinois' workforce pool. Worker dearth looms before Central Illinois in this decade and beyond.

Increasing the size of the workforce pool, or, at least, important parts of it, is one potential part of a company's or a community's response to worker dearth. Certainly, that is what recruitment and retention is all about. When a company sends recruiters outside the area to locate workers of any skill level, it is attempting to augment the area's workforce. When that same company works hard to retain its valued employees, it is attempting to maintain the quantity (as well as the quality) of the local workforce.

The size of any community's workforce pool depends on three factors:

- The size of the section of its population that is able to work;
- The labor force participation rates of its various age, gender, and ethnic components;
- The net number of persons commuting periodically (daily, weekly, etc.) to or from other areas.

While recruitment, sometimes on a large scale, has long been a standard feature of private employers' HR management activities, it has rarely been so with public or semi-public workforce development bodies. Until recently, increasing or decreasing the size of the population that is able and willing to work simply was not considered a proper activity for workforce developers.

But as the worker dearth of the late 1990s intensified, bodies concerned with economic and workforce development in some U.S. communities began to actively assist their employers' recruitment efforts and otherwise to try augmenting the size of local workforces.

Where public or semi-public workforce augmentation efforts are made, the stress is usually on highly qualified professionals, that is, on members of the elite workforce. But there are exceptions: namely, community efforts to help recruit migrant and other temporary workers or even hourly workers for the hospitality and other industries.

Inadvertently, traditional workforce development efforts directed at the marginal workforce (those on welfare, the unemployed, disadvantaged, hard to employ, etc.) have, to the extent that they are successful, the result of increasing the share of persons actually working among those who can work, that is, *increasing the labor force participation rate*.

Central Illinois' workforce development organizations seem not to have explicitly attempted to assist local companies' recruitment or retention efforts or otherwise augment the size of the area's workforce. As labor markets tighten again in the next few years, and as signs of worker dearth return after the Recession of 2001, this will need to change.

Most significantly, Central Illinois needs greater understanding of and attention to the factors that attract and repel executives, professionals, and other members of the high value-adding workforce. These include such community attributes as safety and public order, esthetic attractiveness, educational variety and quality, leisure time possibilities, and other quality of life factors.

Raising workforce quality. Improving the quality of the "human capital" must be a vital part of any effort to raise worker productivity and must be a central focus of every effective workforce development program. The main avenue for raising the prosperity of Central Illinois is by shifting a larger share of area jobs from low-skill, poorly paid to high-skill, highly paid occupations.

What is needed is a virtuous cycle that proceeds simultaneously in two ways:

Traditionally, workforce developers have paid little attention to workforce size.

But worker dearth is changing that...

...especially when it comes to the elite workforce.

Participation rates rise when former welfare recipients and other members of the workforce enter the workforce.

Central Illinois workforce developers and the community at large need to be concerned with the challenge of worker dearth.

Raising workforce quality is critical to raising productivity in Central Illinois.

Needed: Faster growth for high skilled and better paying jobs...

...and...

...an improved workforce to fill those jobs.

Four targets for workforce development.

The Entrant Workforce, i.e., young people moving from school to work.

*The high schools of Central Illinois are among the most important, if not **the** most important, workforce development institutions in the area.*

Assessing how well students learn in school is not easy.

Finishing high school is a necessary condition for a productive place in the 21st century workforce.

1. The jobs that grow most rapidly in Central Illinois must be those that require higher skills (and therefore pay better); and
2. The Central Illinois workforce must constantly raise its level of skills, knowledge, and other workforce competencies so as to be able to fill those better jobs.

Efforts to raise workforce quality, like other measures of workforce development, can be targeted at:

- The entrant workforce (i.e., mainly young people);
- The marginal workforce (i.e., disadvantaged and other persons having difficulty finding and/or holding jobs);
- The incumbent workforce (i.e., those who are normally employed); and
- The elite workforce (i.e., mainly high value-adding professionals and managerial personnel).

Developing the Entrant Workforce. *The most important form of workforce development that most working members of society ever experience is their education.* While it is impossible to exaggerate the importance of early childhood and primary education, we focus in this report on Central Illinois' high schools.

The formal workforce development preparation of many Central Illinois workers ends with their high school education. For many others, a high school diploma is the springboard to college or professional education. The fact is that *the high schools of Central Illinois are among the most important, if not the most important, workforce development institutions in the area.* There are 30 public high schools in Central Illinois. How well are they preparing the area's youth for the 21st century workforce and a lifetime of continuous learning?

There is no perfect way to measure what students learn in school, no perfect way to assess if they mastered the skills and knowledge they will need for a lifetime of continuous learning. What we have are indicators like dropout rates, graduation rates, and scores recorded on various standardized tests. Imperfect indicators, all of them, but they do convey important information and, in any case, they are the best broad measures we have.

It is argued repeatedly in this study that a high school diploma is a necessary condition for a productive and satisfactory life in the 21st century American workforce and society. The point is that *most 21st century jobs*, whether they are in the service- or the goods-producing

sectors, and whether men or women hold them, *require the equivalent of at least a full high school education*. For that reason, our first two educational performance indicators are:

1. The high school dropout rate; and
2. The high school graduation rate.

Although it is a necessary condition for a satisfactory 21st century work life, a high school diploma is far from sufficient. As many employers—and also many workers—have found to their dismay, the mere fact that a person holds a high school diploma is no guarantee that he or she has acquired the knowledge or skills required by the 21st century workplace. For that reason, we need indicators of how successfully Central Illinois high school students actually learn what they need to open the way for their success in later life. Two available measures are:

1. The percentage of Central Illinois 11th graders meeting or exceeding the standards set in the Prairie State Achievement Examination (PSAE) given in the spring of 2001.
2. The percentage of 10th graders meeting or exceeding the standards set in Illinois Standards Achievement Test (ISTAT).

Some form of post-secondary education has become necessary for a rising percentage of jobs in the knowledge economy. This trend will continue—indeed, it will accelerate—in the years ahead. *For the 21st century workforce, the readiness of young people to pursue education beyond high school becomes ever more important*. Consequently, our next two educational performance indicators are:

1. The percentage of high school students who take the ACT test, and
2. The students' actual scores on that test.

Chapter Four of this study provides more than ample detail on the performances of all Central Illinois high schools as measured by these six indicators. We summarize the findings as follows:

- Too many young people in Central Illinois emerge from adolescence into young adulthood without completing high school or, if they do manage to graduate, without appearing to learn much of what they are likely to need in order to lead productive and fulfilling lives.
- Several of the area's high schools perform quite well according to the indicators employed here, but no area high school is among Illinois' very best.

High dropout rates and failure to graduate are the bane of high school education.

But a high school diploma is not a sufficient condition; much depends on what you learn in school.

The PSAT and ISTAT tests provide very useful information.

As do the ACT and WorkKeys[®] test results.

This study analyses the performance of Central Illinois high school students by school.

The results are very mixed.

A serious gap between students' proficiency levels and what future jobs will require.

Student "turnover," i.e., movement from school to school during the academic year, is highly correlated with high dropout rates and low graduation rates.

Some other Illinois high schools in communities that are even more socio-economically challenged than any in Central Illinois have lower turnover rates and higher graduation rates.

Poor education equates to poor adult earning and life-style prospects.

Career guidance is often the neglected stepsister of K-12 education.

- Great variation in student performance exists among the area's 30 high schools. A few area high schools record poor scores according to every indicator used in this study.
- There appears to be a serious gap between many students' proficiency levels, especially in reading and applied mathematics, and the requirements of the area's future jobs. In mathematics, more than a third of Central Illinois' soon-to-graduate students scored at levels below what is required for the job growth implied by the region's ambitious economic development aspirations. To a lesser degree, the same proved true in reading.

A significant finding of this study is that student mobility plays a hugely important role in frustrating satisfactory school performance. "Mobility" refers to the movement of a student from one school to another during the course of an academic year. We prefer to call it student "turnover," because that better evokes the workplace image of a worker leaving one job to take another. Just as high turnover in the workplace reduces employee productivity and bleeds employer profits, turnover in the "schoolplace" disrupts student focus and morale. The result is the same: lower productivity, whether on the job or in the schoolroom. *The analysis of 622 Illinois high schools that was performed as part of this study revealed student turnover is the single most important factor contributing to high dropout rates.*

Schools with low turnover rates across the state, even when they are in poorer minority communities, have much lower dropout rates than Central Illinois high schools where student turnover rates are the highest. In other words, students in those area high schools where turnover is highest perform below what would be statistically probable on the basis only of their ethnic and economic circumstances.

One can only imagine how disruptive to schoolwork it must be when more than 40% students who enroll in a school in September are somewhere else in May. In the world of business, it is only low-skilled, poor-paying jobs in the service and retail sectors that display such high turnover rates. Barring determined remedial efforts, it is only for jobs such as those that most of the unfortunate dropouts, low-achievers, and rapidly churning students will be qualified in the 21st century workforce—if, that is, they can stay out of prison and find any jobs at all.

In many schools across America, career and guidance counseling takes a back seat to virtually everything else that goes on. The results are serious and sad. Young people find themselves making some of the most important decisions of their lives without adequate information and advice. The unpleasant truth is that career and guidance counselors themselves too often lack fresh and accurate information

about the real world of work outside the schools. They need more and better information about emerging occupations so that they can better advise their students. Both counselors and teachers need a deeper awareness that customer service, leadership, and team building skills are increasingly important in the 21st century workplace. These, among many others, are areas in which business and schools in Central Illinois can fruitfully collaborate.

Several conclusions emerge clearly from this analysis and survey of Central Illinois high school performance:

- **Every student can and should learn.** Only a tiny fraction of students are so handicapped or disadvantaged that they cannot meet Illinois' academic achievement standards.
- **Improvement is possible.** The records of other schools in the state and nation, as well as in Central Illinois itself, demonstrate that determined school and community leadership can improve student performance even in difficult circumstances.
- **Student turnover is one of the area's greatest challenges.** The community can and should address the exceptionally high turnover rates among students in some parts of Central Illinois. To repeat and re-emphasize, *reducing student turnover is a shared responsibility between the community and the schools of the district.*
- **Complacency is unwarranted elsewhere too.** The data presented in Chapter Four of this study provides disconcerting evidence that the rot of educational mediocrity can threaten any school district.
- **Improve academic performance.** Beyond reducing turnover, there is much that can and should be done at the district and school level to improve dropout rates, graduation rates, and ISTAT or PSAE performance in Central Illinois schools.
- **Bolster career counseling capacities.** More and better programs are needed to inform career and guidance counselors about emerging occupations and other realities of the 21st century workplace that students need to know in order to make rational career choices.

The bottom line is this: Improving K-12 education is the single, most important step that can be taken to raise the quality of the Central Illinois workforce. Such improvement should be reflected, in particular, by lower dropout rates, higher graduation rates, and evidence of much better subject mastery among high school graduates.

Conclusions from the analysis of Central Illinois high school performance.

Improving K-12 education is the single, most important step toward raising the quality of the Central Illinois workforce.

Better K-12 education is vital to Central Illinois both because it will improve the quality of entrant workers and because it can become a powerful attraction for knowledge workers to the area.

And, did we mention, it also greatly improves people's lives and the society they live in.

Central Illinois has a strong post-secondary institutional base to build upon.

ICC can play a even more valuable role in improving the incumbent workforce.

But it needs to become much more aggressive about it.

Guidance and career counseling offer great opportunity for improvement.

Without such improvement, it is difficult to understand how Central Illinois will be able to develop a workforce of either the quantity or quality needed to support the area's desired level of economic development and prosperity. Nor is it easy to see how the area can attract from elsewhere the quantity and quality of human talent who, together with their families, place a very high value on education when deciding where to reside and work. Finally, to lose on the order of 5,000 Central Illinois young people who fail to complete high school—as seems likely if the current dropout rates persist—is to consign them to poverty and to invite caustic social decay.

At the end of the day, improvement of school performance is a community challenge and responsibility. To ignore this challenge or shirk the responsibility is to imperil the future of the area's workforce and economic development. It is also to imperil the area's future social stability and tranquility.

Post-secondary education in Central Illinois: This area is fortunate to be the home of two fine post-secondary educational institutions, Bradley University and Illinois Central College. Surveying the entire range of their offerings, much less evaluating them, is beyond the scope of this study. Only a few brief comments are offered here.

ICC enjoys a fine and well deserved reputation as an educational institution in Central Illinois. The most recent projections of the Bureau of Labor Statistics for the period 2000 to 2010 indicate that 18.6% of all job openings will require an Associate's Degree or a postsecondary vocational award. They also indicate that 69.8% of job openings will require some kind of on-the-job training. ICC has primarily focused on its undergraduate degree programs and now receives only 4% of its revenue from contract training.

As matters stand now, ICC appears much less aggressive in developing short-term training for the incumbent workforce than it could and should be. Interviews inside and outside the institution suggest that the college's system of (tenured) staffing and curricular development impedes the flexibility needed to play a prominent role in designing and delivering contract training to Central Illinois businesses. To prepare Central Illinois' incumbent and emerging workers for their current jobs, as well as the more demanding occupations in the near future, it seems logical that *ICC should devote and market itself far more aggressively to employers for short term training.*

Guidance and career counseling is another area in which ICC can improve its contribution. Too many students flounder during their late teen years and their twenties, trying to make up their minds about a career that they like and are prepared for academically. Guidance counselors within ICC and in area high schools need current informa-

tion about workforce trends, emerging occupations, and local businesses' workforce needs. They need to know how to use the abundant stock of hardware and software that is available to teach students about new careers. The goal of improving the quality of guidance and career counseling offers great potential for collaboration among Central Illinois businesses, the Workforce Board, ICC, and area high schools.

With virtually no exceptions, the regions in the United States where economic development is most buoyant are home to one or more universities with top-quality research and graduate education programs. A yeasty symbiosis between such universities and private industry explains much of the recent entrepreneurial dynamism of many economic growth centers in the country. In Central Illinois, Bradley University is the obvious candidate to become a nucleus of research and graduate education.

As the Battelle Institute report on the Central Illinois Regional Bioscience Strategy points out, adding Ph.D. programs in these fields will greatly help the region attract top talent that will want to tap that expertise and/or teach in these programs. The engineering program in particular has close connections with Caterpillar, which increases its viability and relevance to Bradley engineering graduates. That program could become the core of the Center for Advanced Manufacturing envisioned in Scenario Number Three (see the first chapter).

Nursing is an essential piece of the Biomedical/Biotechnology Strategy and health care delivery in the area. Central Illinois is fortunate in having five programs that turn out many fine graduates every year. But we are concerned that the isolated operations of these five programs result in inefficiency and less than optimal workforce development in this critical set of occupations.

Entrepreneurialism. Central Illinois' future economic development will depend on entrepreneurial companies much more than in the past, when large and well-established companies accounted for the bulk of the area's employment and wealth creation. Numerous interviews conducted as part of this study revealed a widespread concern that entrepreneurial vigor and activity in Central Illinois is not what it needs to be. Fortunately, Bradley University's business school has recently increased its emphasis on entrepreneurship and entrepreneurial studies. This initiative deserves strong and continuing support.

Private training providers. Sometimes it is thought that workforce development is carried on only in the public sector. Nothing could be farther from the truth. Even a cursory look at private sector companies and union sponsored apprentice programs reveals that

Buoyant economic development in the United States comes to communities that have strong universities.

In Central Illinois, Bradley University is the obvious candidate to become a nucleus of research and graduate education.

Nursing education is a key player.

Entrepreneurial studies offer new horizons.

Private training providers are an important part of Central Illinois' workforce development picture.

But it is a part that needs greater understanding, support,...

...and fuller integration into the area's workforce development system.

Matching workers with jobs.

Central Illinois' labor markets appear to work pretty well.

But room for improvement exists.

WorkKeys® can be a powerful tool for workforce development.

there are close to fifty organizations in Central Illinois offering training in such fields as nursing, vocational work, construction, computer hardware, software, and networking. These private sector training institutions are vital in providing customized training to new graduates and to members of the incumbent workforce who need to upgrade their skills.

Unfortunately, there appears to be no systematic compendium in Central Illinois of these private training providers and their services. A survey of private training providers could provide highly useful information about these organizations, their programs and services, their clients, and the outcomes and measurements of their success. Such information could also help to integrate these private training providers more fully into the area's workforce development system.

Improving the Match of Workers to Jobs. Most Central Illinois employers appear to find traditional methods of recruiting to be the most effective. Those methods include newspaper advertisements, word of mouth, and other informal means, and they seem to work reasonably well. None of the symptoms of inefficient labor markets seem to be present. Unemployment rates in the area have not recently been high compared to state or national averages. There is no evidence that persons who do lose their jobs are forced to suffer inordinately long periods of unemployment. The recruitment methods favored by Central Illinois employers, whatever else may be said of them, are relatively inexpensive. There are no evident signs that significant numbers of discouraged workers are dropping out of the workforce. Nor are worker turnover rates abnormally high when compared to those of other jurisdictions.

The fact that Central Illinois labor markets appear to be operating just as efficiently, if not more so, than those of other areas is no cause for complacency. All workforce professionals and HR managers in the area need to be trained to use the labor market information intelligence system (<http://www.usworks.com/Peoria>).

The same applies to the Illinois Skills Match system at <http://www.illinoisskillsmatch.com/>, and to Illinois' Job Bank at <http://www.ajb.org/il/>, which is part of America's Job Bank. Nearly all of the major Central Illinois employers feature employment or career pages on their websites, but many more could usefully do so. Already, the Internet is favored as a recruiting method by 6% of area employers; undoubtedly that share will rise in the years ahead.

WorkKeys® assessments can help students to assess their workplace skills, and WorkKeys® job profiles can help both educators and employers to better understand job requirements. Taken together, student/worker assessments and job profiles can help improve the

matching of workers with jobs. But if these tools are to be employed, several organizations must take the initiative to make them both happen.

Workforce Development Institutions in Central Illinois. The term “workforce development” is a relatively new entry in the America’s public policy lexicon. But many of the programs and activities now associated with that term developed historically as independent strands of federal and state policy that were designed to focus on specific problem areas. For present purposes, the important points about these traditional governmental workforce development initiatives are these:

- They are all directed at the problems of what are here called the “marginal” and “entrant” parts of workforce;
- They are very large in number and they spawned a correspondingly large number of essentially uncoordinated programs, agencies, and other entities at the federal and state levels, each supported by its own funding stream. The tendency has been for each of these entities to guard their existences, independence, and funding quite jealously.
- To the “customer,” whether job-seeker or employer, this uncoordinated multiplicity of entities is confusing in the extreme.

After years of political wrangling and mounting frustration with the perceived deficiencies of the hodge-podge “system” of traditional workforce development, the U.S. Congress passed and the President signed the Workforce Investment Act of 1998 (WIA). The main objectives of the act were to:

- Refocus the nation’s workforce development (or—in WIA’s language—“investment”) agencies and institutions from their nearly exclusive concentration on the marginal workforce to a much broader population including, specifically, the incumbent workforce.
- Bring greater simplicity, responsiveness and effectiveness to America’s chaotic jumble of programs and agencies dealing with workforce-related issues.

The primary vehicle envisioned by WIA to streamline, integrate, and rationalize the delivery of workforce development services are the so-called “One-Stop Career Centers” (or, more briefly, the “One-Stops”). To accomplish these things, the One-Stops are supposed to be organized around customer needs and demands, rather than around programs and funding sources. The “customers” of a One-Stop are

Central Illinois, along with the state and nation, is striving to improve its workforce development system.

“Traditional” Workforce Development left much room for improvement.

The Workforce Investment Act of 1998 (WIA).

How WIA seeks to improve workforce development.

One-Stop Career Centers.

The Customers of the One-Stop Career Centers are employers and job-seekers.

The role of the One-Stops.

The ideal One-Stop.

Central Illinois was a pioneer in One-Stops.

Much progress has been made but full realization of the goal of seamless integration of service delivery still lies ahead.

All of the many agencies and bureaus that deliver and fund workforce development services need to banish parochial programmatic thinking and combine to present a truly integrated system to their two classes of customers.

supposed to be of two equally important types: (1) employers and (2) workers and would-be workers. Within the workforce development system, the One-Stops are supposed to play two fundamental roles:

- To provide simple access to the entire array of employment, education, training, and workforce development services available to the customer; and
- To serve as reliable and impartial sources of many kinds of information, including the availability and quality of education and training options, labor market information, job and candidate availability, career and skill assessment, and financial aid alternatives.

The ideal One-Stop, in terms of WIA's objectives, is one that presents a highly responsive and integrated face to the customer, whether he or she is an individual or an employer. It should be "seamless" in that it surmounts and erases all bureaucratic, programmatic, and funding disparities that detract from providing the best possible customer service.

How close do Central Illinois' One-Stops come to the "ideal" envisioned by WIA? First, it should be said that Central Illinois was a pioneer in the theory and practice of One-Stop career centers. This area had One-Stops before WIA was enacted.

Much progress in realizing the One-Stop concept has been made thanks to the seriousness with which the Central Illinois Workforce Development Board has embraced its WIA-assigned role. Still, there remains a considerable distance to travel to achieve the goal of full and seamless integration of service delivery.

Although progress has been real, many of the workforce entities still operate too much in their narrow organizational "silos." Such parochialism clearly detracts from the WIA objective of building a fully integrated system whose bureaucratic and programmatic seams are invisible to the system's customers. The efforts and activities of the local offices of the Illinois Department of Employment Security certainly need to be brought into closer harmony with the other entities operating under the aegis of the Central Illinois Workforce Investment Board.

For proper strategic planning and integrated workforce development, the entire regional labor market of Central Illinois needs to be considered as an organic whole. Unfortunately, county, municipal, and other jurisdictional boundaries, which may make sense for other purposes, can and do impede rational planning and policies for economic and workforce development.

TEN KEY FINDINGS AND ISSUES:

This study has made certain key findings and identified certain key issues for Central Illinois. Some of these emerged from the data analyses that were conducted. Others were voiced during the project's many interviews with employers, providers of workforce development services, economic developers, and the community leaders. The ten findings and issues define the terrain that Central Illinois must traverse in this decade:

1. Central Illinois excelled and prospered in the economic eras dominated by the production of goods that it exported in great volumes to the rest of the nation and world. The last of those eras, one characterized by large-scale manufacturing, accustomed Central Illinoisans to employment in large companies. That era is now past its peak and, at least in terms of the number of people employed, is in a long downward slide.
2. To thrive in the 21st century, Central Illinois must find one or more new clusters of economic activity to power its economy and earn, with its exports, the wherewithal to import what this area needs from the rest of the global economy.
3. Powerful forces from beyond this area will impact Central Illinois in the early 21st century. Those forces include rapid technological change, globalization, a changing industrial and occupational structure, and profound demographic change. America's economy is fast becoming a "knowledge-based" economy. Central Illinois' must become part of that new economy or be left in the backwaters of decline.
4. Central Illinois lacks a coherent strategy and defined direction for its economic development in the early 21st century. The Regional Bioscience Strategy for Central Illinois is definitely a step in the right direction but, as one local leader put it, "We need more than one vine to climb."
5. Central Illinois workforce growth has outrun the growth of its working-age population. This poses a serious *quantitative* workforce challenge: Will this area have enough of the right kinds of workers to maintain its present pace of economic development? How will it produce and attract the skilled talent needed to realize ambitious targets of economic development, such as the Regional Bioscience Strategy for Central Illinois?
6. Central Illinois had a workforce that was highly appropriate to a now fading economic era, the era of *goods* production. During the past two decades, the area has developed some elements of a workforce appropriate for the era dominated by the production of *services*. The *qualitative* challenge of workforce development is to develop a workforce appropriate for the "*knowledge economy*."
7. Improving the quality of K-12 education is the most important single step toward developing the workforce that Central Illinois needs. Such improvement starts by doing whatever is necessary to reduce dropout rates and raise high school graduation rates. It continues by improving K-12 educational outcomes, especially in the fields of reading, communication skills, mathematics, technological savvy, reasoning and problem solving skills. Beyond these traditional academic fields are "soft" skills whose importance is magnified by the needs of the knowledge economy. They include teamwork and customer service skills. Finally, and possibly most importantly, all students must be motivated and

equipped to continue their learning throughout their adult lives.

8. In a dynamic and ever-changing economy, members of Central Illinois' incumbent workforce must be both motivated and provided with opportunities to retool, refresh, and augment their skills and knowledge on a continuing basis. Absent either the motivation or the opportunity, workers' skills and knowledge become obsolete and their productivity flags while their employability and earning power declines.
 9. There is a need for more coordinated efforts to better match workers with jobs through comprehensive career counseling and assessment testing, up-to-date labor market information, and links between corporate and community websites about job openings.
 10. Central Illinois' workforce development system, though much improved in recent years, still displays excessive fragmentation. A much better coordinated and integrated system of workforce development is needed for the 21st century knowledge economy. That system would transcend the parochial boundaries of governmental organization to create a truly seamless system of delivering services both to employers and workers. It would connect the numerous resources already available, allowing the system to become greater than the sum of its parts. It is now past time to bury all bureaucratic and other parochialisms. Central Illinois' 21st century workforce demands nothing less.
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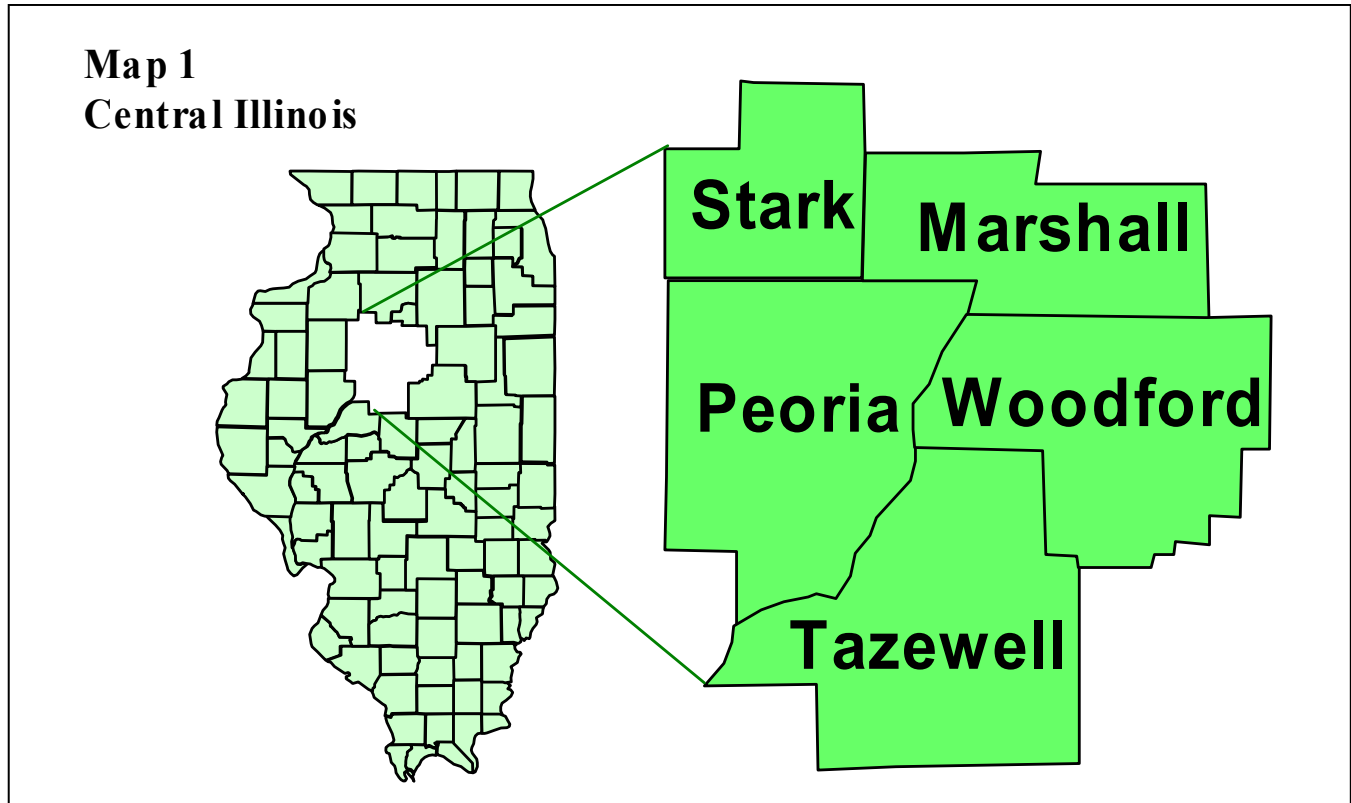
DEVELOPING A 21ST WORKFORCE FOR CENTRAL ILLINOIS: TEN KEY CHALLENGES.

This study has sought to build a topographical map of the territory that Central Illinois must traverse in the early 21st century. It is for the people of the area to build the roads across this territory. What follows is a list of ten key challenges for building Central Illinois' road to the 21st century and workforce to fit it.

1. Make Central Illinois a "Learning Community." Motivate youth and adults alike to be flexible and to become ever more adept at acquiring new skills and knowledge.
2. Reduce dropout rates and raise graduation rates in Central Illinois high schools.
3. Improve educational outcomes of K-12 education with special emphasis on reading, communication, mathematics, reasoning, teamwork, and customer service skills.
4. Ensure that a proper mix of educational and training opportunities as well as of top-quality career guidance and counseling is available and accessible to all students and residents of Central Illinois.
5. Work with employers and all training providers, private as well as public, to make Central Illinois' worker training and retraining system the nation's most responsive and efficient.
6. Focus on the recruitment and retention of a skilled workforce pool for Central Illinois.
7. Reduce barriers to workforce participation for all who want to work, irrespective of age, disadvantages, or disabilities.
8. Make Central Illinois a highly attractive place to live and work for the types of human talent needed by the area's economy and its businesses.
9. Work together for the benefit of all in the region. Banish bureaucratic blinders. Get governments and institutions to collaborate, not to compete. Central Illinois cannot afford petty parochialisms.
10. Understand the workforce needs of making the Central Illinois Regional Bioscience Strategy a reality, and then exert every effort to help meet those needs. Do the same for other well-considered economic development initiatives that mature in the next few years.

Chapter 1: Central Illinois' Economy

For the purposes of this study, "Central Illinois" means the five-county region of Marshall, Peoria, Stark, Tazewell, and Woodford counties (see Map 1).¹



What is Central Illinois?

With a population of 367,000 people in the year 2000 and a Regional Gross Domestic Product (RGDP) of about \$12 billion in the same year, Central Illinois is a major economic power.² To put matters into a global perspective, if Central Illinois were an independent country, its economy would outrank more than 65 nations of the world.³

Central Illinois' Economy Today and How It Got There

This chapter takes a hard look at Central Illinois' economy and asks some basic questions about it. Where is the region's economy today? How did it get there? Which developments and trends can we spot in the recent past that suggest where it may be tomorrow? Which candi-

dates can we spot that may lead the area's future economic development?

Growth in Central Illinois' Output and Per Capita Output

The past quarter century was a bad-news/good-news story for Central Illinois' regional economy. From the mid-1970s to the mid-1980s, the region's inflation-adjusted GDP (Gross Domestic Product) declined or stagnated (see Figure 1-1).⁴ Then, in 1986, a recovery began that continued, with a brief pause in 1991, until the dawn of the 21st century. As gratifying as the post-1986 recovery has been, Central Illinois' economic growth appears quite modest in comparison with that of the state or nation (see Figure 1-2). While we estimate Central Illinois' GDP to have been 23% higher in 1998 than in 1997, that of the State of Illinois

Figure 1-1: Real* Regional GDP for Central Illinois, 1977-2000 (1998 prices)

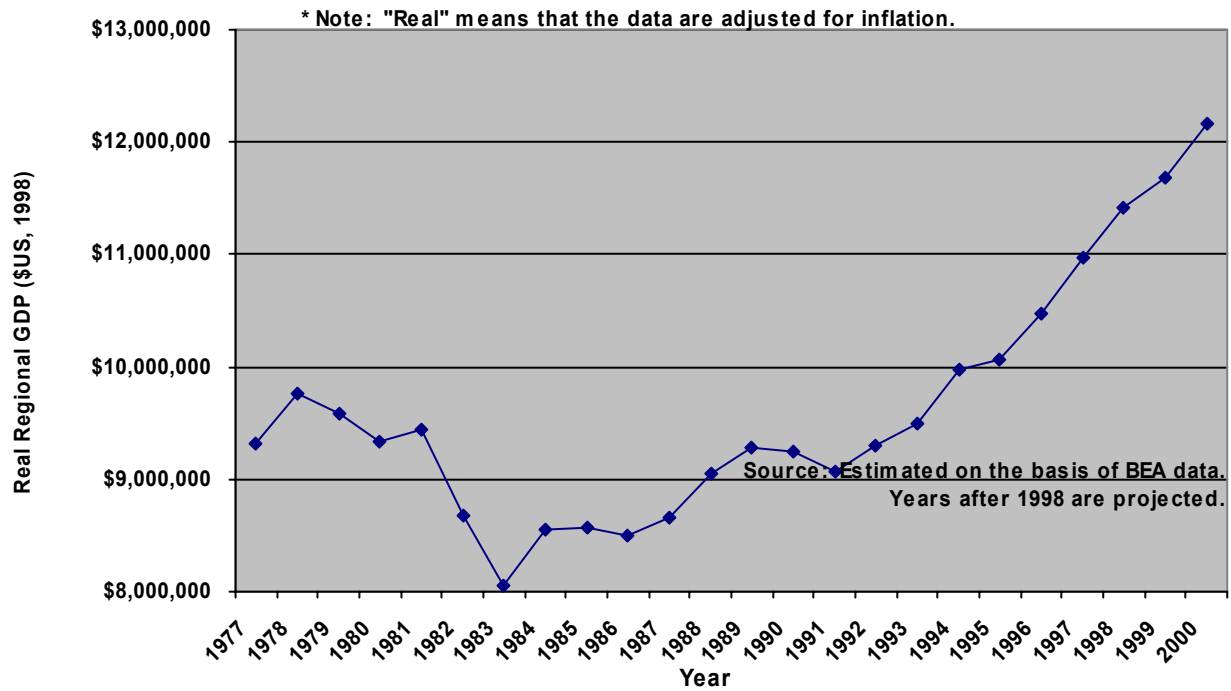
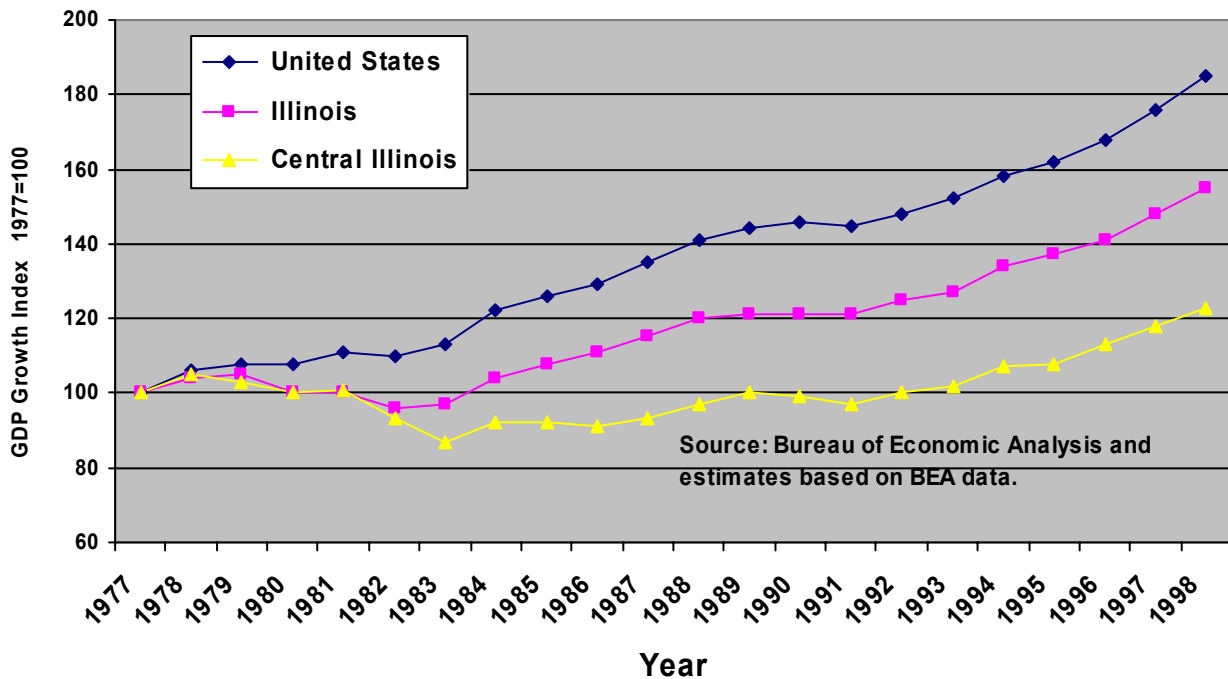


Figure 1-2: Indexes of GDP Growth for the U.S., Illinois, and the Central Illinois Region, 1977-1998 1977=100



**Figure 1-3: Real GDP Per Capita, Central Illinois, 1977-1998
(1998 prices)**

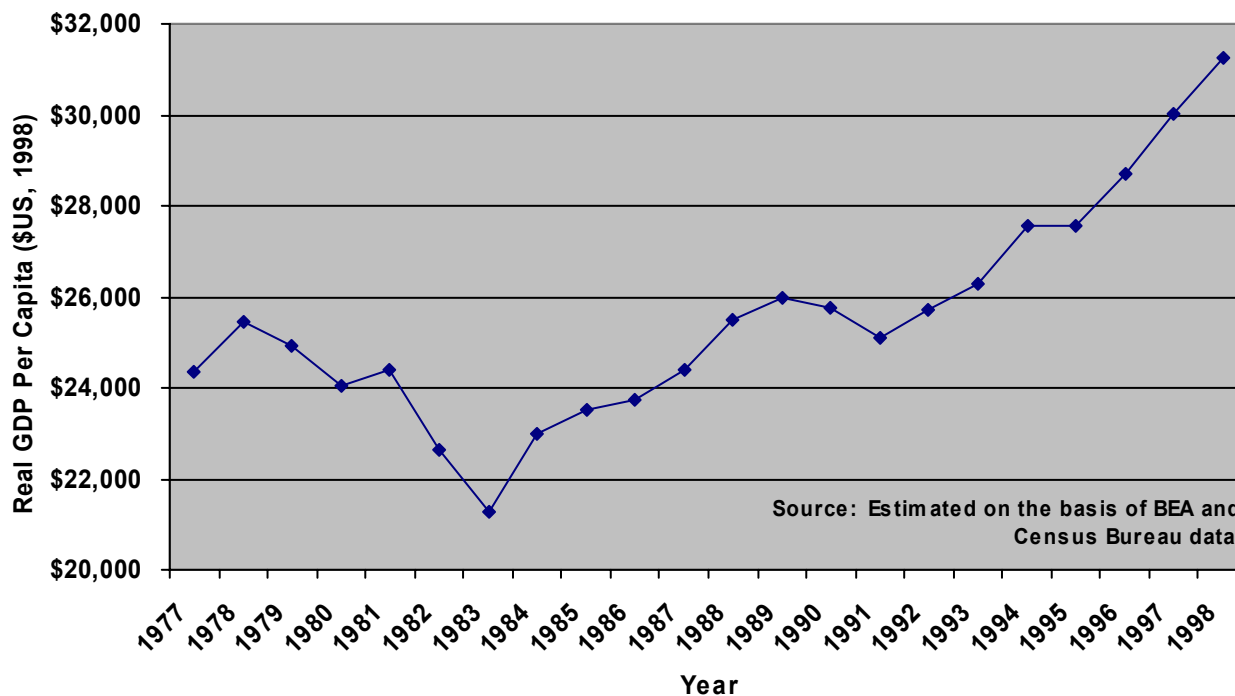
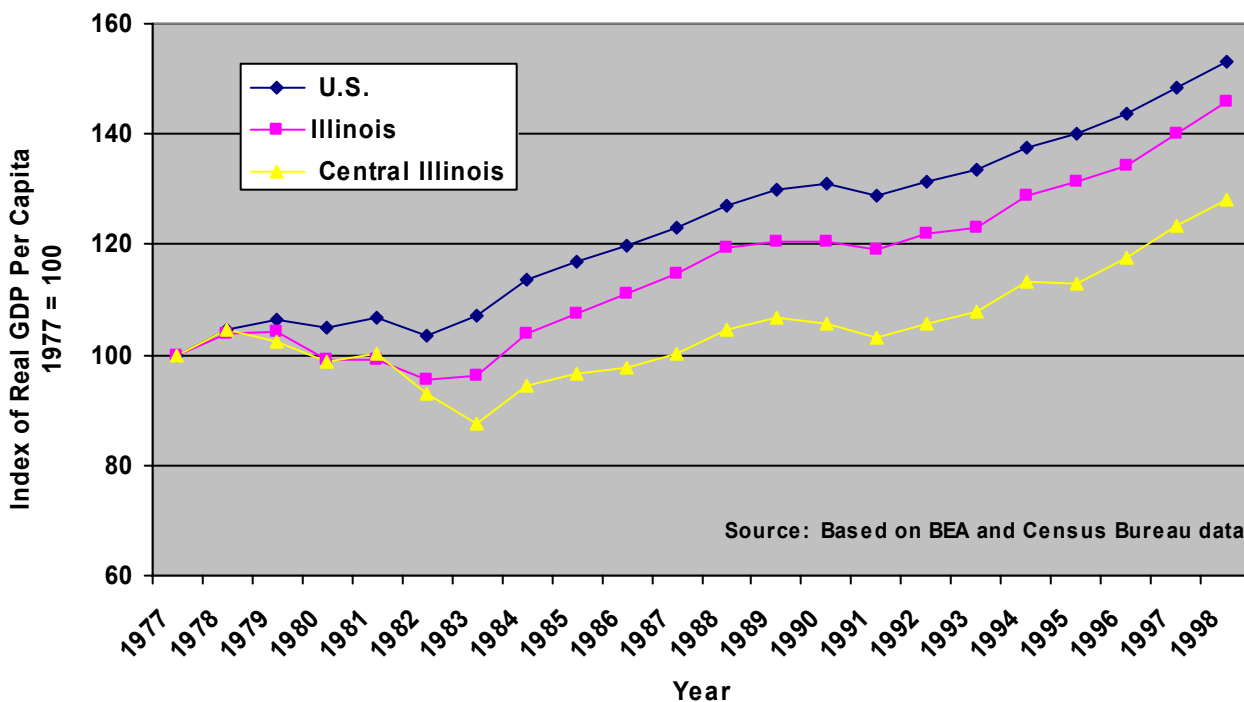


Figure 1-4: Index of Real GDP Per Capita, U.S., Illinois, and Central Illinois, 1977-1998 1977=100



was 55% higher and that of the United States was a remarkable 85% higher. In other words, Central Illinois has been growing at a rate significantly below that of the state or nation.

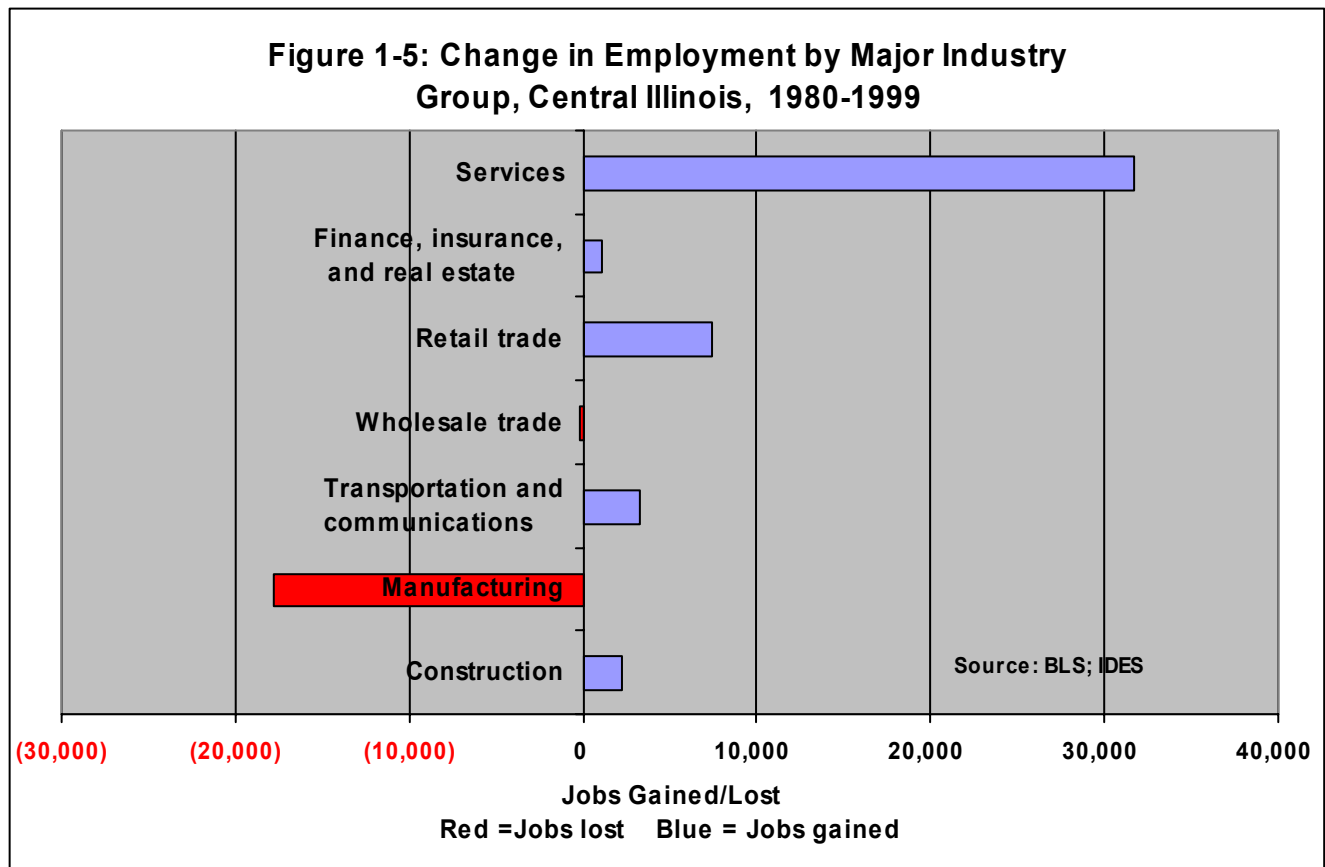
On a per capita basis, Central Illinois' real GDP growth over the past two decades has been even more impressive than its growth between 1997-1998. It climbed from \$24,000 in 1977 to more than \$31,000 in 1998 (see Figure 1-3). Again, however, comparisons with the state and nation are unfavorable (see Figure 1-4). In 1998, GDP per capita (adjusted for inflation) had risen 28% above its 1977 level in Central Illinois, whereas the gains for Illinois and the United States were 45% and 53% respectively. Clearly, this region has not shared fully in America's economic growth of recent years.

Why has Central Illinois' economic growth lagged behind both that of the state and that of the nation? At least part of the answer is quite straightforward. Throughout the period under

review, Central Illinois was more reliant on manufacturing than either the entire state or the nation, both of which have far more diversified economies. That meant that this region suffered more severely from the "rust belt" contraction of the late 1970s and early 1980s. Since manufacturing everywhere grew more slowly than other industrial sectors, those areas heavily reliant on manufacturing grew more slowly in the late 1980s and 1990s as well. Finally, strikes at Caterpillar took a toll on the regional economy that is clearly reflected in the GDP growth figures for 1994-1995.

Growth in Regional Employment by Major Industrial Sector

Employment in Central Illinois grew from 193,000 to 222,000 between 1980 and 1999. That gain of 29,000 jobs amounted to a 15% increase in regional employment. The region's rate of job growth compares to one of 40% for the United States and 26% for Illinois over the



same two-decade period.⁵

Employment growth came very unevenly to the various industrial sectors of the Central Illinois economy (see Figure 1-5). The Service industries, with a gain of nearly 32,000 jobs or 81%, showed by far the greatest growth from 1980-1999. Trailing far behind were Retail Trade (7,400 or 23%), Transportation and Communications (3,200 or 39%), and State and Local Government (2,100 or 13%). Other sectors (e.g., Construction or Mining) showed modest employment increases that amounted, in some cases, to significant percentage gains.

Manufacturing, a key component of the Central Illinois economy, showed the largest employment decline. That sector lost nearly 18,000 jobs, ending in 1999 fully 33% below its 1980 level. Farm employment also dropped; the sector lost more than 1,900 jobs—nearly 30% of the number employed on farms in 1980. Wholesale Trade also declined slightly.

From 1980 to 1999, the pattern of employment change in Central Illinois reflected the

general patterns observed in the state and nation (see Figure 1-6). The shift from goods- to services-producing industries was evident everywhere. Employment in the Farming, Mining, and Manufacturing industries fell locally, nationally, and at the state level. Meanwhile, employment in the trade and services-producing industries expanded in all three areas.

But there were some significant differences. For example, from 1980 to 1999, manufacturing employment fell much more rapidly in Central Illinois than in Illinois or the United States as a whole. At the same time, Services, Retail Trade, Wholesale Trade, and Construction as well as Finance, Insurance, and Real Estate grew more rapidly at the state and national levels than in the Central Illinois region.

The shift from goods-producing to services-producing industries transformed the Central Illinois economy during the last two decades of the 20th century. This transformation becomes evident when comparing Figures 1-7 and 1-8. In 1980, Manufacturing still accounted for 27.7% of all jobs in Central Illinois. Although

Figure 1-6: Percentage Change in Employment by Major Industry for Central Illinois, Illinois, and U.S., 1980-1999

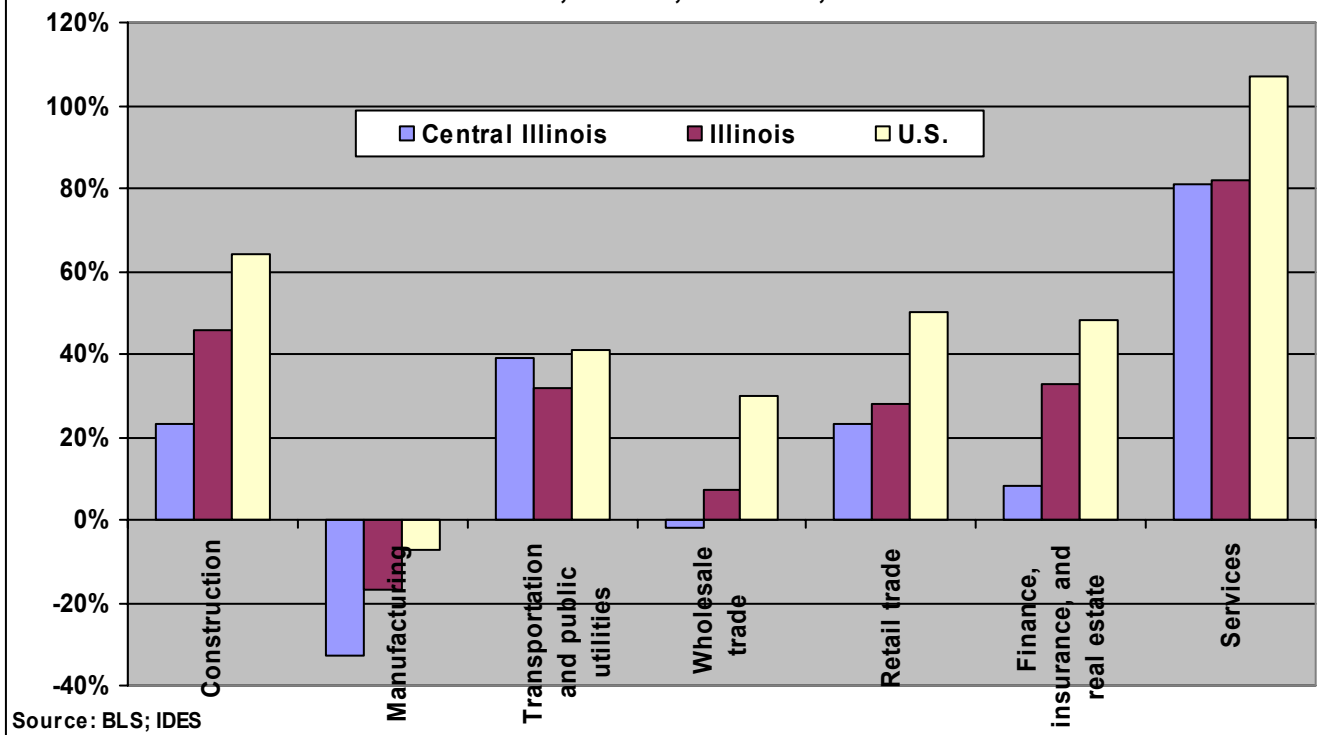
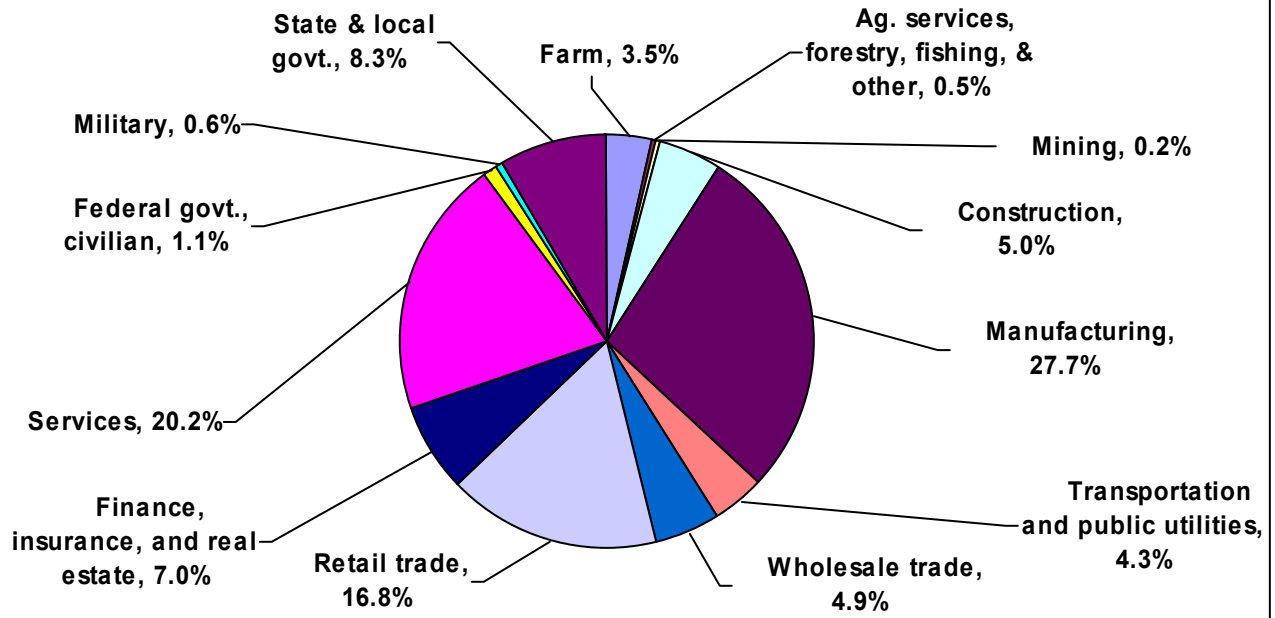
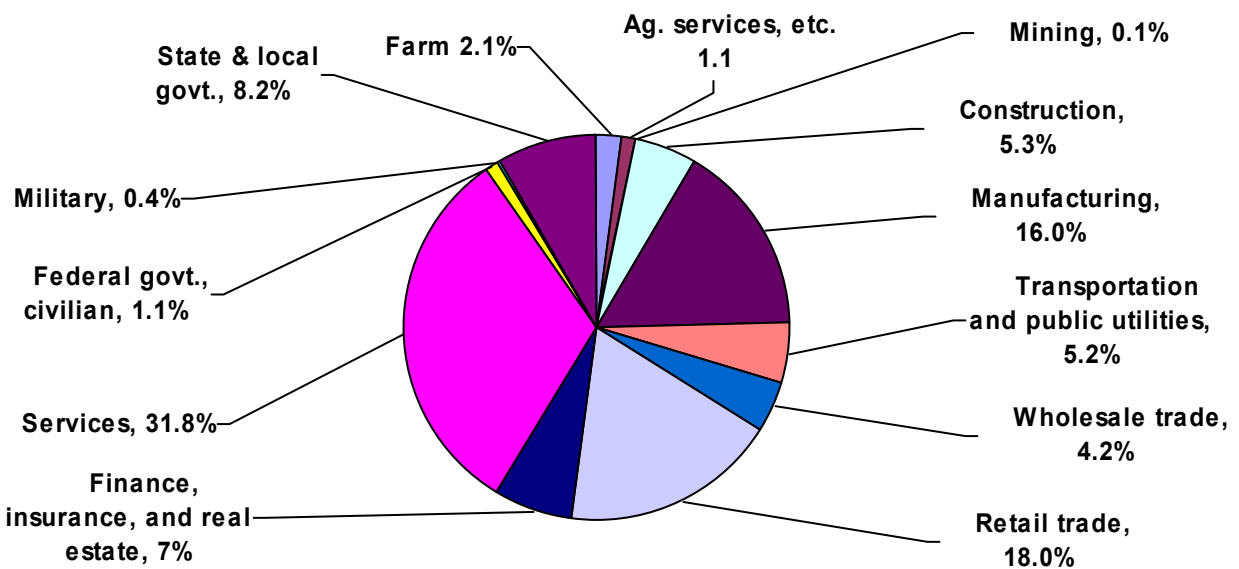


Figure 1-7: Share of Central Illinois Employment by Industry, 1980



Source: Bureau of Economic Analysis

Figure 1-8: Share of Central Illinois Employment by Industry, 1999



Source: Bureau of Economic Analysis

that share was considerably less than in earlier post-war years, it remained much higher than in Illinois as a whole wherein Manufacturing's share was only 21%.

By 1999, Manufacturing's share of employment in Central Illinois had dropped to 16%, and in the entire state it had slipped to about 14%. Most of the decline of Central Illinois' Manufacturing employment occurred during the 1980s; in the 1990's the region lost only about 350 factory jobs or about 1% of the 1990 level.

At the beginning of the 21st century, therefore, Central Illinois remains more of a manufacturing economy than does the entire state of Illinois, but certainly not to the same degree as it was two decades earlier.

Central Illinois, like the state and nation, has become a service-oriented economy. The goods-producing sectors combined, including Farming, Mining, Construction, and Manufacturing, now employ just over a quarter of the regional workforce. The Service industry alone employs 31.8%, and the two trade sectors account for 22.2%.

Central Illinois' "Export" Industries

No country in the 21st century global economy is completely self-sufficient. To a greater or lesser degree, all nations trade with other nations. Each nation tends to specialize in the production of some goods and/or services that it trades for goods and services produced in other countries. In the language of international trade, we call the industries whose output exceeds domestic usage that nation's "export" industries. Generally speaking, nations that are heavy exporters tend to be more prosperous than nations that are not. The reasons are straightforward:

- Nations that export a lot can afford to import a lot in return.
- Nations tend to export products that they can produce less expensively relative to other nations and they tend to import products where other nations have a comparative economic advantage. All participating nations gain from this exchange.
- Higher productivity is the key. Nations and regions tend to export those goods and services in which their higher productivity confers competitive advantages in markets beyond their borders. That greater productivity stems from the following:

⇒ Producing beyond domestic needs enables a nation's producers to specialize in what they can do best, and to realize economies of scale inside their factories and other places of production.

⇒ External economies of scale arise as a specialized infrastructure, a qualified workforce, and clusters of local service firms arise to serve the special needs of the nation's export industries.

Of course, not all export industries are created equal; some are more desirable than others.

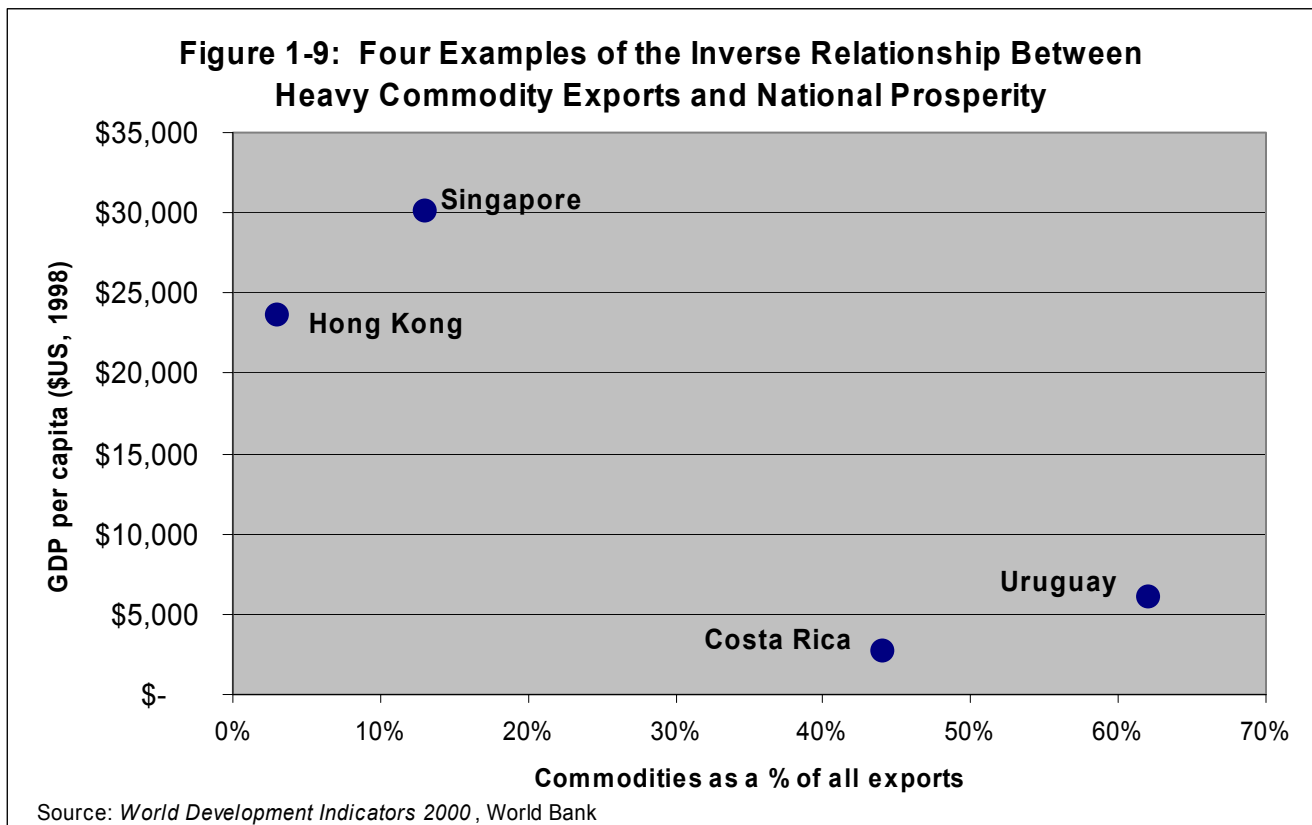
Prosperous nations tend to specialize and become globally competitive in the production and export of high value-added, high-margin goods and services. The more efficient and productive a nation's export industries are, the more it can afford to import and the more prosperous it becomes. At the other end of the spectrum are nations that export little and/or that export mainly low value-added, low-margin goods and services. These are semi-autarchic nations and/or commodity producing nations and they tend to be less prosperous, often quite poor.

Some examples of actual nations will suffice.

Competitiveness of States and Regions

"While some determinants of competitiveness are national in scope or the result of national policies, many are regional and local. Such things as the quantity and quality of specialized skills, infrastructure, and technology, and the presence of clusters vary markedly across regions. This leads to substantial differences in prosperity among states and regions within a nation. States and cities need economic strategies, not just nations."

Michael E. Porter, Bishop William Lawrence University Professor, Harvard Business School



Hong Kong, Costa Rica, and Uruguay have populations of roughly the same size, in the range of 3.2 to 6.7 million, but their similarity ends there. The two Asian tigers are very heavy exporters and their GDP per capita is very high. In both cases, commodities (i.e., agricultural and other raw materials, food, and fuel) comprise a small share of their total exports. In contrast, commodities comprise the bulk of the exports of Costa Rica and Uruguay, and the per capita GDP of these two Latin American countries is very low.

As it is with nations, so it is with regions within nations: those regions that export heavily tend to be more prosperous than those that do not. Those regions that export mainly high value-added, high-margin goods and services tend to enjoy higher per capita incomes than those that export mainly low-margin commodities.⁶ As Harvard Business School Professor Michael Porter has strongly emphasized (see box on preceding page), the key to producing and exporting high-margin products is high productivity.

What are Central Illinois' export industries

today? Are they high-productivity, high value-added, high-margin industries? Or do they tend to be mainly commodity-producing industries?

We approach those questions in two quite different ways: (1) Historically and anecdotally, and (2) statistically and analytically.

The economic history of Central Illinois and its relevance for the future. The economic history of Central Illinois and its Peoria sub-area is both fascinating and highly instructive. In its early years, the region's economic fortunes were linked closely to its strategic location along the Illinois River and to its rich agricultural resources. Those resources underlay a farming boom beginning in the early 19th century. Settlers who flooded in to stake claims to the area's fine land were soon followed by traders and manufacturers. This new urban population supplied the farmers and processed their products for resale in and beyond Central Illinois.

Early industries included meatpacking, foundries, farm machinery manufacturing, and distilling. Peoria is said to once have produced more whiskey than any other city in the world. Indeed, during the years of 1837 to 1919 Peoria was home to 24 breweries and 73 distilleries. Distilling and brewing had joined agriculture to become the area's leading export industries by the end of the 19th century.

Perhaps the most significant single moment in the history of Central Illinois' manufacturing industry was a day early in the 20th century when Benjamin Holt decided to move his tractor manufacturing operations from California to Central Illinois. Probably the second most important moment came in 1925 when the Holt Manufacturing Company merged with the Best Tractor Company to form Caterpillar Tractor Co. Through the rest of the 20th century, Caterpillar was a powerful force pushing the economy of Central Illinois forward.

By 1980, Central Illinois' principal export industries were raw agricultural products, processed agricultural products (including distillery and brewery products), and heavy machinery products, essentially Caterpillar equipment.

The last two decades of the 20th century brought major changes to the Central Illinois economy and its export industries. Farm prices remained depressed for much of the period, which diminished the export earnings of the agricultural sector. Brewers and distillers likewise fell on hard times, and, by the dawn of the 21st century, the last of Central Illinois' once mighty beer and whisky makers had closed its doors. It was also rough going in the 1980's for Caterpillar. A global economic slowdown pushed this erstwhile stellar company into red-ink territory. By 1981-83, CAT was losing the equivalent of \$1 million per day. In short, problems common to many other "rust-belt" communities hit Central Illinois hard in the early 1980's and sent its export sector reeling.

The 1990's brought more changes to Central Illinois' economy, some good, others not so

good. Among the good things was a booming national economy that rekindled demand for manufactured products, including heavy earth-moving and other equipment. Demand for Caterpillar products first recovered and then boomed. Unfortunately for Central Illinois, during the early 1990's, CAT experienced recurring bouts of serious labor union difficulties. Those difficulties came at a time when the company's global horizons were broadening, technological change was accelerating, and demographic change was simultaneously aging CAT's workforce and draining the pool of young Midwesterners from which Central Illinois manufacturers had recruited new workers.

The combined impact of these trends, at Caterpillar and among other Central Illinois manufacturers, has been profound. Fierce competition has intensified the search for least-cost solutions in every sphere. Companies have focused more on their "core" competencies and outsourced their peripheral activities. Non-union and offshore producers seemed to enjoy critical cost advantages in global markets. This has led many corporate managers in Central Illinois and elsewhere to look for places where labor costs might be lower and labor unions might less impede managerial flexibility. Site selection decisions for new and expanded manufacturing production have increasingly favored lower-cost and non-union locales in, for example, the southern states of the U.S. and also offshore in places like Mexico and China.

The dawn of the 21st century finds the Central Illinois economy—particularly its export sector—facing many challenges. As the data and charts presented earlier show, much of the region's recent economic growth has been in trade, services, and other activities catering mainly to "domestic" markets. People and companies within Central Illinois have increasingly been producing goods and services for other people within Central Illinois. The area's traditional "export" industries have either withered or their future growth seems problematic.

The key conclusion emerging from our review of Central Illinois' economic history is this: Central Illinois' critical economic development challenge for the early 21st century will be to diversify even farther away from dependence on a few major employers and to develop new competitive advantages in industrial clusters that can and will profitably export goods and services to markets outside the region.

What the data tell us about Central Illinois's export industries and comparative advantages. Nations employ statisticians to collect detailed data on exports and imports. Analysis of such data reveals the relative importance of various goods and services and makes the identification of a nation's export industries quite easy. Unfortunately, nobody collects such data for regions like Central Illinois. Therefore, we are compelled to employ surrogate measures and "devious" tools to tease information about the region's export industries

from the data that are available.

One such "devious" tool is called Location Quotient Analysis (LQA). Its logic is quite simple. If a given industry in the region employs a higher percentage of the total regional workforce than that same industry does in a designated reference areas (here this is the entire nation or the state), then we term that industry a "basic" industry in that region. Stretching a bit, we can take a "basic" industry to be the functional equivalent of an "export" industry in the sense that we have been using it here.⁷

Table 1-1 tells us that Central Illinois had four major industrial sectors in which its concentration of jobs in 1999 exceeded that of the United States. They were farming, manufacturing, transportation and public utilities, and retail trade. Compared with the state of Illinois, only the local manufacturing and mining industries had greater concentrations of employment. If we stipulate that an industry must show an LQ

Table 1-1
The Relative Strength of Central Illinois Major Industrial Sectors
Versus the State and Nation

INDUSTRY	LOCATION QUOTIENT Compared to Illinois			LOCATION QUOTIENT Compared to U.S.		
	1980	1990	1999	1980	1990	1999
Farm	1.290	1.569	1.507	0.971	1.167	1.062
Ag. services, forestry, fishing, & other	1.213	1.358	1.201	0.579	0.914	0.817
Mining	0.232	0.407	0.449	0.149	0.283	0.245
Construction	1.157	1.146	1.047	0.933	1.014	0.898
Manufacturing	1.252	1.165	1.171	1.414	1.248	1.306
Transportation and public utilities	0.780	0.790	0.925	0.800	0.867	1.017
Wholesale trade	0.761	0.753	0.783	0.902	0.905	0.873
Retail trade	1.037	1.032	1.126	0.999	0.975	1.046
Finance, insurance, and real estate	0.800	0.710	0.705	0.845	0.792	0.787
Services	0.885	1.015	0.968	0.857	0.991	0.965

Interpreting this table: A Location Quotient (LQ) greater than 1 for a particular industry means that industry in Central Illinois employs a higher percentage of the regional workforce than the same industry does in a particular reference area. From this we infer that it is a "basic" or "export" industry with respect to that reference area. The more the LQ exceeds 1, the more important the industry is likely to be as an exporter for the region. This chart displays the LQ for two reference areas, the state of Illinois and the United States as a whole. The higher the bar rises above the baseline (i.e., 1.0) the greater is that industry's LQ and the more important it looms as an exporter for the region.

Source: IDES and Bureau of Economic Analysis. The underlying data are 1999 employment data by 1 digit SIC code.

of at least 1.2 in order to be considered a “basic” industry, then Central Illinois’ single major “basic” or “export” sector in 1999 was manufacturing.

Just as significant as the static picture of relative strengths in 1999 are the decade-to-decade changes in each industry’s relative position. By observing the movement of an industry’s LQ from decade to decade, we see how it may be gaining or losing strength relative to the state or nation, and thereby how its status as an “export” industry may be changing. Thus, for example, the comparative strengths of the manufacturing and construction industries appear to be weakening somewhat over time in comparison with both the state and nation. Retail trade and services, on the other hand, both appear to be gaining relative strength, although neither of these had yet achieved the status of a “basic” or “export” industry by 1999.

What this Location Quotient analysis tells us is basically this:

- Manufacturing, among all of the major industries, has been and remains Central Illinois’ single unambiguous “export” sector.
- The relative strength of Central Illinois’ manufacturing sector appears to be declining somewhat.
- Farming’s status is ambiguous; very strong with respect to the state of Illinois but only slightly stronger than the Farm sector in the United States as a whole.
- There are some signs of growing strength in services and retail trade.

The broad-brush picture painted by this LQ analysis is instructive. Some of what it tells us is familiar, for instance, that Central Illinois is strong relative to the state and the nation in agriculture and manufacturing. That much we know from our cursory survey of the region’s economic history and its export sectors. But the analysis also tells us some things that many people may not know, for instance, that Central

Illinois is relatively strong in retail and relatively weak in wholesale trade. The weaknesses in financial and other services may also surprise some people.

Perhaps the most important contribution of the broad-brush picture is that it stimulates a desire to know more about the details “inside” the major industrial categories. In which kinds of manufacturing, for example, is Central Illinois particularly strong? More specifically, which are the area’s main export industries? Which are the weakest? The same questions arise with respect to the service sector. Services as a whole appear weak in Central Illinois relative to the state of nation. Are there some services in which this area stands in a better light? Are there some kinds of services that show more impressive improvement than others?

These are important questions because the movement from a goods-producing to a services-producing economy is a strong trend everywhere, from the local to the national level. The future prosperity of Central Illinois as a region, it could be argued, depends on its ability to foster and develop strong, export-oriented industries within the service sector.

Table 1-2 displays location quotients for six more specific manufacturing industries and helps us identify which of these may qualify as export industries. For 1977, when distilling and brewing were major export industries in Central Illinois, the LQ for “Food and kindred products” was 1.4, which indicates a very strong concentration of employment in those industries. By 1987, however, that advantage had disappeared for reasons discussed previously. By 1997, with an LQ of 0.5 the area was a major “importer” of these products

The group “Printing and publishing” enjoys a mild advantage—stronger in comparison with the nation than with the state—but one that is diminishing with the passage of time. The “Chemicals and allied products” group, on the other hand, shows increasing strength from decade to decade, both with respect to the state and the nation.

Table 1-2
Manufacturing Industries in Which Central Illinois Enjoys or Has Enjoyed Relative Strength

Blue Means LQ > 1	LOCATION QUOTIENT			LOCATION QUOTIENT		
	1977	1987	1997	1977	1987	1997
Manufacturing 2-digit ISIC	Compared to Illinois			Compared to U.S.		
Food and kindred products	1.404	0.654	0.507	1.433	0.702	0.496
Printing and publishing	0.861	1.128	1.041	1.131	1.532	1.229
Chemicals and allied products	0.502	0.899	0.985	0.478	1.056	1.187
Primary metal industries	2.082	0.942	2.206	2.367	1.223	2.643
Fabricated metal products	0.351	0.613	1.198	0.489	0.885	1.620
Industrial machinery and equipment	2.702	3.343	2.521	4.012	4.473	3.290

Sources: BLS, BEA, and IDES.
For a note explaining how to interpret this table, please see the note at the bottom of Table 1.

Central Illinois' "Primary metals industries" group appears to show a very strong advantage relative to both the state and nation. By 1997, this group accounted for considerably more than twice the proportion of workers in Central Illinois than in either the state or nation. That strength increased over the entire two-decade period under review, although the "rust belt" downturn of the 1980's clearly hit Central Illinois' employment in this group harder than the other two larger jurisdictions. Although data are not yet available to demonstrate it, anecdotal information about plant closings strongly suggests that this sector has declined sharply since 1997.

"Fabricated metal products" is another group in which Central Illinois' strength increased impressively from 1977 to 1997. It, too, may have declined since these 1997 data were published.

It is no surprise that the star of the manufacturing sector in Central Illinois turns out to be the "Industrial machinery and equipment" group. The competitive advantage and export strength of this group, as assessed by LQA, increased from 1977 to 1987 but declined sharply in the following decade. This statistical result is strictly consistent with the anecdotal account of Caterpillar's fortunes during the 1990's that was given earlier. Furthermore, it strengthens the argument that Central Illinois must augment

but not replace this particular manufacturing group with other industries (probably in the service sector) as major generators of export earnings.

Table 1-3 helps us to identify groups within the broad service sector that already have developed comparative strengths vis-à-vis the state and nation, or that show promise of developing such strengths in the reasonably near future.

For the purpose of identifying exciting or potential "export industries," LQA must be used with greater circumspection in the service sector than in manufacturing. That is because many kinds of services are not and probably cannot be "exported." "Personal Services," for example, includes laundry, dry cleaning, barber shops, funeral services and the like. By their nature these services cannot be exported or imported, so a large or small LQ here is meaningless for our present purposes.

"Social services," in which the concentration of employment is substantially greater in Central Illinois than in state or the nation, embrace individual and family social services, job training and vocational rehabilitation, child day care services, and residential care. Such services obviously go mainly to local residents and virtually none can be counted as "export" products.

“Business services,” on the other hand, include advertising, computer programming, commercial art and photography, and other services that may be “exported” themselves or that may support businesses that do ship their products beyond the confines of Central Illinois. Because of this dual potential, an established advantage and/or a growing strength in “Business services” is good omen for economic development. Although Central Illinois still seems to be a net importer of these services ($LQ < 1$), the area appears also to be moving toward self-sufficiency ($LQ = 1$) and perhaps beyond. This movement is in the right direction; it remains only to accelerate it.

“Educational services” is another industry serving both local and distant markets. They include locally delivered services in K-12 schools but also services provided by colleges and universities to students from outside the area, and thus, legitimately considered “exports.” When Bradley University, for example, supplies instructional services to students from Chicago or elsewhere outside Central Illinois, those services are “exported” no less than

when Caterpillar ships a tractor made in East Peoria to a construction firm in Texas. In Central Illinois, “Educational services” appeared in 1997 to be crossing into positive LQ territory. If the industry can continue to progress in the years ahead at the same pace as it did in the two decades from 1977 to 1997, then it can become a major generator of “export” earnings for Central Illinois.

“Health services” are a particularly interesting and promising type of services for Central Illinois. Like their educational counterparts, health service providers may supply both local and distant clients. Some regions have established international reputations for excellence in the delivery of health services. For example, in Olmstead County, MN, the home of the famous Mayo Clinic, the 1997 LQ of the “Health services” industry was 3.72 (relative to the United States), and that industry accounted for 43% of the country’s payroll. This compared with 1.29 and 15% in Peoria County, IL.

In Central Illinois, the “Health services” LQ in 1997 was 1.212 relative to the state of Illi-

Table 1-3
Service Sector Industries in Which Central Illinois
Enjoys or Has Enjoyed Relative Strength

	LOCATION QUOTIENT			LOCATION QUOTIENT	
	1977	1987	1997	1987	1997
Blue Means LQ > 1					
Services 2-digit industries	Compared to Illinois			Compared to U.S.	
Hotels and other lodging places	1.148	0.788	0.983	0.553	0.642
Personal services	0.933	0.920	0.881	0.885	0.881
Business services	0.693	0.625	0.736	0.642	0.827
Auto repair, services, and parking	1.067	1.045	0.925	1.002	0.965
Miscellaneous repair services	0.780	0.692	1.079	0.707	1.071
Motion pictures	0.823	0.192	0.767	0.333	0.644
Amusement & recreation services	1.035	1.108	0.806	0.899	0.694
Health services	1.173	1.465	1.212	1.536	1.159
Legal services	0.824	0.719	0.720	0.772	0.806
Educational services	0.677	0.725	1.047	0.754	1.099
Social services	1.926	1.045	1.463	0.968	1.446
Membership services	0.902	1.098	0.954	1.205	1.030
Services not elsewhere classified	0.748	0.707	0.032	0.597	0.021

Sources: BLS, BEA, and IDES.

For a note explaining how to interpret this table, please see the note at the bottom of Table 1.

**Table 1-4:
Location Quotient Information on Selected Industries in Central Illinois**

<i>Industry</i>	<i>1997 Location Quotient</i>		<i>Employment in 1997</i>	<i>Percent Change in Employment 1977-1997</i>
	<i>vs. Illinois</i>	<i>vs. the US</i>		
Manufacturing				
Printing and publishing	1.041	1.229	2,652	10%
Chemicals and allied products	0.985	1.187	1,420	77%
Primary metal industries	2.206	2.643	2,605	-49%
Fabricated metal products	1.198	1.62	3,578	156%
Industrial machinery and equipment	2.521	3.29	9,239	-41%
Services				
Business services	0.736	0.827	9,444	177%
Health services	1.212	1.159	18,724	89%
Social services	1.463	1.446	4,624	69%
Finance, Insurance & Real Estate				
Depository institutions	1.145	1.18	2,604	19%
Insurance carriers	1.43	1.526	2,542	16%
Construction				
General building contractors	1.218	1.176	1,988	-17%
Transportation & Utilities				
Trucking and warehousing	1.211	1.318	3,580	21%
Transportation services	0.943	1.257	742	960%
Electric, gas, and sanitary services	1.463	1.377	1,619	-3%
Agricultural Services				
Agricultural services	0.968	1	777	115%
Wholesale				
Wholesale trade in durable goods	1.108	1.134	6,826	44%
Retail				
Automotive dealers & service stations	1.237	1.148	3,926	8%
Eating and drinking places	1.067	1.07	12,030	60%

Source: BEA, BLS, IDES

nois and 1.159 relative to the United States as a whole. These numbers are roughly similar to those presented in connection with the Peoria Regional Biomedical/Biotechnology Strategy Study.⁸ They indicate considerable competitive strengths in the health sector with the potential for it to become a major regional provider of health care services, and thereby an important “export” earner for Central Illinois. While this sector holds considerable promise for our five-county area, nobody should underestimate the potential of nearby competition. For example, Sangamon County (Springfield) had a 1999

“Health services” LQ of 1.74, substantially above that of Peoria County.

What other candidates for “export industries” might be found among Central Illinois’ major industries? Table 1-4 presents summary information to guide our quest.

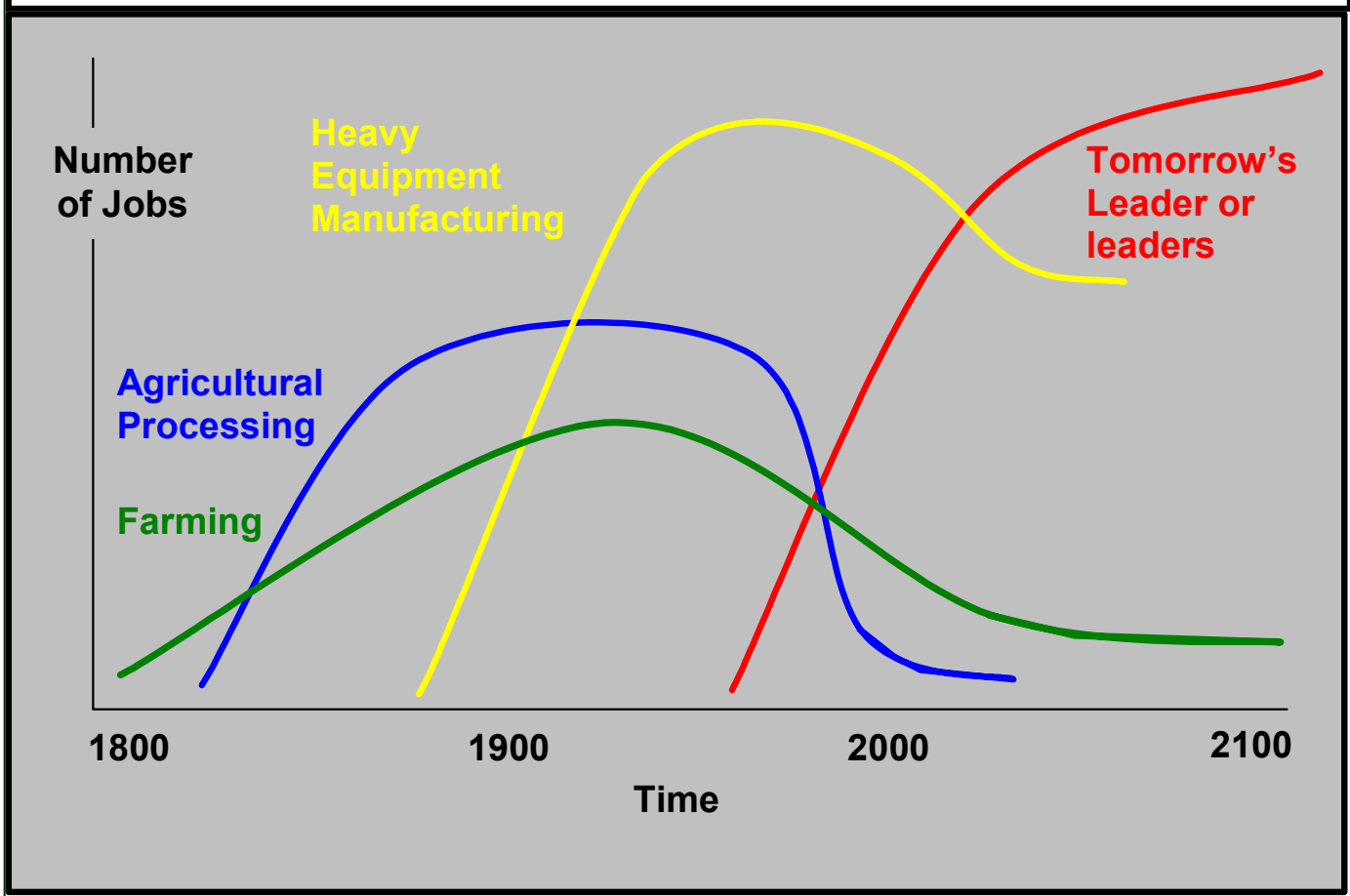
If, in this search for candidates, we restrict our gaze to industries with a 1997 LQ of at least 1.2, Central Illinois employment in 1997 of at least 2,500, and a growth over the twenty years from 1977 to 1997 of at least 50%, we end up with a very short list:

- Fabricated metal products manufacturing where the LQ shows good and growing strength and where employment growth has been rapid (156%) over the past two decades. Some of this growth undoubtedly stems from the outsourcing of work from Caterpillar. That observation, of course, is not meant to disparage this industry. Indeed its growth probably represents the development of a cluster of industries that arose initially to serve one major customer but which lately are moving on to diversify their customer base.
- Social services, which, since they serve a strictly local market, cannot become export industries.
- Health services, which were discussed earlier.

It is an axiom of economic history that every industry progresses through its own unique life cycle. Each is born and grows—often very rapidly in its youth—to a zenith. It may remain on a plateau for a period, and then it withers, hopefully to be replaced by a successor.

Oversimplifying greatly, we can picture the economic history of Central Illinois in three distinct phases, as shown by the green, blue, and yellow curves in Figure 1-10. Farming dominated the first period, which began in the early 19th century and continues to the present although it employs far fewer people than it did decades ago. Agricultural processing, including brewing and distilling, grew rapidly from the late 19th into the mid 20th century and then declined sharply. Manufacturing, especially of heavy earth-moving equipment, became ascen-

Figure 1-10
The History of Employment in
Central Illinois' Leading Industries, From Early Times Into the 21st Century
(An impressionistic view)



dant in the mid-20th century but had receded significantly, at least in terms of total employment, by century's end. Now, at the threshold of the 21st century, Central Illinois searches for a fourth leader—represented by the red curve—or perhaps there will be no single dominant leader. Perhaps a cluster or even several clusters of industries will be the driving economic forces in this new century.

The challenges of future economic development in Central Illinois are clearly posed: What will be the clusters of economic growth in Central Illinois during the early 21st century? What will be the paths of economic diversification in Central Illinois in the years ahead? Which industries will provide employment for the workers of Central Illinois, and what kinds of jobs will they be? Which industries or mix of industries will become the region's 21st century export earners? Which will become the successors to the farming, agricultural processing, and heavy equipment manufacturing that were the main drivers of regional growth and prosperity in the 19th and 20th centuries?

The future course of economic development in Central Illinois will certainly depend a great deal on the past and present. The path from the past to the present cannot help but influence the path from the present to the future, but to influence is not to determine. Other forces, some inside Central Illinois and some outside the area, will also exert major influences on the course of 21st century economic development. We now turn our attention their way.

The Forces Shaping Central Illinois' Economy

Central Illinois is an “open economy” in the midst of much larger state, national, and global economies. It is “open” in the sense that goods and services as well as productive resources (including population and workers of all kinds) can flow freely across its porous “borders” with those other larger entities.

Because it is “open,” powerful forces exerting pressure from the outside heavily influence

Central Illinois. These external forces combine with various forces inside the region to shape the region's economy. Thinking seriously about the economic future of Central Illinois requires that we understand the most important of these forces, both external and internal.

Demographic Change

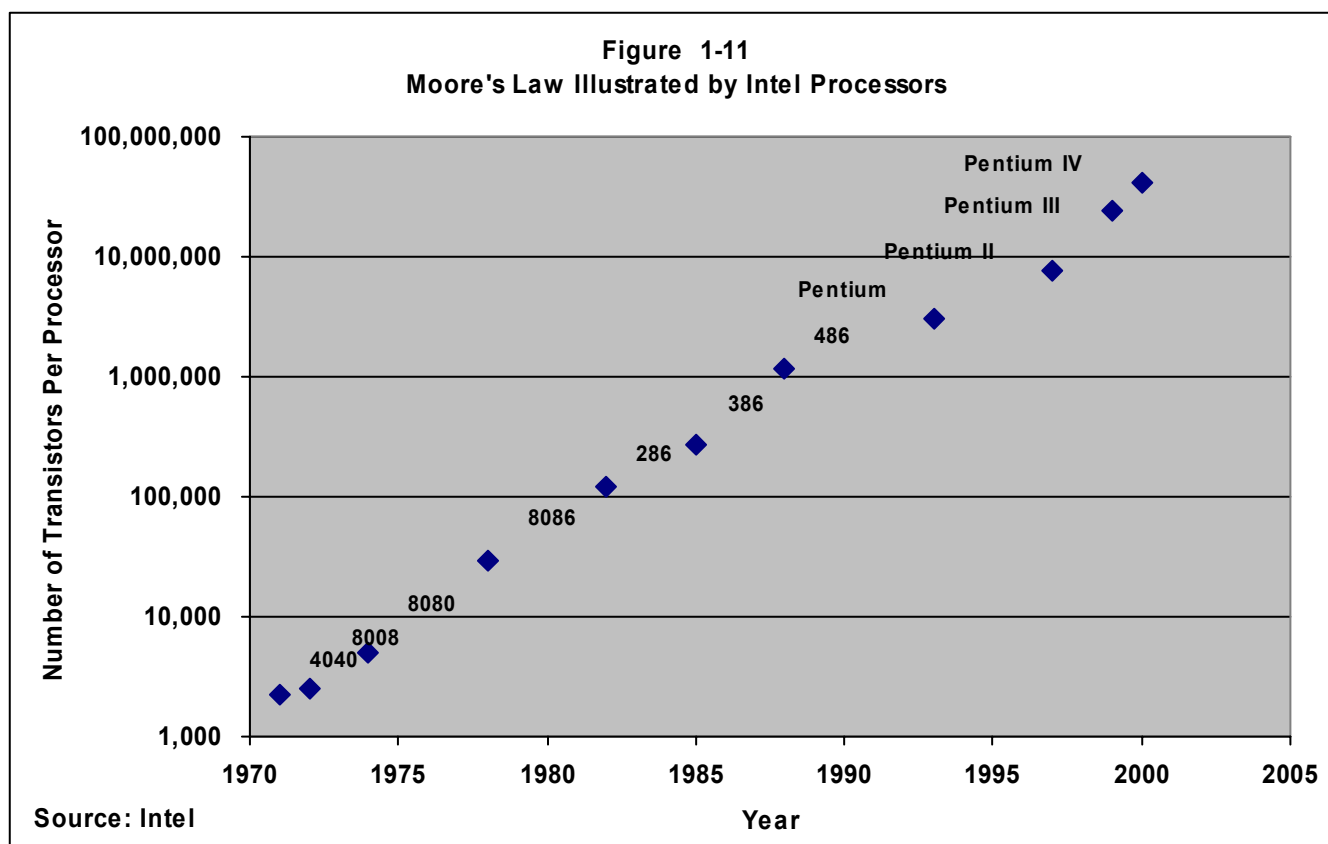
In Central Illinois, as in the nation and the world, demographic trends present important opportunities and challenges for workforce development. In the coming decades, uneven population growth worldwide will put pressure especially on local or regional manufacturers to adapt and compete internationally; an aging workforce will present new demands to and require new or different accommodations from employers; a changing ethnic composition of the workforce will do the same; population growth and migration will affect the size and content of the workforce, requiring employers to respond appropriately; and so forth. These issues will be discussed in much greater detail in Chapter Three.

Technological Change and Its Impact on Central Illinois' Economy

The late 20th century was a period of rapid technological change and innovation. The new 21st century promises to continue and even accelerate those processes. Among the technologies likely to impact Central Illinois significantly in the years immediately ahead are these:

- Computers
- Telecommunications
- Internet
- Manufacturing
- Logistics
- Biosciences and biotechnology, including genetics, pharmacology, biopharmaceuticals, and genetics engineering
- Health care delivery systems

Technological progress in the fields of **computer hardware** proceeds at dizzying speeds. Nearly everyone has heard of Moore's Law, which stipulates that the computing power available at a given price doubles about every



18 months. That doubling of capacity and the accompanying fall in its cost has brought computers into virtually every nook and cranny of the American economy. Despite pessimistic predictions to the contrary, Moore's Law appears alive and well nearly 40 years after its first promulgation (Figure 1-11). Most experts expect the revolution in computer hardware to continue for at least another couple of decades. By then, totally new technologies appear likely to continue or even accelerate the long trend of increasing computational capacity.

Computer software technology, although not so dramatically measurable as hardware, has also progressed at exceptionally rapid speeds—perhaps even more remarkable than those of hardware. The development of higher order programming languages and other powerful tools, when combined with the vastly greater capacity of computers themselves, have removed much of the drudgery and labor intensity from programming. The result has been a great upward spurt in programmer productivity. It has also freed software engineers to create

newer and more powerful application programs.

As remarkable as it has already been, the progress made by 2001 in computer engineering will seem pitifully modest from the perspective of a date as nearby as 2010. Assuming continuation of the pace at which computing technology (both hardware and software) has advanced in the last forty years—and there is no reason to think it will not continue—a supercomputer with the capacity of a human brain is likely to be built by the end of the present decade.

As an illustration of computer technology to come in the middle of this decade, consider IBM's Blue Gene supercomputer project, which was announced in December 1999. This five-year R&D effort, in which IBM is cooperating with the Lawrence Livermore National Laboratory, aims to build a computer capable of one quadrillion operations per second. That will be more than the total computing power of the top 500 supercomputers in the world today. One main goal of the Blue Gene project is to vastly advance the art of biomolecular simulation.

Ever more sophisticated computer applications will continue to revolutionize other fields across the entire spectrum of technology. Here are a few from a long list of IT innovations of potentially great importance to Central Illinois:

- Intelligent agents or “bots.”
- Next-generation database management, including seamless exchanges of information.
- More sophisticated project management software.
- More powerful computer-assisted design capability.
- Ever better speech recognition systems.
- Interactive virtual reality applications with ultra-high verisimilitude.
- 3D and 4D imaging technology.

Telecommunications is another area of technology that continues to progress at break-neck speeds. The advent of digital switching and fiber optics, combined with greater computing capabilities, is producing totally new kinds of interconnectivity among institutions and individuals. E-commerce lives on despite the dotcom debacle of 2000-2001. The quantity and quality of information available globally to both buyers and sellers of every kind of product is vastly greater than ever before. Markets that once were geographically limited to localities or nations have become global as a result. Furthermore, within these broadened markets, individual companies’ “pricing power” (i.e., their ability to set their own prices) is diminished and competition is greatly increased.

The Internet and various corporate intranets have already revolutionized how businesses communicate with one another and with their customers—and that revolution is still in its early stages. Internet II, a much more powerful version of the Internet that has been in design and construction since 1996, now connects more than 300 businesses, universities, research

organizations and government offices. Its goal is to provide an incubator for new technologies in areas like videoconferencing, virtual reality, and telemedicine that may find their way onto the larger Internet. The early 21st century will see rapid advances of many Internet-facilitated applications. Several of potentially great importance to Central Illinois are:

- Highly integrated medical and health-care information systems linking genetic, pharmaceutical, and other patient data;
- Electronic commerce, both business-to-business and business-to-consumer;
- Creation and facilitation of design groups, project teams, and other organizations over potentially long distances;
- Globally integrated supplier chains;
- Geographically dispersed virtual enterprises and design teams;
- Video-conferencing and virtual co-location of people;
- Distance learning.

Manufacturing technology has made huge strides in recent years. Labor productivity in American manufacturing has increased more rapidly than any other sector during the past ten or fifteen years, largely due to the high demands of intense global competition and the incredible innovations of rapid technological progress.

Much 21st century progress in manufacturing technology will be enabled by rapid advances in information technology. For example, Caterpillar recently announced a plan to replace its existing product data management software with a new collaborative commerce system that will integrate product databases with the large volume of data created by the CAD systems used in product design. This Internet-centric system will be able to support up to 3,000 end users worldwide.

New developments will come thick and fast

“With the rapid deployment of the Internet, companies now have instantaneous access to market information from around the globe. This information is free and accurate. Companies have visibility into transactions they otherwise could not see. They don’t have to pay a high price -- or any price -- to search for the price and availability of goods they need to satisfy an immediate demand. Material flow is becoming direct and just-in-time. It is getting easier to switch from one supplier to another because so many products are standardized or can be cheaply assembled from modules of components.

Morris Cohen, Matsushita Professor of Manufacturing Logistics at the University of Pennsylvania’s Wharton School. ManufacturingNews.Com October 13, 2000 Volume 7, No. 18

in manufacturing technology in the early 21st century—so thick and so fast that it is impossible to list even the major areas of innovation. A few of the most important are:

- Robotics and laser applications to advanced machining technology;
- Powder metallurgy;
- Fuel cell technology;
- Rapid prototyping and 3-D digital product models;
- Flexible assembly, soft tooling, single piece fabrication and adaptive machine control;
- Tool-free assembly;
- Embedded sensors and transponders;
- Nanotechnology.

This list barely scratches the surface of technical innovations coming down the manufacturing turnpike in the early 21st century.

Improvements in logistics technology and management lie at the heart of more efficient systems of delivering goods and services. In an economic environment characterized by leaner enterprises, just-in-time inventory practices and fiercer competition, the ability to deliver products efficiently and on time can spell the difference between success and failure.

The technologies here relate to materials

handling, transportation, order tracking, supply chain management, and the linkages between customers and suppliers worldwide. As in virtually every other field, IT will occupy center stage in 21st century logistics management.

The prospect of a protracted war on terrorism will complicate the task of distributing products in the globalized economy. The ability to move and deliver the right products to the right customer at the right time and at the right price will become even more important than before September 11, 2001.

Technological advances in genetics, pharmacology, biopharmacology, medical devices, and medical informatics will create the potential for dramatic progress in the delivery of health care services in the early 21st century. Very soon, possibly within this decade and surely before 2020, technologies will be developed to arrest or control most of the debilitating diseases of human aging, including arthritis, osteoporosis, diabetes, heart disease, and most forms of cancer. It will be possible to provide gene-based, personalized medical care including nano-robotic systems for the prevention, diagnosis and treatment of these and many more maladies of both the young and old.

But the technological potential for dramatic improvements in health care will not, by any

“Genetic engineering promises to revolutionize agriculture by increasing crop yields while reducing the use of pesticides; to create tens of thousands of novel species of bacteria, plants, viruses, and animals; to replace reproduction, or supplement it, with cloning; to create cures for many diseases, increasing our life span and our quality of life; and much, much more. We now know with certainty that these profound changes in the biological sciences are imminent and will challenge all our notions of what life is.”

“Why the Future Doesn’t Need Us,” by Bill Joy, CEO Sun Microsystems, April 2000, p. 58

means, automatically translate into the systems for delivering that superior care. The necessary improvement of our health care delivery systems will present challenges as great as or even greater than developing the technologies themselves.

Among the most critical of these challenges is forging ways to finance the delivery of these technological miracles. They are not cheap and the conventional employment-based system of health insurance seems unlikely to be able to carry the burden.

Another major challenge to the health care delivery system centers on the education of all sorts of health care professionals, from doctors to nurses to the myriad of technical specialists required to deploy and employ the new technologies.

Still another challenge will be that of integrating and synthesizing patients' medical and genetic information and presenting it efficiently and cogently to the health care professionals who make clinical decisions. Great strides in

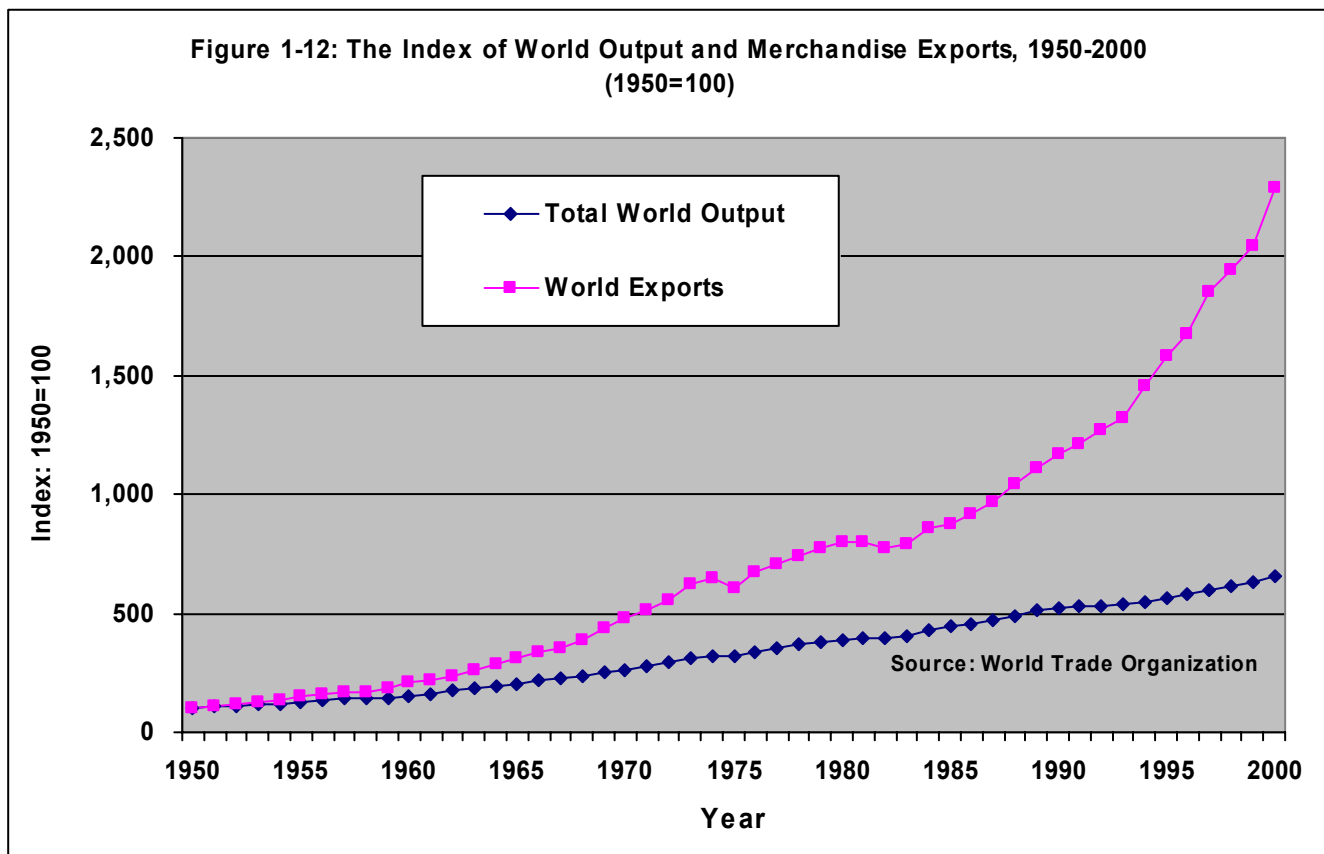
health informatics are possible, and they will increasingly be needed to build the health care delivery systems that will realize the possibilities of emerging 21st century biomedical technologies.

Agriculture and food sciences will be another beneficiary of progress in the biosciences and biotechnology. The mechanical and chemical revolutions of America will continue, as will the genetic revolution, especially in the new form of genetic engineering.

The point to be stressed here is that the biosciences and health care delivery systems are areas exciting for the pace and importance of their technological innovation as well as for the opportunity they offer to "export" industries for Central Illinois.

Globalization

In the last several decades, technological advances in telecommunications and transportation have combined to shrink the globe. Some speak of the "death of distance." Producers and



consumers worldwide now share a common information system. Anyone anywhere who has the capacity to use it has access to vast amounts of technological, product, and financial information. With national borders increasingly porous to the flow of information, markets that once were limited to localities or countries are rapidly becoming global in scope.

The globalization of information flows is both the cause and effect of freer global flows of technology, goods, and money. Figure 1-12 shows the results of this development. In the second half of the 20th century, total world output (world GDP) expanded about five and one half times. Meanwhile, the total volume of world merchandise exports grew by nearly twenty-two times. In other words, in the past half-century, the world's exports of goods have grown about four times faster than global output. Clearly, the world economy is now much more integrated than it was just a few decades ago.

International trade has become much more important to the U.S. economy in recent decades. In 1959, for example, total trade (exports plus imports) amounted to only 9% of GDP; by 1999, the share had risen to 25%. At the state level, Illinois is a major player in global markets. In the first eleven months of 2001, the state's exports amounted to nearly \$30 billion, or 4.3% of all U.S. exports. In 2001, Illinois was the seventh largest exporter of manufactured products and the sixth largest of non-manufactured products among the 50 states. In the first 11 months of 2001, Illinois manufacturers exported nearly \$25 billion of product—approximately double the 1990 level.

Accompanying this dramatic growth has been a remarkable shift in the composition of U.S. foreign trade. In 1959, for example, “goods” (primarily manufactured and agricultural products) amounted to 80% of total exports and 69% of total imports. Thirty years later, “goods” comprised only 70% of exports, while their share of imports had risen to 84%.

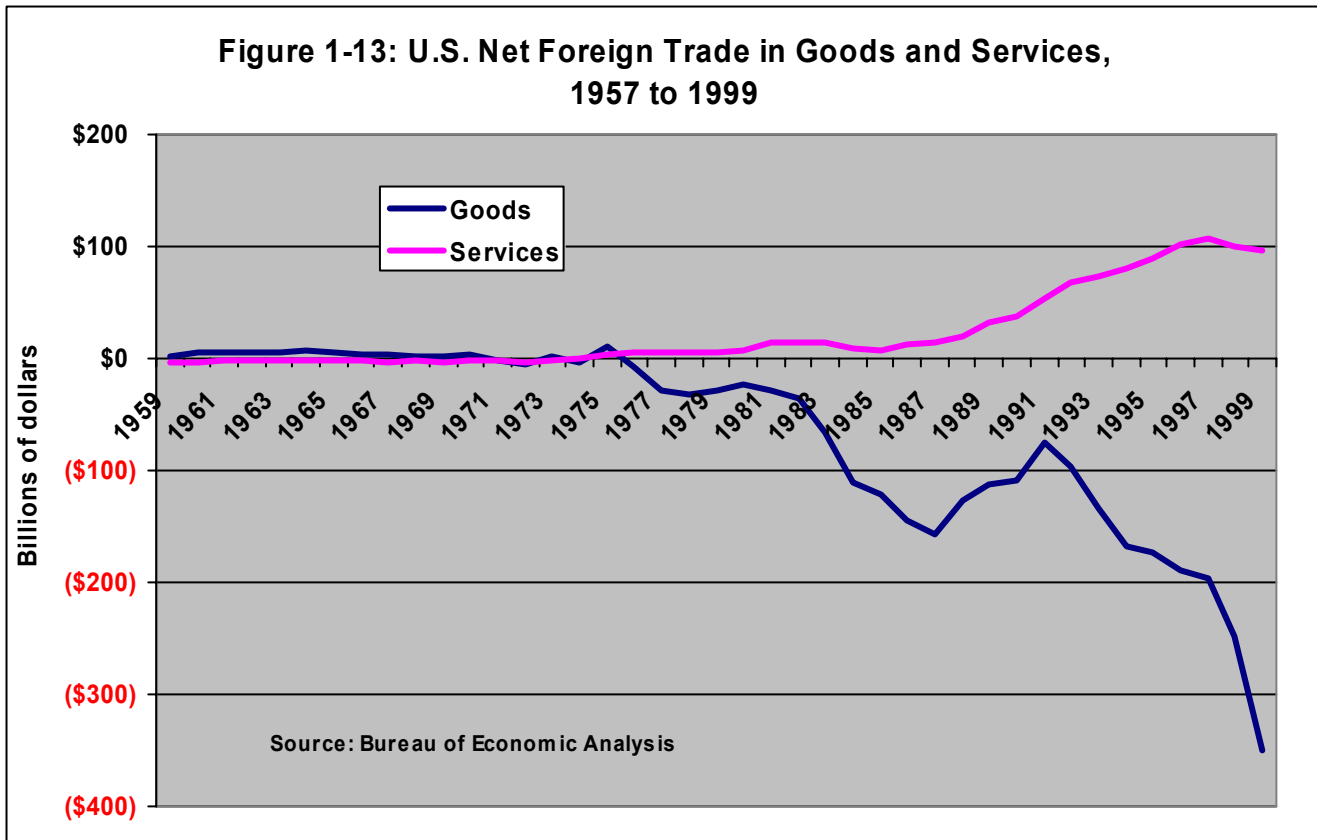
Until the mid-1970s, America's foreign trade

was approximately in balance every year. Typically, the nation ran a small surplus in its trade of goods and a small deficit in its trade of services. After 1975, however, things changed dramatically. In 1976, U.S. surplus in the trade of goods turned negative and has remained in deficit ever since, growing to \$459 billion by 2000. Trade in services, on the other hand, went the other direction. In every year since 1975, America's balance of trade in services has been positive, rising to a plateau of about \$100 billion by 1997.

The message of the divergent trend lines shown in Figure 1-13 is that the United States is increasingly an importer of goods and an exporter of services. Among the goods where this trade deficit is highest are petroleum products, computers, automobiles, and other consumer goods. High value-added manufactured capital goods, including aircraft and heavy machinery, are areas in which the United States still enjoys a modest export surplus. But labor-intensive, low value-added manufacturing in America is in deep trouble that promises to get deeper, and the reasons for it are not difficult to find.

Between 1997 and 2000, the average annual rate of growth of China's exports exceeded 15%. In the decade 1988 to 1998, the average annual growth of China's manufacturing sector was 13.5%, which represented an acceleration in comparison to the previous decade. Manufactured goods comprised 87% of China's goods exports in 1998. Barring some unexpected development that would derail its economic growth, China will be the world's leading manufacturing nation by 2015. China and a few other populous countries will “own” the world's low- and medium-level value-added manufacturing industries.

As Figure 1-13 indicates, services have assumed major importance as net export earners for the United States. But those net service earnings have weakened since 1998. One new aspect of globalization is the growing competitiveness of other nations in the global trade in services. India, one of the few nations whose



service exports are proportionately as great as the United States', is emerging as a powerful global competitor in the provision of both high- and low-skill services. Some examples illustrate the trend:

- The General Electric Corporation now employs about 10,000 workers in India, some 6,000 of whom were hired within the last year. Company executives have stated their intention to replicate the GE Laboratories (located near Albany, NY) near Bangalore, India, and to staff those labs with approximately 1,000 engineers and scientists.
- Many call centers and back-office operations are moving to India, not only from the United States, but also from Ireland, Hong Kong and other nations where labor costs for English speaking workers have risen far above the going rates in India.
- Sun Microsystems, Microsoft, and many similar companies are sourcing programming and software services from Indian suppliers.

A Changing Industrial Structure

Figures 1-5 to 1-8, displayed earlier in this chapter, document a major trend in the national,

“What’s enabling all of this change? The Internet explosion and Moore’s Law have played a spectacular part—transforming fields such as logistics, design, marketing, engineering and law into computer inputs and outputs. Eastern Europe, China, and India, with their immense labor forces and sophisticated schools, are opening to the world economy. And there is a technological leapfrog effect. Thanks to powerful fiber optics, businesses that could hardly get a dial tone a decade ago can link now to the world, even if it does mean paying for 100% redundant systems. Competition has a lot to do with it, too. In 2000, 49 countries had competitive telecom markets, up from six in 1990.”

Douglas Lavin, “Globalization Goes Upscale,” Wall Street Journal, February 1, 2002

state, and Central Illinois economies—that is, the shift employment from the production of goods to the production of services. In fact, this shift has occurred gradually over a long period of time. Service-producing employment accounts for an astonishing 94% of total U.S. job growth from 1951 to 2001, and this trend seems almost certain to continue.

Recent BLS projections see the share of service-producing jobs rising from 72.1% in 2000 and to 74.7% in 2010. The national trend affects all states and regions of the country, including Central Illinois.

As the pace of technological innovation accelerates, the U.S. economy is moving rapidly beyond the service economy in the direction of becoming a “knowledge-based” economy. The main traits of a twenty-first century knowledge-based economy are these:

- A high and rising share in GDP of output from “knowledge-intensive” industries, i.e., industries in which the quantity and quality of firms’ intellectual property is critical to competitive success. These include the information technology (IT) industries as well as many other high-tech industries. Among others, they include financial, business, health, and educational services. Even the major goods-producing industries, Manufacturing and agriculture, for instance, are rapidly becoming more “knowledge-intensive.”
- The “knowledge content” of everyday goods and services is high and rising.
- High levels of R&D at all levels, governmental, university and corporate.
- An accelerating pace of technological innovation, accompanied by insistent pressures on companies to innovate or lose competitive position.
- Shortening life spans for both products and services, i.e., a contraction of the time period between when they are designed or conceived and when they become obsolete and are replaced.
- Intense competition in markets where both buyers and sellers are very well informed by the Internet and other telecommunications media.
- A major need for rapid responsiveness and adaptability to ever-changing customer needs and other market circumstances. From this comes the need to know and anticipate those changes ahead of the competition.
- High tolerance of risk among businesses and individuals, accompanied by a high incidence of entrepreneurial activity.
- High levels of “creative destruction” in which established technologies (and the companies based on them) are constantly threatened by newcomers both from within and outside their industries as previously defined.
- Many “gazelles,” i.e., recently formed and very rapidly growing companies based on new or transformed intellectual property.

By its very definition, “knowledge” is central to the “knowledge-based economy.” Competitive success for firms and individuals depends on the ability to produce new ideas, transform old ones, combine and codify that information into intellectual property, and incorporate it into new products and processes. In short, success increasingly depends on individual and collective abilities to produce and use knowledge.

Manufacturing in the Knowledge Economy

Among the goods-producing industries, manufacturing employment in the United States has been in decline for many years. It reached a post-war peak in 1979 at 21 million jobs and had declined to 17.7 million by 2001. The operation of this trend was highly apparent in the 1980s but was obscured to some extent in the

1990s, particularly in the last half of that decade. Between January 1992 and January 1999, U.S. manufacturing employment actually grew by slightly over half a million jobs.

The recession of 2001-2002 saw a resumption—indeed, an acceleration—of the long-term downward slide in manufacturing employment. Between January 1999 and the same month in 2002, the manufacturing sector of the U.S. economy lost 1.7 million jobs, according to the Bureau of Labor Statistics. Meanwhile, the service sector gained 2.6 million jobs over that same period. The latest BLS projections envision a recovery of manufacturing employment to 1990 levels by 2010 but we are dubious.

While manufacturing employment has declined over the years, the value of manufacturing output has increased impressively. From 1987 to 2000, a period in which manufacturing employment declined 3%, the value of manufacturing output in real terms (i.e., corrected for price changes) increased 52% (Table 1-5).

Two manufacturing industries stand out among those listed in Table 1-5. The “Electronic and other electrical equipment” and “Industrial machinery and equipment” industries both added jobs and increased output by large percentages. These two industries are both very high tech and incorporate copious quantities of information technology into their products. Both are heavily knowledge-based in the sense that engineering and other intellectual capital play key roles in both their design and their production. They represent the kinds of manufacturing in which American producers remain highly competitive in national as well as in global markets.

American manufacturing companies that prosper in the early 21st century are likely to produce goods that display one or more of the following characteristics:

- They are high-tech, high value-added products that are competitive in global

<i>Industry</i>	<i>Employment</i>	<i>Value of Output</i>
All Manufacturing	-3%	52%
Durable goods	6%	91%
Lumber and wood products	19%	-13%
Furniture and fixtures	9%	26%
Stone, clay, and glass products	10%	49%
Primary metal industries	0%	35%
Fabricated metal products	5%	29%
Industrial machinery and equipment	15%	222%
Electronic and other electric equipment	10%	507%
Motor vehicles and equipment	146%	37%
Other transportation equipment	-5%	-28%
Instruments and related products	-15%	-21%
Miscellaneous manufacturing industries	5%	41%
Nondurable goods	1%	12%
Food and kindred products	16%	13%
Tobacco products	-25%	-72%
Textile mill products	-21%	9%
Apparel and other textile products	-41%	-14%
Paper and allied products	7%	-3%
Printing and publishing	4%	-16%
Chemicals and allied products	27%	52%
Petroleum and coal products	10%	-12%
Rubber and miscellaneous plastics products	22%	102%
Leather and leather products	-45%	-24%

markets;

- They are “knowledge-intensive” in the sense that a large portion of their value stems from their intellectual property component;
- They are produced at a total cost that enables the producer to compete successfully in national and international markets;
- Recently developed intellectual property is especially important in their design and/or production;
- Close proximity to customers or suppliers is critically important;
- Their production requires intimate customer knowledge on the part of the producer;
- They are nearby and interact with a major university or other research center;
- They are subject to rapid innovation, i.e., the time cycle from product conception, through design and manufacture, to replacement is short;
- Political factors dictate that production should be within the U.S. (e.g., this is one of the reasons why Japanese auto manufacturers locate in this country);
- It is uneconomical to import them because international transportation costs are too high;
- Strong brand loyalty exists among consumers or other users;
- Logistics and/or customer service by the manufacturer are so closely associated with the physical product that the customer sees them as a joint value proposition.

The trend toward the knowledge economy and the trend toward globalization are well illustrated in one prominent Central Illinois com-

pany: Caterpillar Inc. Beginning in the 1960s, if not earlier, Caterpillar began a process of “globalization” that increasingly defines its corporate character. Although it had long been a world-wide supplier of earth-moving and other heavy equipment, Caterpillar’s manufacturing base had long remained in the United States and, more specifically, in Central Illinois. In 1963, the company began an inexorable process of global growth and diversification, a process that continues to the present. In recent years, about half of Caterpillar’s total sales have originated outside the United States, with the Asia/Pacific share growing most rapidly of all.

Between 1998 and 2000, the number of full-time Caterpillar employees working in the United States declined by 6.5%, while those working elsewhere in the world increased by 20.4%. In 2000, 45% of Caterpillar’s global workforce worked outside the United States, compared with 39% in 1998. In Central Illinois, Caterpillar’s blue collar workforce has shrunk substantially in the past few years, a fact much lamented in the region. This shrinkage reflects much broader trends affecting all of American manufacturing.

At the same time, Caterpillar’s high value-adding workforce (e.g., in engineering, design,

Globalize or fall behind.

“... [T]he United States is increasingly specializing in more complex, higher value-added goods and services, which is reflected in the fact that the average weight of a dollar’s worth of American exports is less than half of what it was in 1970. That focus on higher value-added goods and services is benefiting many American workers. Workers employed in export-oriented firms earn 10 percent more than workers in similar firms that export less, or that don’t export at all. As a result, states whose companies are not global traders will be left behind, as will their workforces.”

Caterpillar 2000 Annual Report

Blending customer knowledge & technology

“To remain the leader in the industries we serve, we must blend two things — our understanding of customers’ needs and a forward look at technology to satisfy those needs. Innovations impact all aspects of our business. Our products incorporate computers which provide better control and flexibility of components and systems and optimize operating efficiency. Instead of the time-consuming development of prototypes, we achieve the same thing quickly using computer simulations. We’ve expanded the technology envelope through our own internal expertise and through collaboration with universities, government labs and others. State-of-the-art laser welding and cutting have reduced production costs and improved the durability of structures. Advanced materials and coatings are used to extend the life of components. Laser visualization of fuel injection characteristics is used in the lab to understand process variances.”

Caterpillar Annual 2000 Report, p. 26

marketing, and management) has expanded. To remain competitive in the global market place, Caterpillar increasingly stresses excellence of product design, ergonomics, and customer support, all of which will necessitate more and more highly qualified knowledge workers. Today, Central Illinois is the locus of the highest concentration of those knowledge workers. The region clearly has a major interest in seeing that continue.

Scenarios of Future Economic Development in Central Illinois

To foresee the future is not within our powers. There are an infinite number of possible futures that stretch before us, and though only one road out of many will be taken and one state alone achieved, we do not know exactly which it will be. We can, however, perform mental experiments, exercise our imaginations, and visualize “alternative futures” or scenarios

of possible development, in order to explore ways to create a desirable future.

It is obviously impossible to explore an infinite number of scenarios. Even a large number of them would be quite confusing and defeat our purpose, which is to stimulate thought about how to create a desirable future. Therefore, to visualize the future economic development of Central Illinois, we create three different scenarios for the year 2010. All three are sketched here in very broad strokes. More detail will come in later chapters in which we also explore their workforce implications.

Scenario Number One: Things Go Downhill

Scenario number one is a “nightmare” scenario, which means that some important things go wrong and trends run much worse than expected.

If only a few important things go wrong and almost nothing goes right, then things are very likely to get worse. Little imagination is required to think of things that might go wrong.

One Central Illinois nightmare has to do with the contraction of major industrial operations. An example of such would be a significant downsizing of one or more significant employers, such as Caterpillar Inc, in Central Illinois. While this seems unlikely, in a “worst case” scenario, all possibilities should be considered

Central Illinois could fail to cope with the challenges facing its K-12 educational system. Such a failure would produce at least three nightmarish consequences. First, the costs reckoned in forgone human potential and personal tragedy would be incalculable. Second, employers would be unable to recruit and retain a qualified workforce. Third, the ensuing racial and other social tensions could make life in Central Illinois much less pleasant than it now is.

Nightmare scenarios need no detailed elaboration. Their sole purpose is to alert our minds

so that we can avoid them or, at least, minimize the probability that they will occur. Therefore, having raised the nightmarish specter, we can more usefully pass on to think about positive scenarios of the future.

Scenario Number Two: Things Go On As They Are

Scenario number two is a “surprise-free” scenario, which means simply that it describes a state of affairs (for our purposes, projected for the year 2010) that would surprise us the least if it actually came true. Essentially, it is a scenario in which things continue along “predictable” lines, pretty much as they are at present.

To the casual eye, “surprise-free” Central Illinois in 2010 looks very much as it did at the beginning of the decade. Of course, there have been several major improvements. The transportation infrastructure took a significant step forward with the widening and modernization of Interstate 74, which was completed during the preceding decade. Developments along both sides of the Illinois River brought important esthetic and commercial enhancements.

The region's GDP continued to grow during the decade ending in 2010 although at rates considerably below those of the preceding decade. Total Regional GDP showed a respectable 2% average annual growth over the course of the decade and, on a per capita basis, the growth was slightly higher at 2.1%. As in the previous quarter-century, however, the region's income growth lagged behind that of the state and, especially, that of the nation as a whole.

Central Illinois' employment growth during the first decade of the 21st century averaged 0.9% annually, slightly less than that of Illinois and considerably less than that of the United States.

Caterpillar retains its international headquarters in Central Illinois but continues to reduce its hourly employment in the area as it shifts actual production to lower-cost locations and closer to its global markets. Most of this job loss comes through attrition and the retirement

of many veteran hourly employees.

Caterpillar, like other employers of highly educated workers in the area, experiences growing difficulty in recruiting younger, unmarried talent. Even greater difficulty attaches to the recruitment of professionals from abroad and certain minority groups. The complaint is heard that Central Illinois offers insufficient attractions to persons seeking their own cultural or ethnic affinities. Nevertheless, salaried employment remains stable even as Caterpillar decentralizes more of its engineering and design work to other global locations.

Other manufacturing firms in the area experience stiff competition, especially from overseas producers. By 2010, the value of manufacturing output rises by about 10% but total employment sags slightly below its 2000 level.

Construction is the only goods-producing industry to show increased value of both output and employment. The value of output grows by nearly 15%, and employment grows by over 8%. Farm earnings continue in the doldrums, falling nearly 10% in real terms from 2000 to 2010.

Services and retail trade continue the brisk growth that they showed in the late 20th century. These two sectors account for three-quarters of job growth in the area during the decade, with the service sector alone contributing 50% of new jobs in the area.

Business services are the most rapidly growing of all the sub-sectors of the service sector. Sparked by the rapid growth of the staffing industry, business services account for nearly half of all service sector job growth and almost a quarter of all net employment growth in Central Illinois during the decade.

The Regional Bioscience Strategy for Central Illinois launched in 2001 makes gradual progress during the decade. Unfortunately, a shortage of funding combines with persisting governmental and institutional rivalry to impede more rapid gains. Nevertheless, health services jobs grow by 15% from 2000 to 2010

and account for 13% of the decade's net job growth. By 2010, the health services are one of Central Illinois' largest employers, rivaling both retail trade and durable manufacturing in terms of jobs provided.

With 10% of net new jobs, the education sector is the third most important employer among the service industries. The quality of K-12 education is a continuing concern. Student scores on Illinois' standardized tests show some modest improvement during the decade but not enough, in the view of critical observers, to qualify the area's young people for America's most rapidly growing and best paying jobs. Although Bradley University's new graduate programs have drawn much admiration and Illinois Central College continues to be well regarded among community colleges, Central Illinois remains undistinguished for its K-12 education.

Inadequately prepared high school graduates frustrate employer's efforts to build a qualified workforce, and also saddle post-secondary educational institutions and their students with heavy remediation burdens. Furthermore, mounting evidence indicates that the perception of educational mediocrity makes it difficult to attract highly skilled professionals to jobs in the area.

The end of the first decade of the 21st century finds Central Illinois still looking for a successor to heavy manufacturing as a locomotive to drive economic growth. No single industry or industrial cluster has yet emerged to propel income and employment to significantly new levels. Nevertheless, life goes on satisfactorily in the view of many area residents—pretty much as one might have expected.

Scenario Number Three: The Dawning of a Bright, New Era

Scenario number three is a “winner” or “dream” scenario in which some key things turn out well or go better than they appear to be

going at present.

In this scenario, Central Illinois in 2010 exudes the optimism and dynamism of success. Two new engines accelerate the region's economic growth:

- The phenomenally successful Regional Bioscience Strategy for Central Illinois that was launched in 2001; and
- The newer but equally impressive Central Illinois Center for Advanced Manufacturing that was launched in 2006.

Four factors deserve credit for the success to date of **Central Illinois' Regional Bioscience Strategy (“RBS”)**:

- The vision and perseverance of its leadership;
- The willingness of all key participating institutions and governmental bodies to bury past rivalries and to combine their efforts to surmount the financial and organizational difficulties that might otherwise have doomed the effort;
- Conducive conditions including (i) rapid technological progress in biotechnology, pharmacology, medical science, and health care delivery; and (ii) an aging regional population that require more and better health care;
- Focused efforts by the region's educational institutions to craft suitable curricula and to raise the quality of education and professional training at every level, from pre-school and kindergarten to post-graduate programs.

The **Center for Advanced Manufacturing (“CAM”)** was conceived early in the decade as a way to leverage Central Illinois' historical strengths in manufacturing with its developing strengths in education and training.

The genesis of the CAM lay in the clear rec-

ognition by the area's leading manufacturers that, to be globally competitive, they had no choice but to become more "high-tech" at every level, from research and development to design and engineering to fabrication and assembly to supply-chain management.

High-tech manufacturing in the 21st century, they realized, would mandate continual improvement in every aspect of their operations. Such improvement would be possible only if it were knowledge-based and powered by a workforce that was well educated, highly skilled, and constantly learning.

From that realization came the inspiration to co-harness the talents and efforts of Central Illinois' leading manufacturing companies with the area's intellectual and educational resources in ways that had never been done before. The result was the Consortium for Advanced Manufacturing, which combined top talent from the companies, Bradley University, Illinois Central College, and the region's public schools. From the Consortium came the objectives and design criteria for CAM, of which the following were the most important:

- Research and development in all the emerging technologies of modern manufacturing in an environment closely linking academic research with industrial application;
 - Close and frequent exchange and interaction of industry professionals with educators at various levels including university professors of science, engineering, and business; community college instructors; high school teachers; and career guidance counselors;
 - Stimulation of entrepreneurship and the rapid commercialization of research results emanating from university and other laboratories;
 - Collaborative development of new curricula for educating and training that embody the principles of cooperative learning, wherein students have ample opportunity
- for internships, part-time work, and other hands-on experience in manufacturing companies;
 - Post-graduate and mid-career education for academic, industrial, and managerial professionals to upgrade their knowledge and the skills necessary for 21st century high-tech manufacturing;
 - Aggressive marketing of the CAM program both within and outside Central Illinois with the objective of recruiting promising students who, upon completion of their studies, could be candidates for employment by local manufacturing companies.

In 2010, CAM is still young but its fruits are already visible. For the region, it is becoming a magnetic attraction for talented scientists, engineers, and management specialists. Key new faculty appointments at Bradley University and ICC reflect this new magnetism. Coveted research grants from industry, foundations, and government have been both cause and effect of these new appointments. Numerous new and rapidly growing companies (gazelles) had emerged from this yeasty entrepreneurial mix.

The interchange of top-flight talent between academia and industry is generating enthusiasm on both sides and enhancing the attractiveness of employment in Central Illinois. Perhaps most important has been the new interest among area youth in manufacturing careers and an enhanced motivation to acquire the basic knowledge and skills necessary to pursue such careers.

The successes of both RBS and CAM are beginning to show in the numbers. The growth of regional per-capita income in Central Illinois has broken the trend of the late 20th century and now is increasing more rapidly than either the state or the nation.

The recruitment and employment of a larger proportion of high value-added professionals in Central Illinois is generating a gratifying spurt of demand for locally provided goods and ser-

vices. These span a broad spectrum from home construction to restaurants to up-scale retail establishments. The quality (and pay) of service sector jobs is improving noticeably as small and medium-sized service firms spring up to serve business and consumers with higher disposable incomes.

Central Illinois' professional workforce has become noticeably more diverse during the decade. A critical mass has been achieved not only of African-American but Hispanic, Asian and other talent that makes it easier for HR managers to recruit more professionals from these rapidly growing ethnic and cultural groups. Central Illinois also has become somewhat of a Mecca for immigrant talent. These factors have made the area much more attractive to companies who employ or wish to employ minority and/or immigrant talent.

Quantitatively, manufacturing employment is stable. Qualitatively, however, it is changing rapidly. Caterpillar not only retains its world headquarters in Central Illinois but is significantly expanding its research, engineering, and managerial operations in the area. Due to greater automation and the growth of its global operations, though, the number of hourly Caterpillar employees continues a gradual downward drift. The positive side of this change, however, is that the remaining hourly jobs require much higher skills and pay much better than those that have been lost.

Real estate values in many areas of Central Illinois are climbing twice as rapidly as in the preceding decade and several rundown urban neighborhoods are being renewed and gentrified. Downtown and riverfront enhancement has accelerated, to the delight of the area's growing population of young professionals.

As the second decade of the 21st century dawns, Central Illinois looks to the future with greater hope and optimism than it has had in many decades.

Chapter 2: Workforce Needs for Central Illinois' 21st Century Economy

Having examined the main influential forces of early decades of the 21st century, we now move on to explore recent employment by industry and occupational categories at the national level, as well as the education and training implications of those projections. We also explore the workforce implications of the scenarios of Central Illinois' future economic development that were sketched in Chapter One of this study. Finally, we investigate the education and skill-level implications of these various projections and scenarios

New Workforce and Occupational Projections for the U.S. Economy, 2000 to 2010

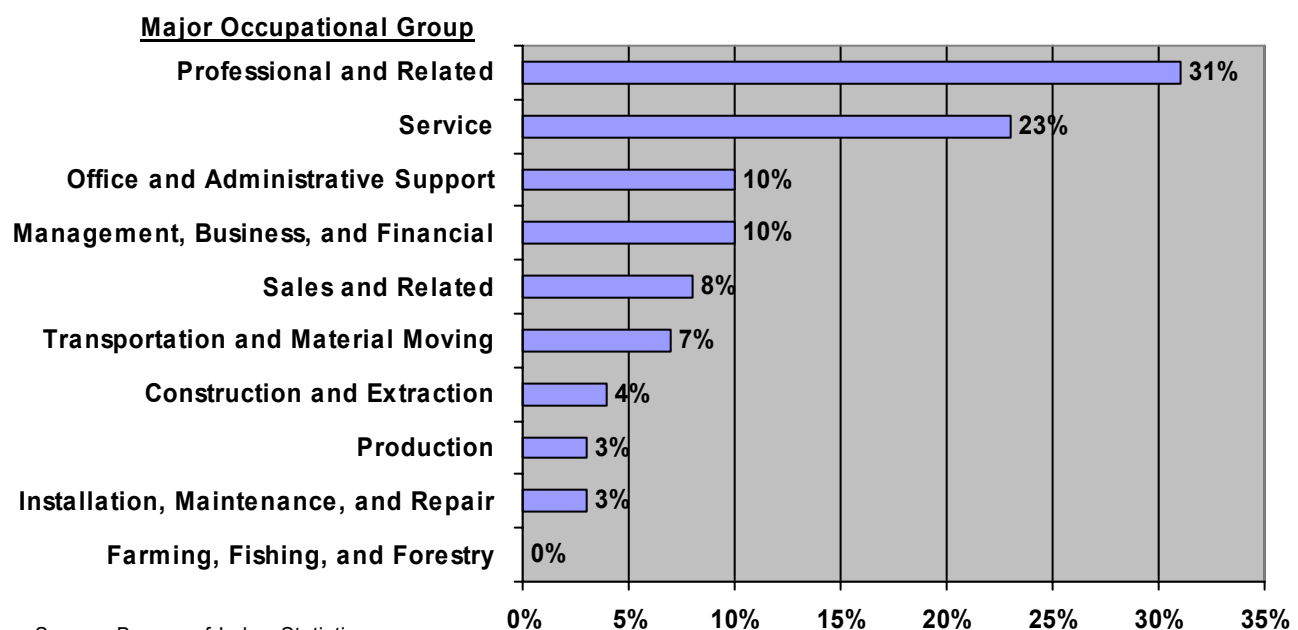
The long-term trend toward a services-producing economy seems certain to continue unabated throughout the first decade of the 21st century and beyond. The most recent projections of the BLS for the year 2010 foresee a continued contraction of employment in agriculture, mining, and non-durable manufacturing.¹ More than half (52%) of job growth from 2000-2010 is expected to come in the Services sector. Together with Retail (14%) and Government (8%), the Services sector will account for four-fifths of the nation's total employment

growth in this decade if the BLS projections prove accurate.

Focusing mainly on the shifting industrial structure tends to obscure an even more fundamental transformation that is taking place: namely, the shift toward a knowledge-based economy. This becomes more evident as we examine the economy's changing occupational composition, as well as the changing levels of education, skills, and knowledge that the most rapidly growing occupations require.

The changing occupational composition of the economy is summarized in Figure 2-1. Nearly a third (31%) of job growth in this decade will come in the "Professional and Related"

Figure 2-1
Percentage of Total Employment Growth in the United States, 2000-2010, Projected by Major Occupational Group



occupations, and another 10% will come in “Managerial, Business, and Financial” occupations. The vast majority of occupations in these two broad categories are knowledge-based, as are a substantial share of those grouped under “Service” occupations.²

A closer look at the specific occupations in which jobs are expected to grow and those in which jobs should contract is quite instructive. The twenty occupations that are projected to grow most rapidly in the U.S. economy over the next decade are shown in Table 2-1. This list is

<i>Occupation Title</i>	<i>2000-2010 Job Growth (pct.)</i>	<i>Job Openings Due to Growth (thous.)</i>	<i>Job Openings Due to Replacement Needs (thous.)</i>	<i>Median Annual Earnings</i>	<i>Education or Training Category</i>
Computer software engineers, applications	100%	380	410	\$ 67,670	Bachelor's Degree Associate's Degree
Computer support specialists	97%	490	510	\$ 36,460	Bachelor's Degree
Computer software engineers, systems software	90%	280	310	\$ 69,530	Bachelor's Degree
Network and computer systems administrators	82%	190	200	\$ 51,280	Bachelor's Degree
Network systems and data communications analysts	78%	90	100	\$ 54,510	Bachelor's Degree Post-Secondary Vocational Award
Desktop publishers	67%	30	30	\$ 30,600	Post-Secondary Vocational Award
Database administrators	66%	70	70	\$ 51,990	Bachelor's Degree
Personal and home care aides	63%	260	320	\$ 15,600	Short-term OJT Post-Secondary Vocational Award
All other computer specialists	61%	120	140	\$ 50,590	Post-Secondary Vocational Award
Computer systems analysts	60%	260	300	\$ 59,330	Bachelor's Degree
Medical assistants	57%	190	270	\$ 23,000	Moderate-term OJT
Social and human service assistants	54%	150	190	\$ 22,330	Moderate-term OJT
Physician's assistants	54%	30	40	\$ 61,910	Bachelor's Degree Associate's Degree
Medical records and health information technicians	49%	70	100	\$ 22,750	Associate's Degree
Computer and information systems managers	48%	150	200	\$ 78,830	Degree plus work experience
Home health aides	47%	290	370	\$ 17,120	Short-term OJT
Physical therapist aides	46%	20	30	\$ 19,670	Short-term OJT
Occupational therapist aides	45%	0	10	\$ 20,710	Short-term OJT Associate's Degree
Physical therapist assistants	45%	20	30	\$ 33,870	Associate's Degree
Secondary school teachers, except special and vocational education	45%	10	10	\$ 44,830	Master's Degree

Source: Projections of the Bureau of Labor Statistics, November 2001

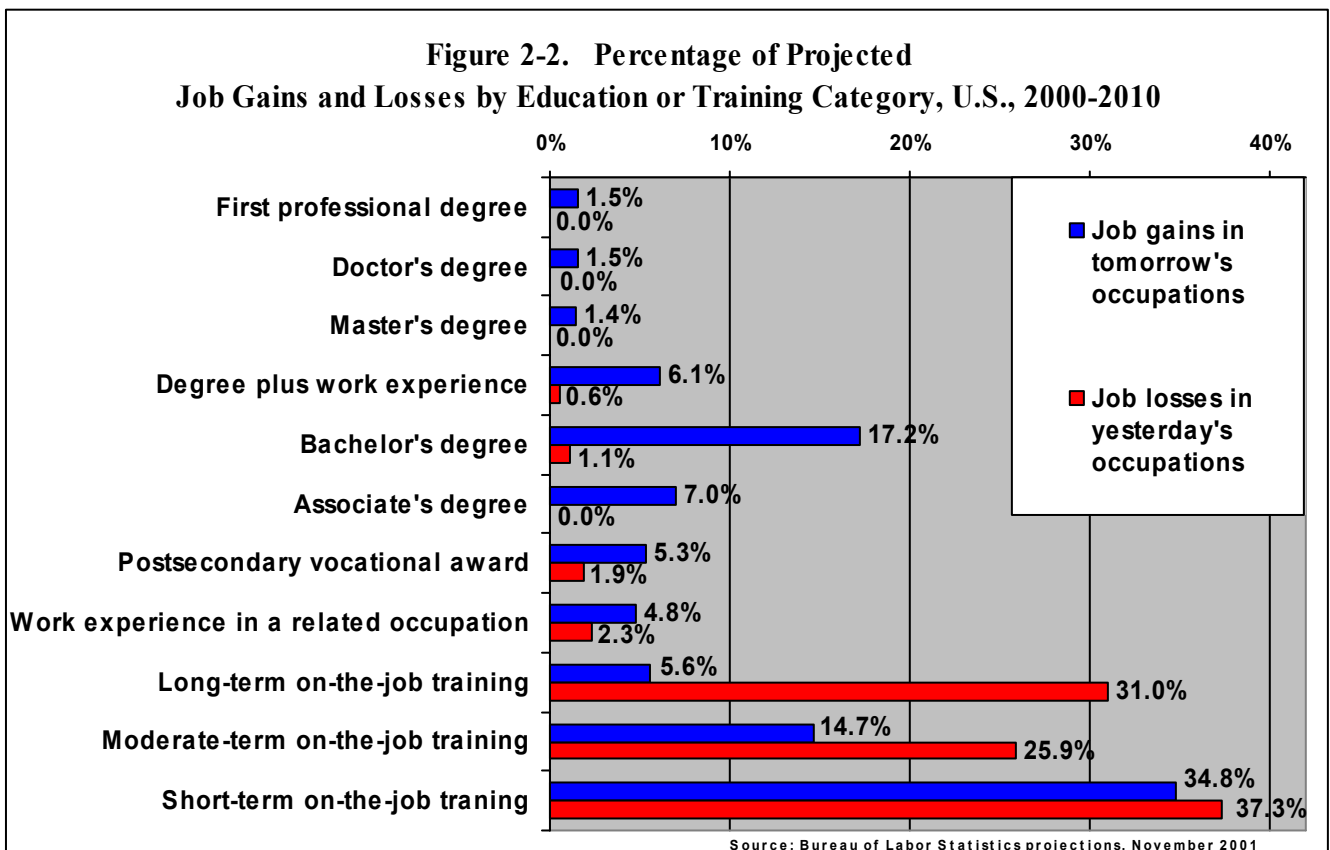
striking in that virtually all of these occupations are either in the information technology or health care fields of work. Another striking aspect of these rapidly growing occupations is that most of them require some kind of post-secondary education. Furthermore, the occupations typically requiring education beyond high school tend to pay much better than those that do not. *In short, this list of the very fastest growing occupations in the U.S. economy is replete with well-paying jobs requiring education and training beyond a high school diploma.*

Another very significant characteristic of many rapidly growing occupations is that they are new; they did not exist even in 1990. *The age of rapid technological innovation will bring many surprises, but of one thing we can be sure: many more new occupations requiring new kinds of education and training will emerge by 2010.*

The Increasing Importance of Education and Training

It is not just the most rapidly growing occupations that demand higher levels of education and skills. In November 2001, the BLS projected employment change during the decade 2000-2010 for 695 specific occupations, of which Table 2-1 provides information for twenty. Job growth was projected for 598 of those occupations; job stagnation or actual losses were projected for the remaining 93. As the table also shows, the BLS also provided indicators of the education or training considered typical for each occupation in categories that ranged from doctoral degrees to short-term OJT.

The education and training levels typical of those occupations in which employment is expected to grow (hereafter called “tomorrow’s jobs” or “tomorrow’s occupations”) differ dramatically from the levels typical of the occupations in which job losses are expected (hereafter called the “yesterday’s jobs”), as shown in Figure 2-2.



Of all jobs that stand to grow in the next decade (shown by the blue bars), 40% require some sort of post-secondary education. Jobs typically requiring a Bachelor's degree account for 17.2% of total job gains, or almost half (43%) of the share of tomorrow's jobs requiring post-secondary education.

In contrast to that, among yesterday's jobs, those requiring only OJT or work experience will account for more than 95% of job losses in the next decade.

The first conclusion to be drawn from Figure 2-2 is that tomorrow's jobs in the U.S. economy typically will require much more education and training than yesterday's jobs. Young Americans looking to careers in tomorrow's jobs in the knowledge economy will need the proper K-12 preparation and the requisite post-secondary education to fill these jobs.

Figure 2-2 makes a second important point: *Many tomorrow's jobs typically will not require higher education.* In fact, more than a third (34.8%) of all gains in tomorrow's jobs will require only short-term OJT. As a group, those requiring some kind of OJT are expected to account for 55% of total gains among tomorrow's jobs.

The fact that occupations requiring OJT bulk so largely among both tomorrow's and yesterday's occupations supports another, subtler point, which is this: because they will bear the brunt of both job losses and job gains, workers holding jobs in occupations typically requiring OJT will have both the necessity and the opportunity to re-train and re-tool themselves for new jobs in order to remain employed. That inevitably will raise the importance of job training to facilitate the flexibility and adaptability that workers must have in order to remain productive and employable.

The final conclusion emerging from Figure 2-2, therefore, is that the largest share of job growth expected in the U.S. economy in this decade will come in occupations where OJT is a primary means of developing the required

workplace qualification. Job training, therefore, is of inestimable importance for the proper development of America's workforce.

Replacement of Workers Leaving Some Key Occupations Will Pose Growing Challenges

Economic growth will not be the only source of job openings during the period 2000-2010. This decade will see a rising tide of retirements from the workforce as members of the Baby Boomer generation move into their 50s and 60s. Fresh supplies of workers also will be needed to replace workers who exit some occupations to enter other occupations. In fact, over three-fifths (62%) of total projected job openings in the U.S. economy during this decade will come about because of the need to replace workers who have switched occupations or left the workforce for one reason or another.

Table 2-2 pictures the top 20 occupations in terms of replacement needs. Unlike the top 20 growth occupations (Table 2-1), the majority of the top 20 replacement occupations pay relatively poorly and typically require only short-term OJT. Several of these occupations (e.g., waiters and waitresses) are "starter" occupations in which young people take their first jobs and then move on later to better-paying jobs that require more education and higher skills. Replacement of these workers mainly means replacing persons who are still in the workforce but who have moved on to better jobs in other occupations. There are, however, several very significant exceptions to that rosy picture. Consider these occupations:

- Registered nurses
- Postsecondary teachers
- Elementary school teachers
- Secondary school teachers

Each of these is a critically important occupation. Each typically requires advanced education. In each of them, the total number of job openings due to growth and replacement needs will come to a very large portion of those now employed. For example, the total number of

Table 2-2
Occupations with the Greatest Number of Job Openings Due to Replacement Needs,
United States, 2000-2010

<i>Occupation Title</i>	<i>2000-2010 Job Growth (pct.)</i>	<i>Job Openings Due to Growth (thous.)</i>	<i>Job Openings Due to Replacement Needs (thous.)</i>	<i>Median Annual Earnings</i>	<i>Education or Training Category</i>
Food preparation and serving workers, including fast food	27%	810	1,680	\$ 13,550	Short-term OJT
Retail salespersons	12%	510	1,560	\$ 16,670	Short-term OJT
Cashiers, except gaming	14%	470	1,510	\$ 14,460	Short-term OJT
Waiters and waitresses	18%	360	1,120	\$ 13,350	Short-term OJT
Laborers and freight, stock, and material movers, hand	14%	290	690	\$ 18,810	Short-term OJT
Stock clerks and order fillers	9%	140	600	\$ 18,210	Short-term OJT
Office clerks, general	16%	430	520	\$ 21,130	Short-term OJT
Registered nurses	26%	560	440	\$ 44,840	Associate's degree
Janitors and cleaners, except maids and housekeeping cleaners	14%	320	420	\$ 17,180	Short-term OJT
General and operations managers	15%	360	410	\$ 61,160	Degree plus work experience
Child care workers	11%	130	400	\$ 15,460	Short-term OJT
Sales representatives, wholesale and manufacturing, except technical and scientific products	6%	80	390	\$ 40,340	Moderate-term OJT
Bookkeeping, accounting, and auditing clerks	2%	40	380	\$ 25,670	Moderate-term OJT
Postsecondary teachers	24%	320	370	\$ 46,330	Doctor's degree
Maids and housekeeping cleaners	5%	80	360	\$ 15,410	Short-term OJT
Elementary school teachers, except special education	13%	200	350	\$ 39,700	Bachelor's degree
Counter attendants, cafeteria, food concession, and coffee shop	14%	60	330	\$ 13,970	Short-term OJT
Secretaries, except legal, medical, and executive	-1%	0	320	\$ 23,870	Moderate-term OJT
Security guards	35%	390	300	\$ 17,570	Short-term OJT
Secondary school teachers, except special and vocational education	19%	190	300	\$ 40,870	Bachelor's degree

Source: Projections of the Bureau of Labor Statistics, November 2001

newly trained registered nurses required will come to nearly half (46%) of the total number of nurses employed in 2000. For elementary school teachers, it is nearly as bad (36%), and for secondary school teachers it is worse (49%). For postsecondary teachers, the total is worse still (51%).

These numbers should serve as an early warning: recruiting and retaining enough properly educated and qualified persons to meet the nation's growing needs for nurses and teachers will present a mounting challenge during this decade.

Occupational Projections for Central Illinois

Three scenarios were sketched in Chapter 1. The first was a “dismal scenario.” The second was a “so-so” or “surprise free” scenario. And the third was a “winner” scenario wherein all “plays well in Peoria” and elsewhere in Central Illinois. All three of these scenarios were essentially scripts for *economic* development. But each obviously carries many *workforce implications*. To these we now turn.

Scenario Number One: Things Go Downhill

If this scenario were to come to pass, it would see a “hollowing out” of most of the skilled portion of Central Illinois’ workforce. Large numbers of professional and managerial workers would leave the area or would not be recruited to it in the first place. The best and the brightest of Central Illinois youth would leave the area never to return. Those who stayed would find themselves in modestly skilled and low-paying service sector and retail jobs that would grow both in absolute numbers and as a percentage of the workforce. As economic growth stagnated or reversed, total employment would shrink as well.

The model for the “downhill” scenario can be seen in the depressed areas of the Northeast and Appalachia—or even in the depressed small- and medium-sized towns of the agricultural Midwest—where the principle industry has dried up or departed and nothing has replaced it. It is not a pretty picture. It is a scenario to be avoided.

Scenario Number Two: Things Go On As They Are

Under this scenario, Central Illinois’ employment grows by 10.7% during the first decade of the 21st century, slightly less than that of Illinois and considerably less than that of the United States.

By 2010, employment in the goods-producing

industries is well below their 2000 levels. Agriculture has continued its historic downward drift and mining has virtually disappeared in the region. Manufacturing jobs have dropped to 16.8% of total employment in Central Illinois, down from 18.8% in 2000. Construction is the only goods-producing industry to show increased employment.

Jobs in services-producing industries now account for three-quarters of all Central Illinois employment. Services and Retail Trade have been the two big employment gainers during this decade. These two sectors account for 83% of job growth during the decade, with Services alone contributing 64% of new jobs in the area. Business services are the most rapidly growing of all the Services sub-sectors. Sparked by the rapid growth of the staffing industry, Business Services account for nearly a third of all service sector job growth and almost one fifth of all net employment growth in Central Illinois during the decade.

Health Services jobs grow by nearly 15% from 2000 to 2010, and account for 15% of the decade’s net job growth. By 2010, the Health Services are one of Central Illinois’ largest employers, now rivaling Durable Manufacturing in terms of jobs provided. With 9% of net new jobs, the Education sector is the third most important employer among the service industries even though the area’s schools have experienced great difficulty attracting and retaining qualified teachers.

The Job Mix Changes, Too

The occupational profile of employment in Central Illinois also continues to evolve under the assumptions of Scenario Number Two. Unfortunately, no detailed projections of occupational employment to the year 2010 have yet been developed for Illinois. To explore the shifting occupational profile, therefore, we must employ the projections made by the Illinois Department of Employment Security for the period 1998-2008. For that decade, the IDES projects that employment growth will

Table 2-3
Scenario Two: Things Go On As They Are
Employment by Major Industrial Group, Central Illinois,
2000 (estimate) and 2010 (projected)

<i>Industry Title</i>	<i>Employment (Jobs)</i>		<i>Change</i>	
	<i>Estimate 2000</i>	<i>Projected 2010</i>	<i>Amount</i>	<i>Percent</i>
Total, All Industries	187,956	206,363	18,407	9.8%
Agriculture, Forestry, and Fishing	7,700	6,986	-714	-9.3%
Mining	56	36	-20	-35.7%
Construction	8,596	9,700	1,104	12.8%
Manufacturing, Total	35,358	34,600	-758	-2.1%
Durable Goods Manufacturing	28,898	28,800	-98	-0.3%
Machinery, Except Electrical	20,587	20,750	163	0.8%
Nondurable Goods Manufacturing	6,000	5,800	-200	-3.3%
Trans., Communic., & Utilities	10,500	12,000	1,500	14.3%
Transportation	7,893	8,741	848	10.7%
Communications and Utilities	3,497	3,566	69	2.0%
Wholesale Trade	8,714	9,376	662	7.6%
Retail Trade	33,204	37,000	3,796	11.4%
Eating and Drinking Places	13,233	16,000	2,767	20.9%
Finance, Insurance, and Real Estate	8,079	8,665	586	7.3%
Services	65,000	78,000	13,000	20.0%
Miscellaneous Business Services	11,907	16,000	4,093	34.4%
Health Services	20,358	23,335	2,977	14.6%
Educational Services	11,000	12,870	1,870	17.0%
Government, Total	9,000	10,000	1,000	11.1%

Source: Estimated and projected by Workforce Associates, Inc. on the basis of data from 2008 projections and other data from IDES as modified by BLS projections of US employment 2000-2010 together with shift-share analysis of U.S. and Central Illinois data.

Table 2-4
Projected Employment Change by Major Occupational Groups,
Central Illinois, 1998-2008

	<i>Change, 1998-2008</i>		<i>Total Number of Job Openings</i>			
	<i>Number</i>	<i>Percent of Total</i>	<i>Number</i>	<i>Percent of Total</i>	<i>Due to Growth</i>	<i>Due to Replacements</i>
Total, All Occupations	23,822	100%	68,940	100%	35%	65%
Executive, Administrative, Managerial Occs	1,711	7%	3,940	6%	44%	56%
Professional Specialty Occupations	7,911	33%	14,990	22%	53%	47%
Marketing/Sales Occupations	3,167	13%	9,490	14%	33%	67%
Administrative Support, Clerical Occupations	1,799	8%	7,760	11%	23%	77%
Service Occupations	5,046	21%	15,210	22%	33%	67%
Agricultural, Forestry, Fishing	-145	-1%	1,730	3%	-	100%
Precision Production, Craft, & Repair Occs	1,329	6%	5,950	9%	22%	78%
Operators, Fabricators, & Laborers	3,004	13%	9,870	14%	30%	70%

Source: IDES projections.

provide 23,822 new jobs in Central Illinois. Because nearly two thirds of all job openings will arise from the need to replace workers leaving the workforce, the total number of job openings that will appear in the decade is three

times that number. One third (7,911) of new jobs in the area will come in the “Professional Specialty” occupations. That same group will supply 22% of *all* job openings in Central Illinois during the decade. Significantly, more

Table 2-5
The 30 Most Rapidly Growing Occupations in Central Illinois, 1998-2008

	<i>Change</i> <i>1998-2008</i>		<i>Total Number of Job Openings</i>			
	<i>Number</i>	<i>Percent of Total</i>	<i>Number</i>	<i>Percent of Total</i>	<i>Due to Growth</i>	<i>Due to Replacements</i>
Systems Analysts	1209	5.1%	1,320	0.3%	92%	8%
Cashiers	1144	4.8%	3,470	0.8%	33%	67%
General Managers & Top Execs	684	2.9%	1,520	0.3%	45%	55%
Retail Salespersons	659	2.8%	2,450	0.5%	27%	73%
Office Clerks, General	590	2.5%	1,720	0.4%	34%	66%
Waiters & Waitresses	545	2.3%	2,020	0.4%	27%	73%
Hand Packers & Packagers	533	2.2%	900	0.2%	59%	41%
Registered Nurses	477	2.0%	1,100	0.2%	44%	56%
Computer Support Specialists	473	2.0%	500	0.1%	94%	6%
Nursing						
Aides/Orderlies/Attendants	409	1.7%	770	0.2%	53%	47%
Teachers, Elementary School	378	1.6%	990	0.2%	38%	62%
Office/Admin Support						
Supvrs/Mgrs	377	1.6%	780	0.2%	49%	51%
Marketing/Sales Supervisors	330	1.4%	620	0.1%	53%	47%
Laborers,						
Landscaping/Groundskpg	321	1.3%	860	0.2%	37%	63%
Teachers, Secondary School	302	1.3%	680	0.1%	44%	56%
Food Preparation Workers	292	1.2%	1,560	0.3%	19%	81%
Social/Human Service						
Assistants	275	1.2%	410	0.1%	68%	32%
Reception & Information Clerks	267	1.1%	590	0.1%	44%	56%
Food Service & Lodging						
Managers	253	1.1%	450	0.1%	56%	44%
Welders & Cutters	244	1.0%	790	0.2%	30%	70%
Cooks, Restaurant	234	1.0%	480	0.1%	48%	52%
Teachers, Special Education	229	1.0%	280	0.1%	82%	18%
Numerical Control Mach Opers	189	0.8%	420	0.1%	45%	55%
Computer Engineers	173	0.7%	180	0.0%	94%	6%
Police Patrol Officers	171	0.7%	310	0.1%	55%	45%
Physicians and Surgeons	159	0.7%	280	0.1%	57%	43%
Guards	151	0.6%	340	0.1%	47%	53%
Adver/Mrkt/Promo/PR/Sales						
Mgrs	145	0.6%	240	0.1%	63%	38%
Teachers/Instructors,						
VocEd/Training	145	0.6%	220	0.0%	64%	36%
Machine Assemblers	140	0.6%	510	0.1%	27%	73%

Source: IDES projections.

than half (53%) of those openings will arise because of growth, while only 47% will be to replace workers who have left their occupations..

The “Professional Specialty” occupations are clearly the wave of Central Illinois’ employ-

ment future. In every other occupational group, the need to replace persons leaving the workforce or occupation accounts for more than half of total job openings. In the blue-collar occupations (i.e., in precision production, craft, and repair trades, and among operators, fabricators,

Table 2-6
The 30 Occupations With the Most Projected Job Openings in Central Illinois, 1998-2008

	<i>Change 1998-2008</i>		<i>Total Number of Job Openings</i>			
	<i>Number</i>	<i>Percent of Total</i>	<i>Number</i>	<i>Percent of Total</i>	<i>Due to Growth</i>	<i>Due to Replacements</i>
Cashiers	1,144	4.8%	3,470	5.0%	33%	67%
Retail Salespersons	659	2.8%	2,450	3.6%	27%	73%
Waiters & Waitresses	545	2.3%	2,020	2.9%	27%	73%
Food Prep/Service Wkrs, Fast Food	463	1.9%	1,820	2.6%	25%	75%
Office Clerks, General	590	2.5%	1,720	2.5%	34%	66%
Food Preparation Workers	292	1.2%	1,560	2.3%	19%	81%
General Managers & Top Execs	684	2.9%	1,520	2.2%	45%	55%
Systems Analysts	1,209	5.1%	1,320	1.9%	92%	8%
Janitors & Cleaners	448	1.9%	1,270	1.8%	35%	65%
Registered Nurses	477	2.0%	1,100	1.6%	44%	56%
Teachers, Elementary School	378	1.6%	990	1.4%	38%	62%
Truck Drivers, Heavy	499	2.1%	920	1.3%	54%	46%
Hand Packers & Packagers	533	2.2%	900	1.3%	59%	41%
Laborers, Landscaping	321	1.3%	860	1.2%	37%	63%
Counter Attendants, Lunchroom/Café	115	0.5%	850	1.2%	13%	87%
Welders & Cutters	244	1.0%	790	1.1%	30%	70%
Office/Admin Support Supvrs/Mgrs	377	1.6%	780	1.1%	49%	51%
Nursing Aides/Orderlies/Attendants	409	1.7%	770	1.1%	53%	47%
Helpers/Laborers/Movers, NEC	197	0.8%	720	1.0%	28%	72%
Teachers, Secondary School	302	1.3%	680	1.0%	44%	56%
Cooks, Fast Food	301	1.3%	600	0.9%	50%	50%
Reception & Information Clerks	267	1.1%	590	0.9%	44%	56%
Health Professionals/Paraprofs., NEC	346	1.5%	580	0.8%	59%	41%
Carpenters	177	0.7%	560	0.8%	32%	68%
First Line Sups: Mechanics/Repairers	54	0.2%	560	0.8%	9%	91%
Home Health Aides	418	1.8%	530	0.8%	79%	21%
Truck Drivers, Light	280	1.2%	520	0.8%	54%	46%
Machine Assemblers	140	0.6%	510	0.7%	27%	73%
Computer Support Specialists	473	2.0%	500	0.7%	94%	6%
Telemarketers/Door-to-Door	310	1.3%	480	0.7%	65%	35%

Source: IDES projections.

and laborers), as well as in administrative support occupations, replacements comprise 70% or more of job openings. In agriculture, forestry, and fishing, employment growth is entirely absent; replacements will constitute 100% of all job openings for the decade.

The 30 most rapidly growing occupations in this scenario are displayed in Table 2-5.³ Many of the entries are similar to those in Table 2-1, which pertains to the entire national economy. They tend to fall into the following categories:

- Occupations typical of the knowledge economy, such as systems analysts, computer support specialists, etc. Not only are these occupations growing rapidly, the larger share of their job openings are due to growth rather than replacements;
- Traditional but critical occupations, such as elementary teachers and health care personnel, where demand for services is increasing rapidly. Rapid growth of health care professionals is probable even without the additional demand to be generated by the unfolding of the Regional Bioscience Strategy for Central Illinois (See Scenario Three);
- Modestly paid service and retail workers.

The list of the 30 occupations with the greatest number of job openings projected for the period 1998-2008 is shown in Table 2-6. Several of the occupations on this list were also on the list of rapidly growing occupations shown in Table 2-5 (e.g., systems analysts, registered nurses, etc.). Many more of the occupations in Table 2-6 are low-paying jobs characterized by high retirement levels, heavy worker turnover, and high percentages of workers leaving the occupations altogether.

Education Requirements for Central Illinois' Workforce Rise

The 1998-2008 IDES projections for Central Illinois show 248 growing occupations ("tomorrow's") and 98 shrinking occupations ("yesterday's"). As is the case with the BLS

projections for the United States, tomorrow's jobs differ sharply from yesterday's jobs in terms of the education and skills normally required.

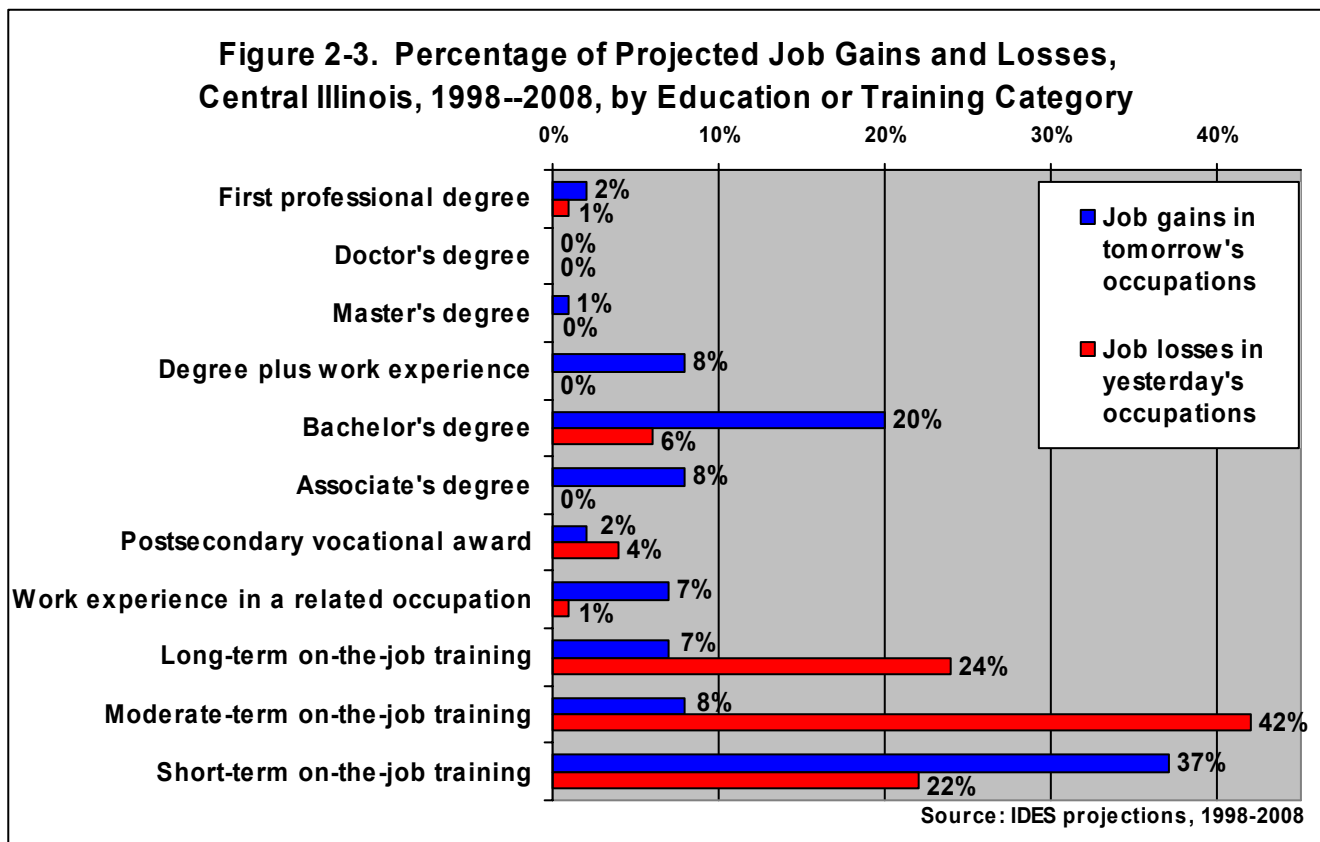
As Figure 2-3 shows, 39% of job gains among tomorrow's occupations (shown by the blue bars) require some sort of post-secondary education. Among that group, jobs typically requiring a Bachelor's degree account for 20% of all job gains.

In contrast to that, among yesterday's occupations, those requiring only OJT or work experience will account for more than 94% of job losses.

The projections for Central Illinois mirror those for the United States: Tomorrow's occupations, both nationally and regionally, will require much more education and training than yesterday's occupations. *In order to be able to fill these jobs and to grow into them as their careers progress, young people in Central Illinois will find the proper K-12 preparation and the requisite post-secondary education a plain necessity.*

The outlook for Central Illinois shown in Figure 2-3 differs from that for the United States in two respects.

- First, the share of tomorrow's occupations typically requiring bachelor's degrees is greater (20% vs. 17.2%). This suggests that a more serious need to re-educate and retrain college educated workers for new careers may exist in Central Illinois than in the nation as a whole. The same is true, to a lesser degree, for workers holding postsecondary vocational awards.
- Second, the share of yesterday's occupations requiring only short-term OJT is smaller in Central Illinois than in the nation (22% vs. 37%). This suggests that Central Illinois is not shedding entry level jobs at the same rate as the nation. The good news of that, of course, is that entry level jobs remain in existence for persons



who need them. The not-so-good news is the occupational profile locally is not evolving as rapidly up the skill and compensation ladder as in the nation as a whole.

Locally, as well as nationally, occupations requiring OJT will bear the brunt of both job losses and job gains. This means that workers in OJT-requiring occupations will need retraining on an ongoing basis. Three noteworthy points emerge from this fact:

- *More than anyone else, workers with modest formal education must be able to adapt and grow to meet the changing requirements of the workplace.*
- *The formal education that these workers bring to the workplace, however modest it may be, must be good enough to prepare these workers to grow and adapt to changing workplace circumstances that affect them more than other groups in the workforce. If it is not sufficient, then these workers are left in a hopeless position.*

- *Effective training and retraining becomes critically important to the employability and earning ability of workers who fill these “churning” occupations that typically do not require a great deal of formal education.*

The Skill Requirements of Central Illinois' Jobs Are Also Rising Rapidly

In a general sense, this comes as no surprise to people who pay attention to such matters. Fortunately, by blending the IDES projections with the skills standards of individual occupations, it is possible to offer very concrete evidence of how rapidly skills requirements are escalating. First, however, it is necessary to develop a basic understanding of *skill standards*.

Skill Standards. A skill standard defines what a worker needs to know to perform a certain task. For example, a skill standard would describe what a webmaster would need to know in order to design and maintain a website.

Within a skill standard, skills and performance objectives are defined, as are the task's key activities and the level of knowledge required to perform the work successfully.

Skill standards can become important components in a successful workforce development system because they align the skills that are taught to employees in the education/training system with the skills that businesses seek in employees. They make it possible to:

- Improve the communication between employers and educators by clearly defining the skills required by various jobs;
- Develop innovative, targeted, and effective instruction, as well as classes and programs based on employer needs;
- Improve quality, productivity, and overall customer satisfaction by hiring employees who meet or exceed objectively established standards;
- Assess employee/job seeker qualifications based on the standards;
- Decrease the time spent during the hiring process by matching employee skills with job requirements;
- Design training programs or select training providers that will provide training well suited for job needs.

In addition, standards help students and job seekers to:

Accurately compare their existing skills against those required for career advancement, lateral moves, or career changes;

- Understand what employers expect them to know for specific jobs;
- Earn certification for selected skills by achieving measurable, established proficiency standards;
- Expand their career opportunities.

One of the most widely used sets of skill standards is ACT's WorkKeys[®].⁴ WorkKeys[®] is a way to bridge the gap between levels of job skills needed in the workplace and the actual skill levels of prospective workers. WorkKeys[®] provides students and workers with reliable information about their workplace skill levels and the skill levels required for jobs, enabling them to make better career and educational decisions. The WorkKeys[®] system currently measures eight workplace skills. A distinct scoring scale describes each of these skills; the scale ranges from 1 (the lowest level, denoting virtually no skill) to 7 (the highest level, denoting a very high degree of skill). The skill assessment areas are:

- Applied mathematics
- Applied technology
- Listening
- Locating information
- Observation
- Reading for information
- Teamwork
- Writing

Figure 2-4 compares the average WorkKeys[®] scores in all eight assessment areas for (i) the occupations that IDES projects to grow during the period 1998-2008 ("tomorrow's occupations"), shown in blue, and (ii) the occupations projected to lose jobs during the same period ("yesterday's occupations"), shown in burgundy on the graph.⁵ The results are very revealing and may be summarized as follows:

- *Required skill levels are higher for tomorrow's occupations than for yesterday's, sometimes startlingly so.*
- *The largest differences are recorded for the "soft" skills. Teamwork, Listening, and Observation skill requirements are much higher for tomorrow's jobs than for*

The WorkKeys® System

The complete WorkKeys® system comprises two complementary parts:

Job profiles, which are measurements of the peculiar combination of levels for the eight WorkKeys® skills that are judged necessary to properly do a specific job. Trained job profilers work with experts who know certain jobs or occupations to develop a set of WorkKeys® scores for each job. A set of such scores is called a “job profile.” A very large database of more than 6,148 job profiles has been developed and is now available from ACT (formerly American College Testing).

Worker or student assessments which are scores on each of eight criteria that are determined by testing (assessing) individual workers or students. In the spring of 2001, as part of the Prairie State Assessment Test, the entire cohort of Illinois high school juniors was given the WorkKeys® test in two of the eight assessment areas, Applied Mathematics and Reading for Information.

The results of these tests are discussed in Chapter 4 of the present study. Illinois Central College, together with numerous other community colleges in Illinois offers WorkKeys® job profiling and student or worker assessment services.

WorkKeys® is a registered trademark of ACT.

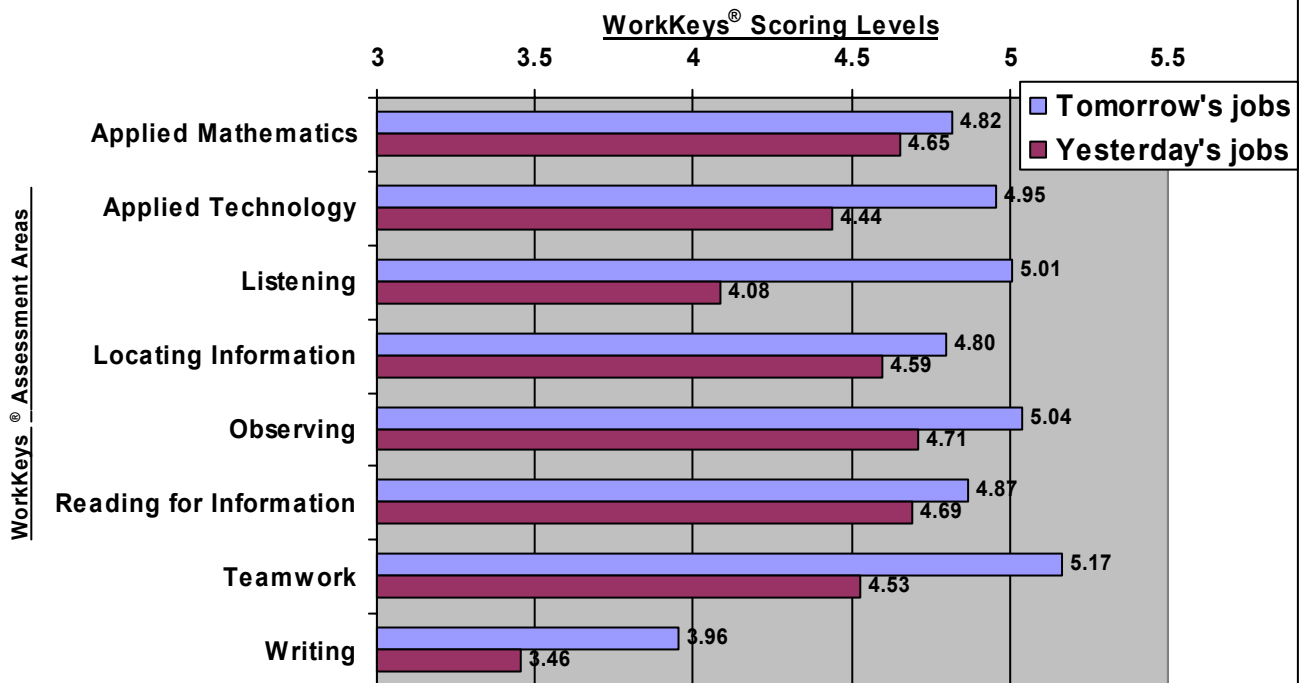
yesterday's. In fact, for tomorrow's jobs, these three “soft” skills record the highest levels of all the eight assessment areas.

- *Reading, Writing, and Mathematics skills requirements are higher for tomorrow's*

jobs, but the difference is not as great as for the “soft” skills.

- *Applied Technology skills are higher for tomorrow's jobs and stand just below the “soft” skills in their levels of importance.*

Figure 2-4
Skills Requirements for Tomorrow's Jobs vs. Yesterday's Jobs
 in Central Illinois, (Scenario #2, Using WorkKeys® Scores & IDES Projections)



Source: Workforce Associates, Inc., based on IDES and ACT data.

Scenario Number Three: The Dawning of a Bright, New Era

The third scenario differs from the second notably in its assumption that the Central Illinois Regional Biosciences Strategy “takes off” in a very significant way. For that reason, it is important to focus particular attention on the workforce implications of such a takeoff.

The study entitled “A Regional Bioscience Strategy for Central Illinois” cited four “best practice” regions. All are homes to existing bioscience industries and merit consideration for their relative strengths in the health care occupations and professions. Table 2-7 shows the importance of selected key health care professions in Central Illinois as well as in the “best practice” regions cited in the Battelle Study, and in Rochester, Minnesota, which is the home of the Mayo Clinic. The purpose of this display is similar to that of the Location Quotient analysis presented in Chapter 1. As employed here, it sheds light on the relative strengths of the various regions in the health care professions.

All six of the regions displayed in Table 2-5 show considerable strengths in these nine health care occupations. Not surprisingly, however, the “gold standard” of the group is set by Rochester, MN, with its astonishing LQ of 13.36 for the category Physicians and Surgeons. Nurses and miscellaneous health professionals also show very high LQs in Rochester.

Although it cannot compare to Rochester, the Peoria-Pekin Metropolitan Statistical Area (MSA) compares quite well with the four other reference areas. Indeed, the Peoria-Pekin LQ exceeds 1.2 (our standard for “significant” comparative strength) in all nine health care occupations. In addition to Rochester, three of the other areas have higher LQs for Physicians and Surgeons but only one has a higher LQ for Registered Nurses. Central Illinois clearly has a strong comparative base upon which to build.

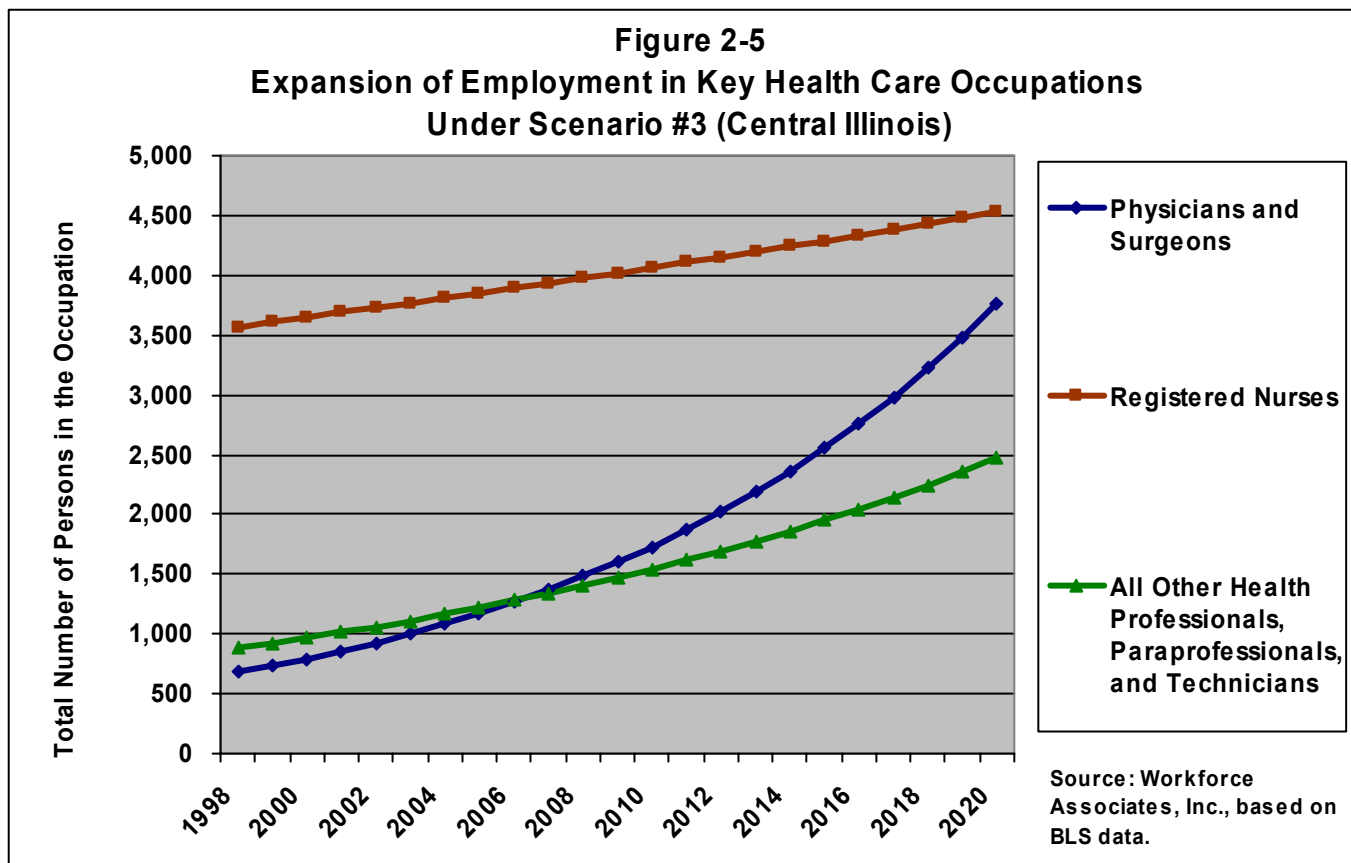
A naive comparison of Central Illinois’ LQs for the health care occupations with those of Rochester is inappropriate. Central Illinois has a strong employment base in engineering and other occupations prominent in the manufactur-

Table 2-7
The Relative Strengths of Six Regions in Selected Health Care Professions
(as revealed by Location Quotient Analysis)

Blue Means LQ > 1	Rochester,	Peoria-	Worcester,	Birmingham,	Baltimore,	Roanoke,
	MN MSA	Pekin, IL MSA	MA-CT PMSA	AL MSA	MD PMSA	VA MSA
OCCUPATION Compared to the United States						
Physicians and Surgeons	13.36	1.21	1.43	1.11	1.62	1.82
Registered Nurses	3.94	1.55	1.96	1.34	1.33	1.54
Licensed Practical Nurses	2.17	1.26	1.31	1.48	0.81	1.70
Pharmacists	1.56	1.78	1.10	1.23	1.11	1.25
Pharmacy Technicians and Aides	1.19	2.17	1.26	0.84	1.83	1.16
Medical and Clinical Laboratory Technicians	N/A	1.32	0.93	1.66	1.77	1.21
Medical Records Technicians	2.07	2.46	1.53	1.47	0.81	0.57
Radiologic Technologists	N/A	1.29	1.21	1.43	1.04	1.87
All Other Health Professionals, Paraprofessionals, and Technicians	9.48	1.69	0.93	1.94	1.29	1.08

Interpreting this table: A Location Quotient (LQ) greater than 1 for a particular occupation means that the indicated region employs a higher percentage of the regional workforce than the same occupation does in the entire United States workforce. The greater the LQ, the stronger the area's strength in a particular occupation or profession.

Source: Bureau of Labor Statistics 1998 OES database.



ing sector, and such a greater diversification of employment among industrial sectors automatically lowers the relative share of the health care occupations. Although it is exceptionally strong in the health care field, Rochester's economy is much less diversified than Central Illinois'. It is not reasonable or desirable, therefore, for Central Illinois to aspire to Rochester's extremely high concentrations in the health care occupations. Nonetheless, if the Regional Bioscience Strategy for Central Illinois is to be realized, then this area must aspire to much higher levels of employment for doctors, nurses, and assorted health care professionals,

paraprofessionals, and technicians than it now has. Just how great must the growth be?

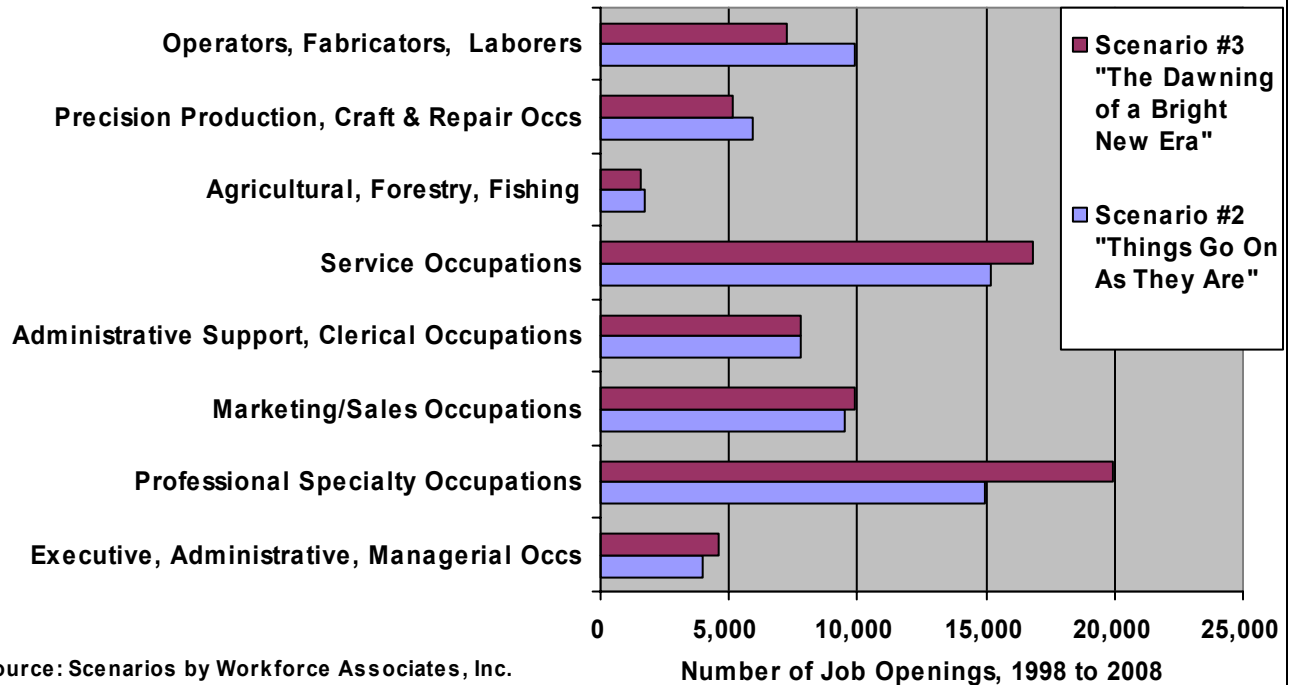
Suppose, for the purposes of this scenario, Central Illinois were to gradually approach *half* of Rochester's 1998 LQs for the key health care professions **by the year 2020**. Figure 2-5 shows three of the growth paths implied by such an expansion. In the mid-term future, that is, by 2008, it would mean at least doubling the number of physicians and surgeons now working in the Peoria MSA, adding nearly 700 more of them. It would also mean adding more than 300 registered nurses, and more than 400

The Rise of the "Knowledge Technologist"

"This new knowledge economy will rely heavily on knowledge workers. At present, this term is widely used to describe people with considerable theoretical knowledge and learning: doctors, lawyers, teachers, accountants, chemical engineers. But the most striking growth will be in "knowledge technologists": computer technicians, software designers, analysts in clinical labs, manufacturing technologists, paralegals. These people are as much manual workers as they are knowledge workers; in fact, they usually spend far more time working with their hands than with their brains. But their manual work is based on a substantial amount of theoretical knowledge which can be acquired only through formal education, not through an apprenticeship."

Peter Drucker, "The Next Society: A Survey of the Near Future," *The Economist*, November 3rd 2001, p. 4

Figure 2-6
Total Number of Job Openings Between 1998 and 2008 in Central Illinois Under Scenarios #2 and #3, by Major Occupational Category



“other” health professionals and technicians. Interestingly, the Peoria MSA already has higher LQs than does Rochester for pharmacists, pharmacist’s assistants and medical records technicians. This implies that the Peoria MSA has no need for additional workers in these occupations in order to match Rochester’s level of concentration.

Scenario Three (“The Dawning of a Bright New Era”) implies the need to build up the health care and related bioscience sectors of the Central Illinois economy much more aggressively than envisioned in Scenario Two (“Things Go On As They Are”). In particular, there will be a need to recruit and retain many more physicians and surgeons. Even aspiring to reach just half of Rochester’s present concentration of physicians and surgeons by the year 2020, this region needs more than 1,500 doctors versus approximately 700 at present and 922 suggested by Scenario Two (and projected by IDES for 2008). Still, it will take more than just more doctors to make Scenario

Three happen. Just as vital will be increased numbers of nurses, pharmacists, and the variety of other occupations that the BLS lumps together in the category of “All Other Health Professionals, Paraprofessionals and Technicians.” These are among the “knowledge technologists” to which management guru Peter Drucker refers in his article, “The Next Society: A Survey of the Near Future,” quoted in the box on the preceding page.

Scenario Three implies more rapid growth of many other professional and “knowledge technologist” occupations. The **Center for Advanced Manufacturing**, sketched at the end of Chapter One, would require and attract an impressive concentration of engineers, technicians, and information technology professionals to Central Illinois. World-class manufacturing companies would site more of their design and training activities in the area. In short, Central Illinois would become a Mecca for knowledge economy brainpower and expertise.

Realization of Scenario Three would see Central Illinois' total employment growth beating that of Scenario Two by 6% or nearly 4,000 additional jobs by the year 2008. It would also significantly alter the occupational profile of those jobs. Figure 2-6 compares total job openings in the two scenarios by major occupational category.

Scenario Three, which sees Central Illinois wholeheartedly participating in the growth of America's knowledge economy, creates a need for many more workers in the professional specialty occupations and in several of the service occupations than does Scenario Two. To a lesser extent, more marketing and managerial workers are also needed. On the other hand, fewer Central Illinoisans find jobs as laborers or in other lower-paying occupations.

The skills and knowledge required by the Central Illinois workforce under Scenario Three are another notch higher than under the previous scenario. The share of well educated and skilled workers in the total workforce would be greater in this scenario. The considerable differences in skills required by "tomorrow's jobs" versus "yesterday's jobs" which were discussed in Scenario Two (and displayed in Figure 2-4) would be even greater under Scenario Three.

Summing Up

It goes without saying that Scenario One should be avoided at all costs. Scenario Three is preferable to Scenario Two but making it happen will be more of a "stretch." The differences between these latter two are primarily ones of degree. Both of them, the third scenario more than the second, see Central Illinois participating in the nation's movement toward a knowledge economy. Both scenarios shout loudly that a workforce that supports and makes possible a 21st century economy is one that differs very significantly from one that was appropriate to the economy of the last century.

To thrive—or even to survive—in the 21st century workplace, every worker in Central Illinois will need a set of personal qualities and

attitudes, basic tools, and thinking skills.⁶

- Personal qualities and attitudes:
 - ⇒ Integrity and honesty;
 - ⇒ Personal responsibility and self discipline;
 - ⇒ Sociability, including understanding of others, friendliness, empathy, and team-work skills;
 - ⇒ Curiosity – the desire to understand and learn;
 - ⇒ Flexibility and adaptability – a positive attitude toward change;
 - ⇒ Self-motivation, initiative, and self-management.
- Basic tools:
 - ⇒ Communication skills, including language proficiency (at least in English and, desirably, in Spanish or other foreign languages), reading, writing, and speaking;
 - ⇒ Quantitative skills – mastery of arithmetic and a sufficiently solid foundation to learn more mathematics as may be required by work and additional study.
- Thinking skills:
 - ⇒ Knowing how to learn – the ability to apply what one already knows to the task of learning what one does not;
 - ⇒ Information search skills – the ability to determine what information is required for a particular task, to locate that information, and to use it appropriately;
 - ⇒ Problem solving skills – the ability to diagnose a problem, determine causal linkages, and break big problems down into smaller, solvable parts;
 - ⇒ Decision making skills – the ability to conceptualize objectives, identify constraints, elaborate alternative courses of action, and choose well from the set of available options;

- ⇒ Pattern recognition skills – the ability to discern commonalities, differences, and connections among seemingly disparate phenomena, and to build coherent mental models of their interrelationships;
- ⇒ Critical skills – the ability to see possibilities for improvement;
- ⇒ Creative skills – the ability to think “outside the box,” to find new and better ways to approach problems and situations.

These attitudes, tools and skills comprise the foundation upon which Central Illinois 21st century workforce must be built.

Needed: Enhanced Abilities to Learn

"The world is changing so fast that the concept of schools teaching people what they need to know is no longer viable. We're moving into a time when people need to know how to learn things they weren't taught in school."

Seymour Papert, MIT Media Laboratory; *New York Times*, August 10, 2000

Chapter 3: Central Illinois' Workforce in the 21st Century

This chapter examines Central Illinois' workforce as it is now and may be in the future. It poses two main questions. The first is, "Will there be enough workers in Central Illinois to sustain the area's economic development?" The second question is, "Will they be the right kind of workers with the skills and knowledge required for the 21st century economy?"

The chapter starts by exploring the demographic trends that are operating at the global, national, state, and local levels. From there, we move on to examine the implications of those trends for the workforce at the national and local levels. The future prospects for workforce growth in Central Illinois receive special emphasis. Later in the chapter, the focus turns from the quantitative to the qualitative side of Central Illinois' workforce, as illuminated by comparative educational attainment data and employers' perceptions of employee deficiencies. The chapter concludes with a review and a list of some challenges for workforce development.

Demographic Change

The French mathematician and philosopher Auguste Comte said, "Demography is destiny." There is surely more to destiny than that, but when it comes to workforce issues, demography is among the key determinants. In Central Illinois, as in the nation and the world, demographic trends present important opportunities and challenges for workforce development.

Unbalanced Global Population and Workforce Growth

Fundamental demographic changes will occur at the global level during the early 21st century. The most important of these pertains to the distribution of population growth among the nations and regions of the world. Between 2000 and 2015, the world's population is slated to increase by more than one billion people.¹ The prime working age population (hereafter considered 16 to 64 years of age) will see an increase in size of about 23%, or 900 million people.

What is most remarkable about global population and workforce growth in the early 21st century is that it will come almost exclusively outside of the countries that were already economically

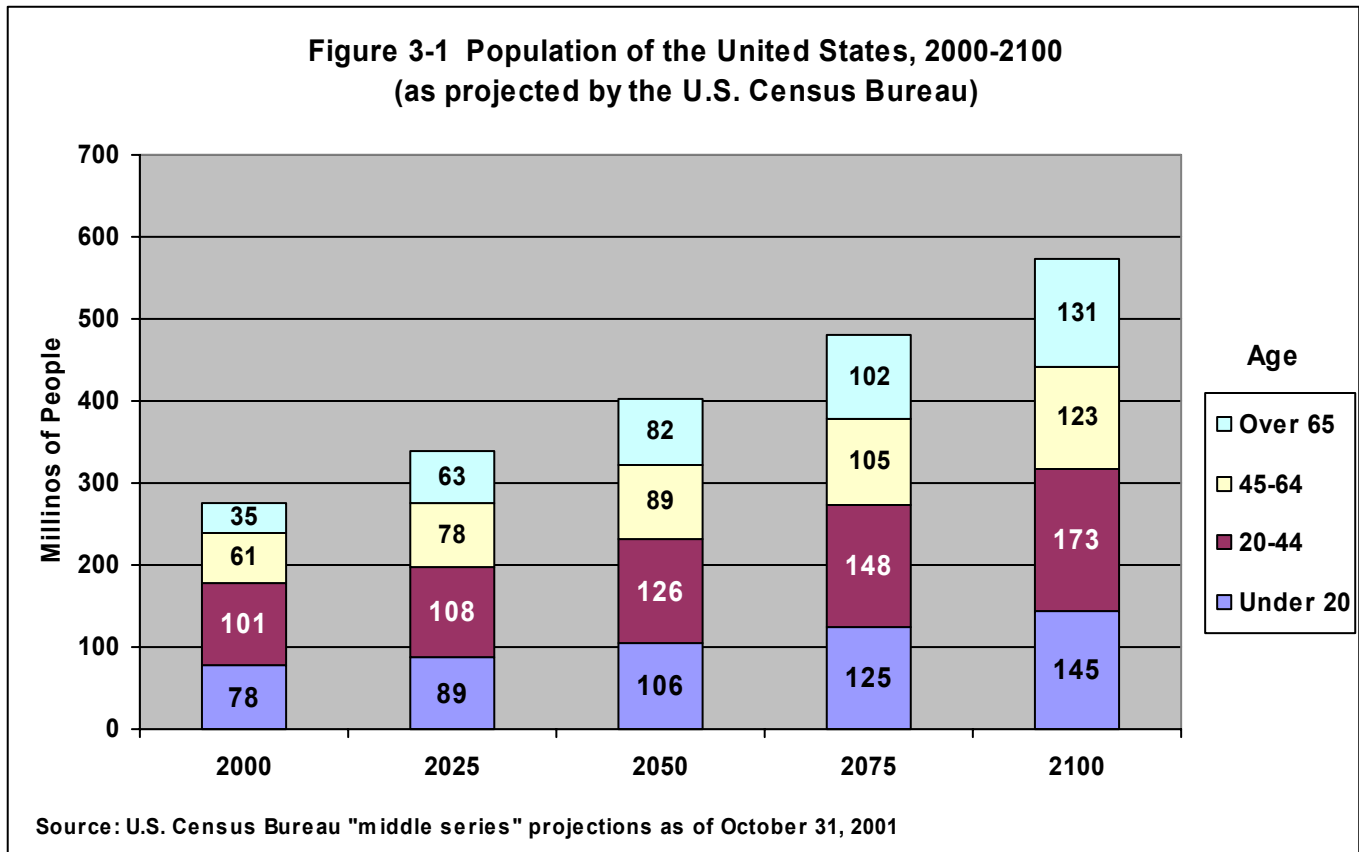
developed at the beginning of the century. Indeed, over 74% of the growth in the world's working age population will come in what the World Bank defines as "low income" countries. Another 24% will come in the "middle income" countries. Only 1.3% of that increase will come in the "high income" countries of North America, Western Europe, Japan, and Oceania. Even in North America, the growth of Mexico's working age population from 2000-2015 will equal that of the United States and Canada combined.

Why is this unbalanced global workforce growth important for Central Illinois? Its significance comes primarily by way of its impact on the location of the world's manufacturing industries. Consider China, for example. In that one "low income" nation alone, the working age population is projected to grow by more than 136 million persons. This growth is nearly as much as the *entire size* of the U.S. workforce in 2001 (roughly 142 million persons). The specific implications of this for manufacturing in the United States and Central Illinois were discussed in the section in Chapter One on globalization.

Suffice it to say here that the pre-

The Chinese symbol for "Crisis" combines the symbols for "Danger" and "Opportunity."





dominance of population and workforce growth outside the developed countries (including the United States) poses both dangers and opportunities for manufacturers and other businesses in Central Illinois. The dangers stem from the stiffening competition that foreign operations will pose for companies, communities, and workers in Central Illinois. The opportunities will arise as more potential customers in developing nations find themselves with the purchasing power to buy imported goods and services.

Workforce Aging, Diversification, and Migration in the U.S.

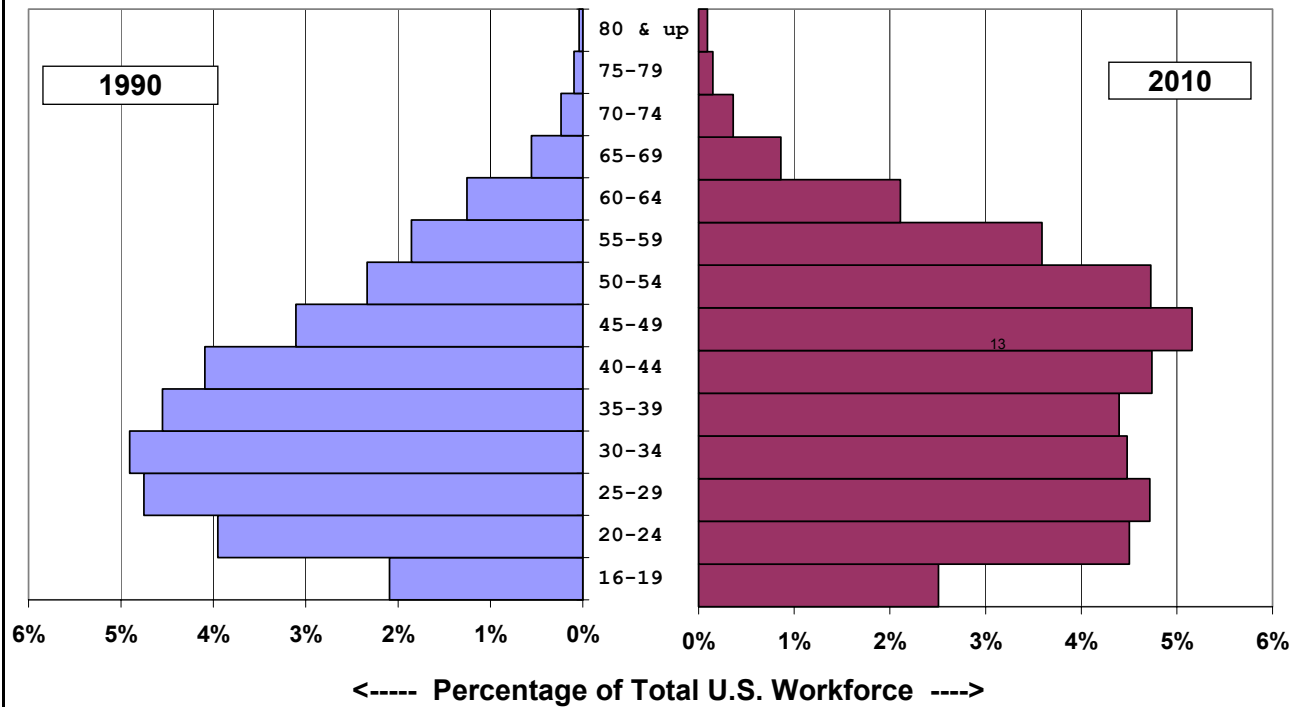
Population growth in the United States will continue throughout the 21st century, as will workforce growth, though both will carry on at rates much below those of the late 20th century. Even so, the fact that this nation's population and workforce will grow at all distinguishes it from the European Union and Japan, where both populations and workforces will stagnate or even decline.

Undoubtedly the most significant American demographic event of the early 21st century will be the gradual aging of the population as the Baby Boomer generation moves into its fifties and sixties. This gradual aging process is expected to continue throughout the entire century (see Figure 3-1). Of course, as the population ages, so must the workforce (Figure 3-2). In 1990, the age group 30-34 was the largest 5-year age group in the workforce. By 2010, that distinction will belong to the 45-49 year-old group.

One significant aspect of the overall aging of the workforce will be a drop in the number of workers in their thirties. That decline will be most pronounced among white, non-Hispanic workers, who will lose 3.4 million workers aged 30-39 (Figure 3-3). Asian and Hispanic workers will take up some of the slack, but not enough to compensate for such a huge drop.

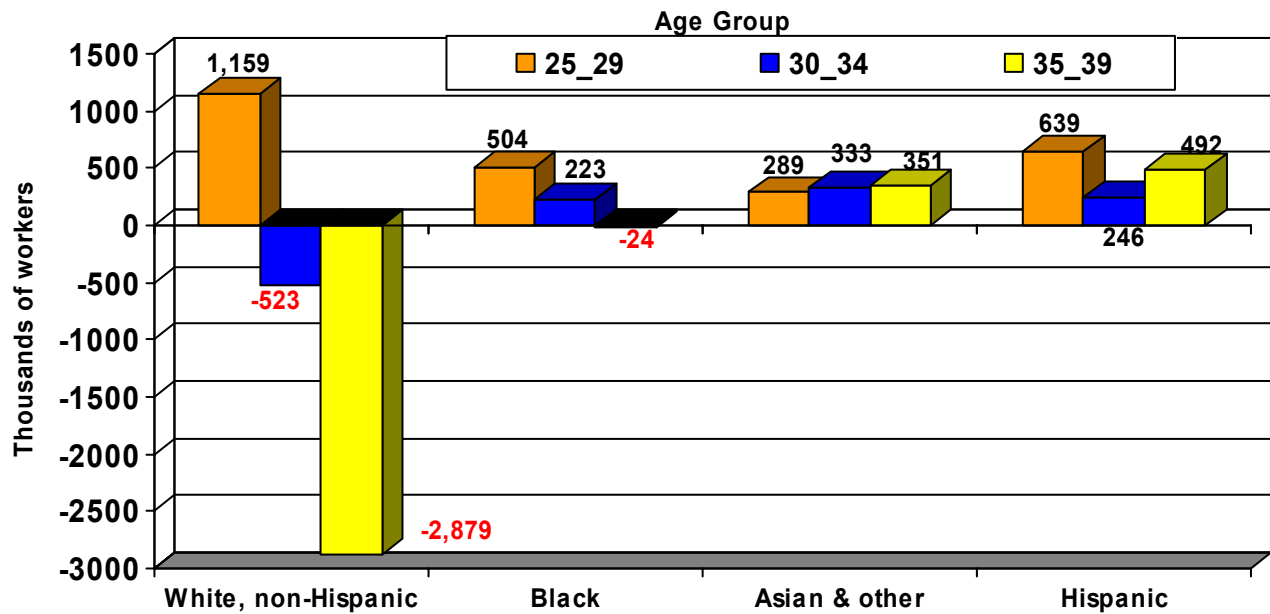
Women will account for 58% of the net new entrants into the U.S. workforce between 2000 and 2010 (Figure 3-4). White, non-Hispanics

Figure 3-2
The Changing Age Structure of the U.S. Workforce
1990 and 2010 Compared
Percentage of Total U.S. Workforce by 5-year Age Groups



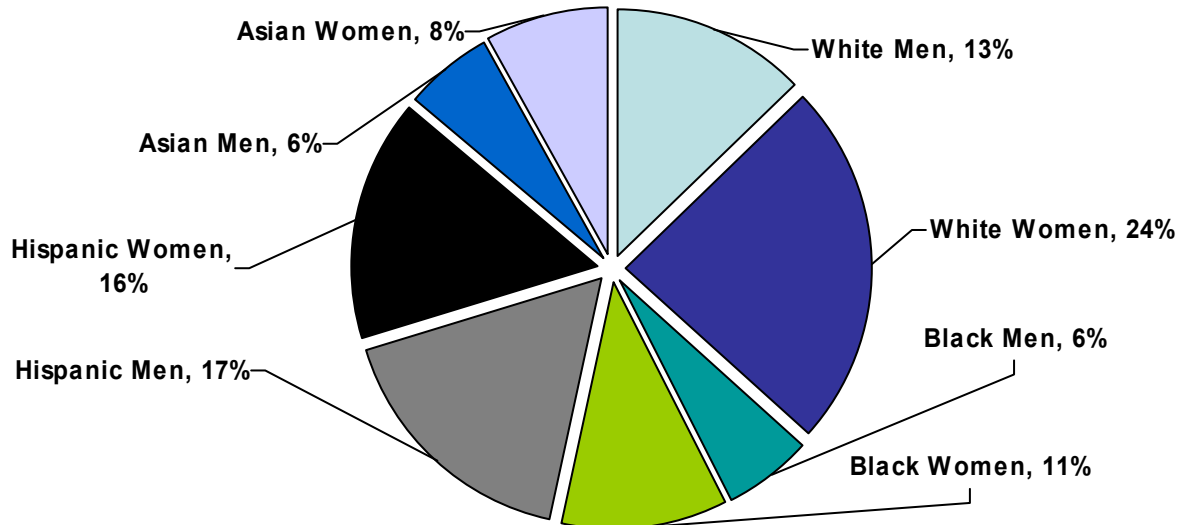
----- Percentage of Total U.S. Workforce ----->

Figure 3-3
Changes in the U.S. Workforce,
2000-2010 by Age Group and Ethnicity



Source: Bureau of Labor Statistics, November 2001

Figure 3-4
Projected Net New Entrants into the U.S. Workforce,
by Gender and Ethnicity
2000-2010



“Net new entrants” for a particular group means the number of that group who enter the workforce from 2000 to 2010 minus all those of that group who leave it in the period.

Source: BLS, Nov. 2001

of both genders will contribute only 37%, while “minorities” will constitute the rest.

By 2010, the ethnic profile of the American workforce will differ substantially from that of 2000 or, even more so, of 1990 (Figure 3-5).

The rapidly changing age, gender, and ethnic composition of the nation’s workforce obviously signifies much greater diversity in the 21st century workforce. Two important points follow:

- Employers accustomed to recruiting and employing young, white, non-Hispanic males will confront a rapidly shrinking pool of potential workers. Diversity will move beyond a moral and legal obligation to become a requisite for business survival.
- The average educational and skills level of the ethnic groups that will contribute the largest share of net new entrants into America’s workforce historically have been below the national average. Alas,

that is still the case both nationally and in Central Illinois. If the nation and this region are to have a workforce qualified for a high-tech 21st century economy, it is imperative that the educational and skills levels of its minority workers be dramatically improved. This applies to the incumbent workforce and, with even more force, to those newly entering the workforce from high schools and colleges.

Still another important aspect of demographic change in America is the *regional shift of the nation’s population from its Northeastern and Midwestern regions to the Southern and Western regions*. Figure 3-6 shows the ten states that added the greatest number of people between the census of 1990 and that of 2000. New York and Illinois are the only Northeastern or Midwestern states in this group. The other eight of these states, all of them in the South or West, accounted for 54% of the nation’s total population growth in the period 1990 to 2000. According to projections of the U.S. Census Bureau, those same eight states

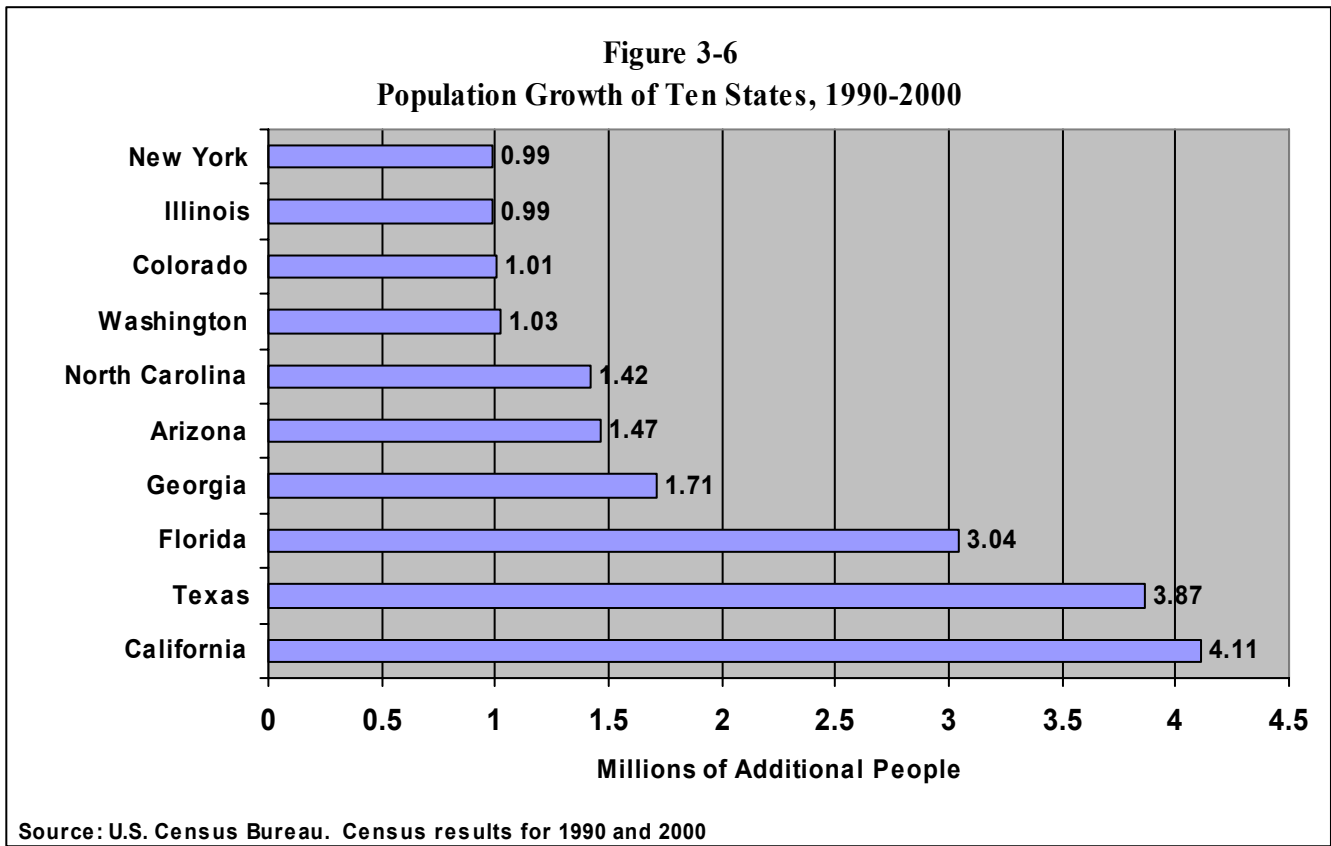
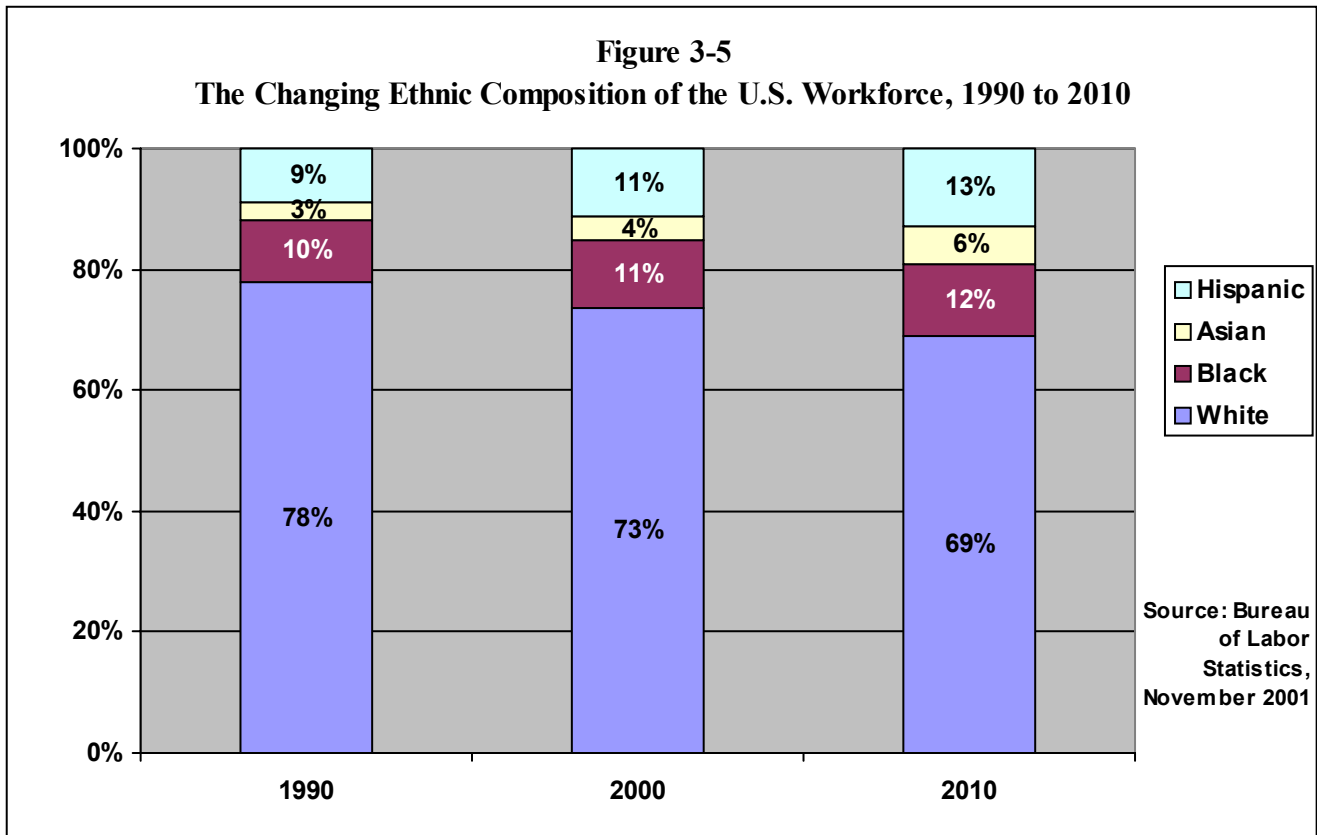
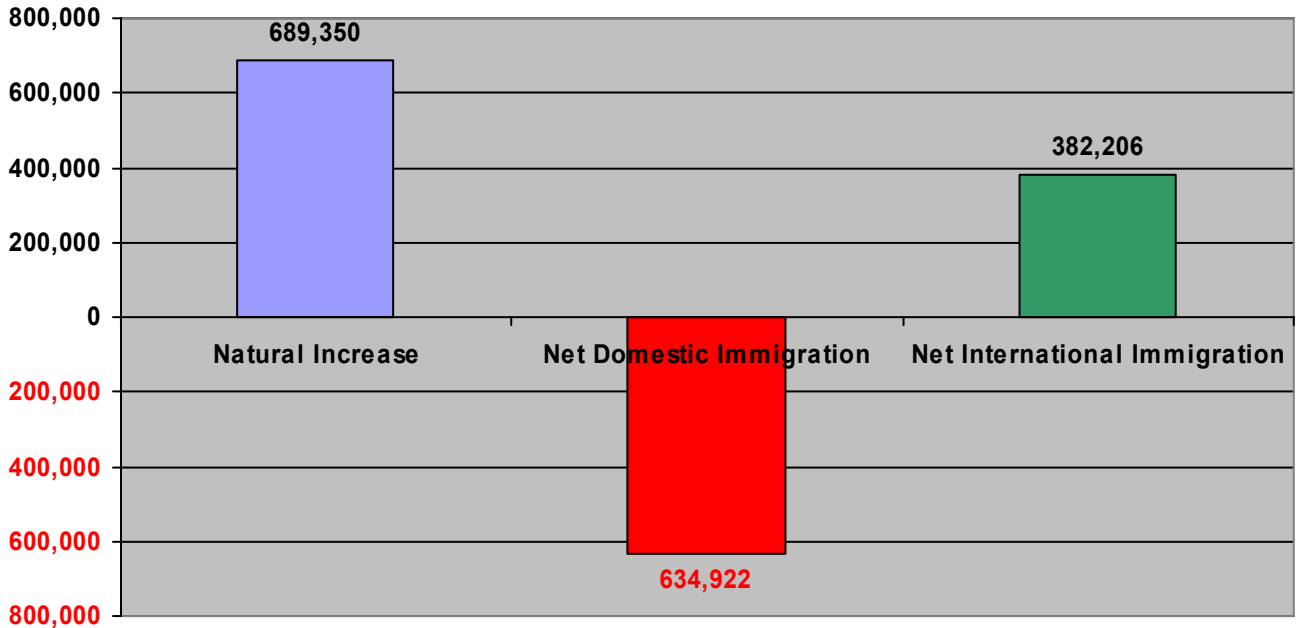
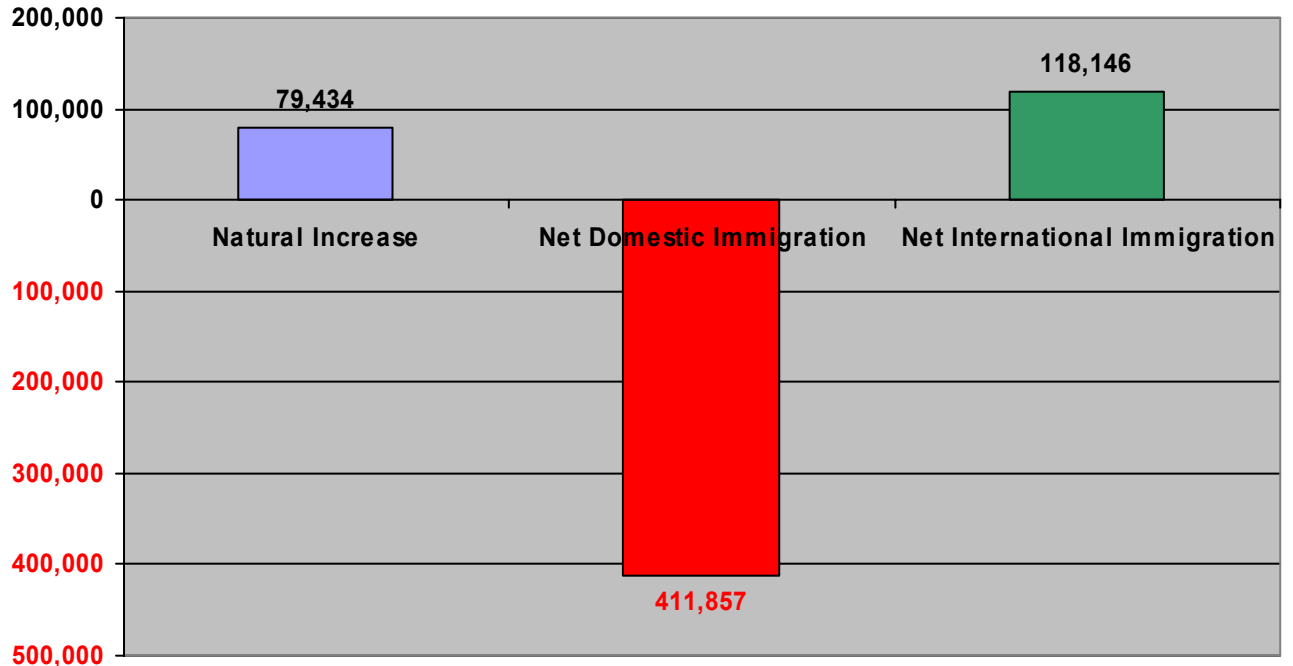


Figure 3-7
Components of Total Population Change,
State of Illinois, 2000-2010 (Projected)



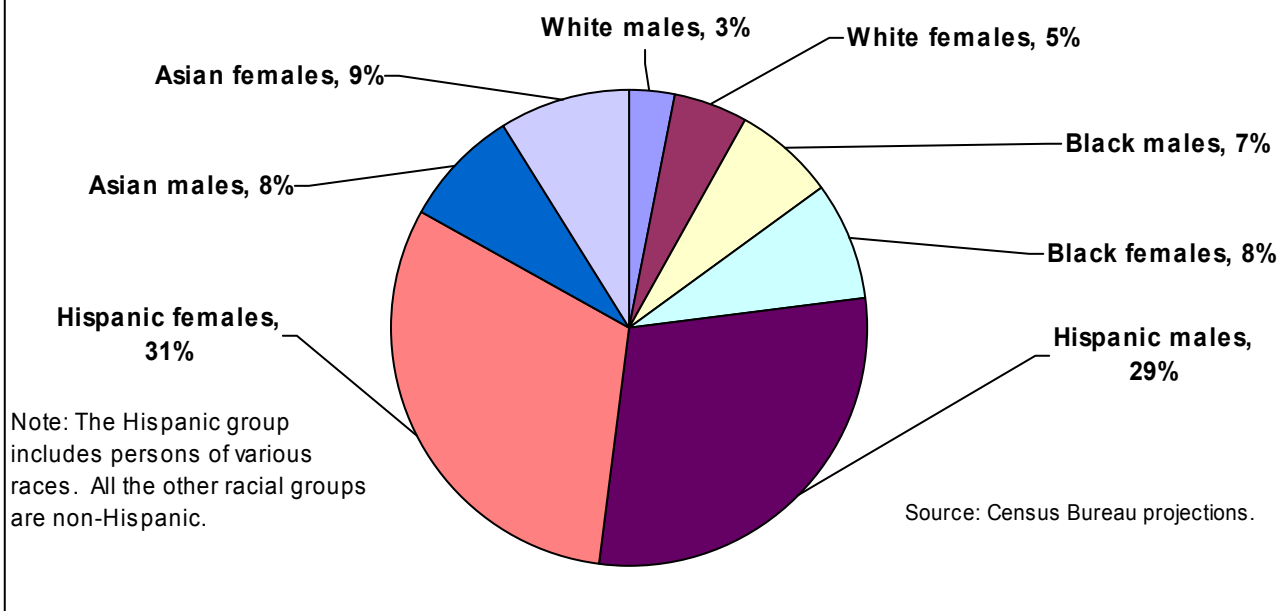
Source: U.S. Census Bureau projections.

Figure 3-8
Components of White, Non-Hispanic Population Change,
State of Illinois, 2000-2010 (Projected)



Source: U.S. Census Bureau projections.

Figure 3-9
The Percentage of Growth of Illinois' Working Age
Population (ages 16-64), 2000-2010, by Gender and Ethnicity



will contribute 61% of the nation's population growth between 2000 and 2015.

The population of Illinois, as in other Mid-western states, is growing very slowly. Census Bureau projections indicate that slow population growth in the Midwest will continue for the indefinite future. During the decade 2000-2010, Illinois's population is slated to grow by slightly over 3.9% which is less than half the national average for the same period.

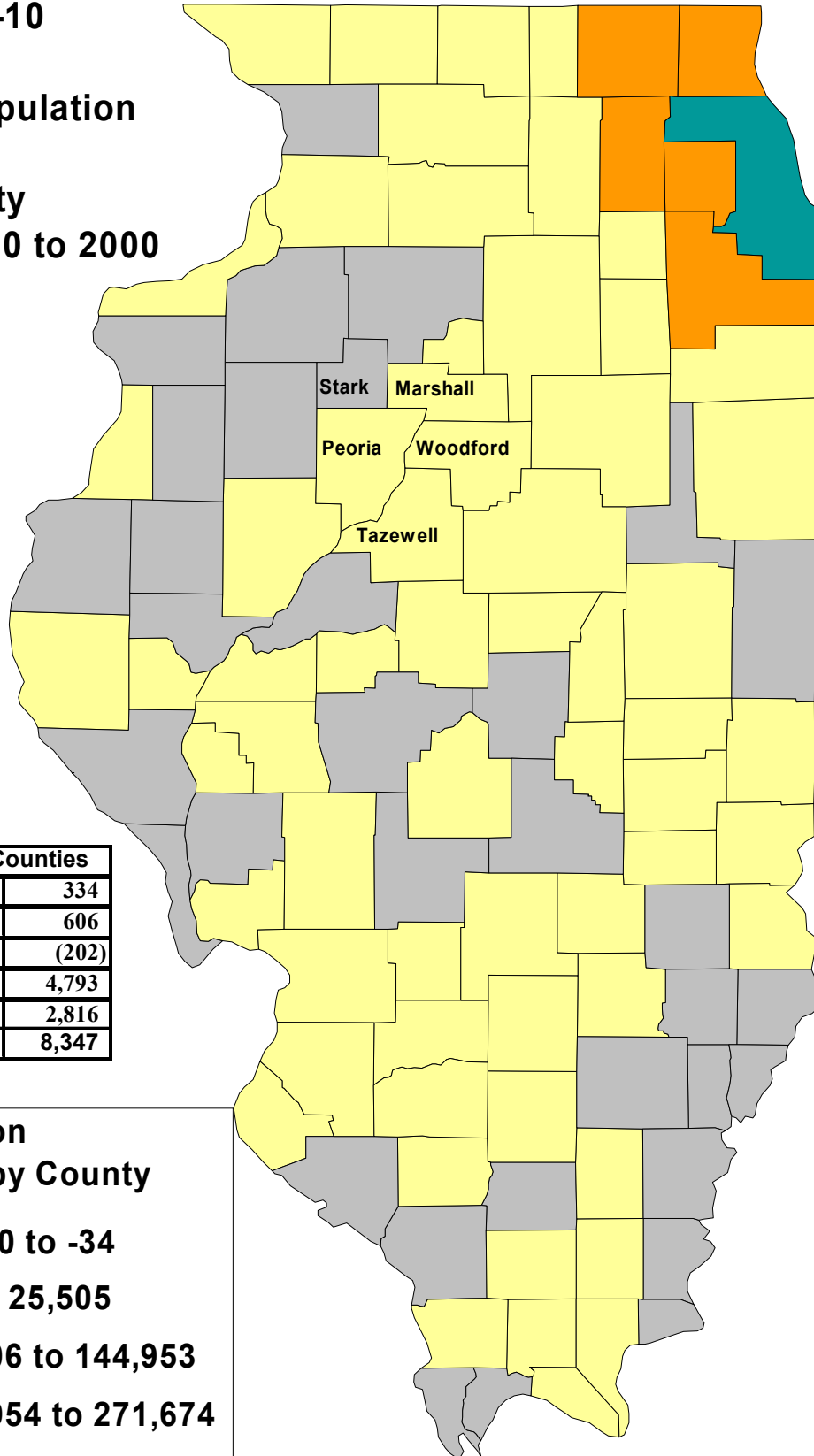
A major cause of Illinois' slow population growth is its heavy domestic out-migration. For the present decade, the Census Bureau projects 634,922 more Illinoisans will move from Illinois to other states than will arrive from them (Figure 3-7). That large outflow will be nearly double the flow of foreigners into the state (382,206). Most (411,857 or 65%) of that exodus will consist of white non-Hispanic Illinoisans (Figure 3-8). At the same time, white non-Hispanics will account for only 12% of the state's natural increase and 31% of its net international immigration. This will result in a net drop in Illinois' white, non-Hispanic population

of about 214,000 during the present decade.

The combined effect of these demographic changes in the state of Illinois will be a decided change in the ethnic composition of the state's workforce. The growth in the state's working age population during this present decade will be overwhelmingly of Hispanic ethnic origin (Figure 3-9). According to the most recent Census Bureau projections, fully half of the growth in Illinois' population in the age groups 16 to 64 will be among the state's Hispanic population.

Although 92% of the growth of the Illinois working age population during the present decade will be "minority" (i.e., something other than white and non-Hispanic), the total composition of that population will not change so dramatically. By 2010, the share of white non-Hispanics in the state's working age population will decline to 69% from 72% in 2000. The non-Hispanic African-American and Asian shares will remain steady at 14% and 4% respectively. The gain comes in the Hispanic

Figure 3-10
Illinois
Total Population
Change
by County
from 1990 to 2000



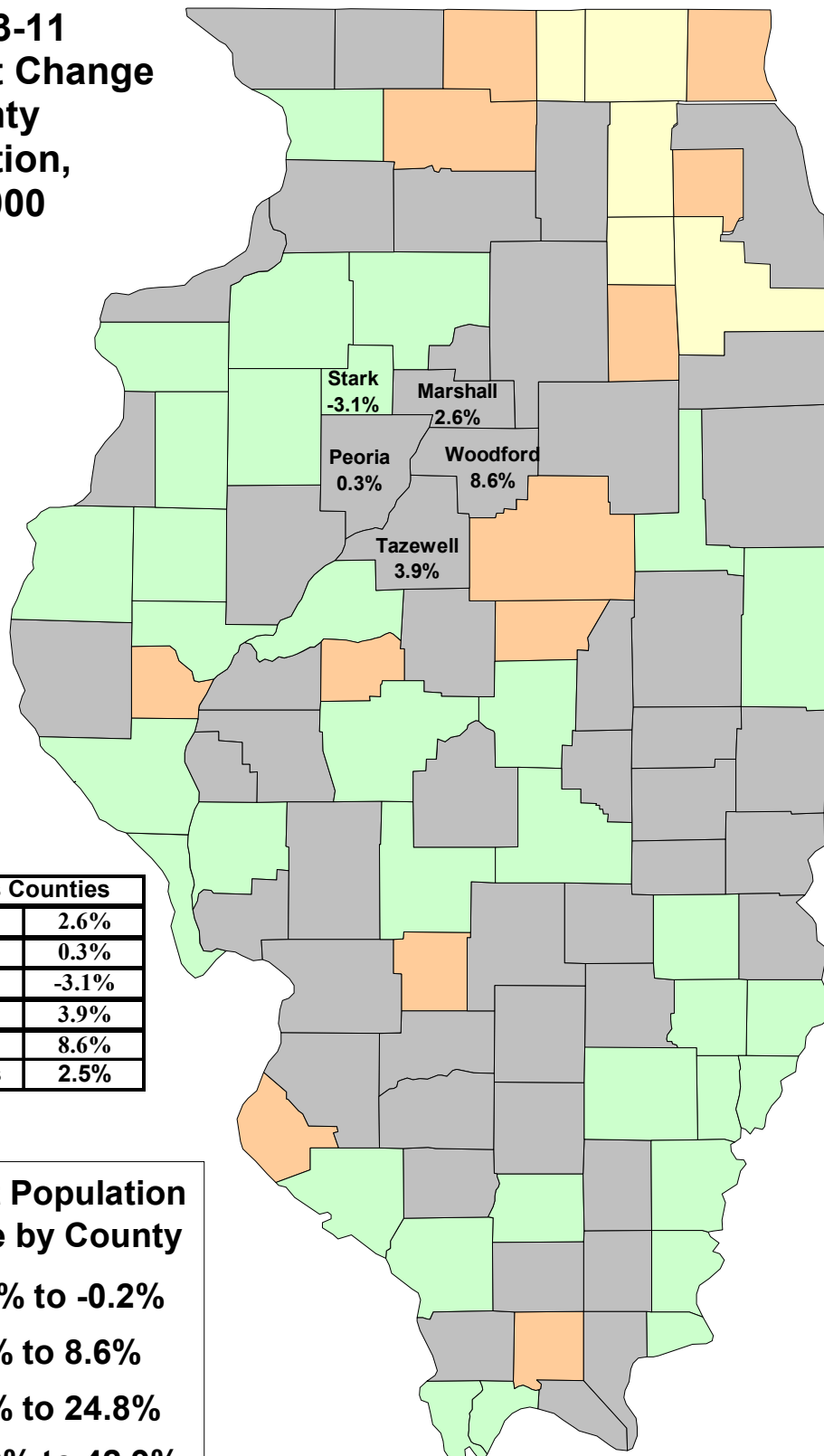
Central Illinois Counties	
Marshall	334
Peoria	606
Stark	(202)
Tazewell	4,793
Woodford	2,816
Central Illinois	8,347

Population Change by County

- 6,770 to -34
- 40 to 25,505
- 25,506 to 144,953
- 144,954 to 271,674

Sources: Illinois Department of Commerce and Community Affairs and the U.S. Census Bureau.

**Figure 3-11
Percent Change
in County
Population,
1990-2000**



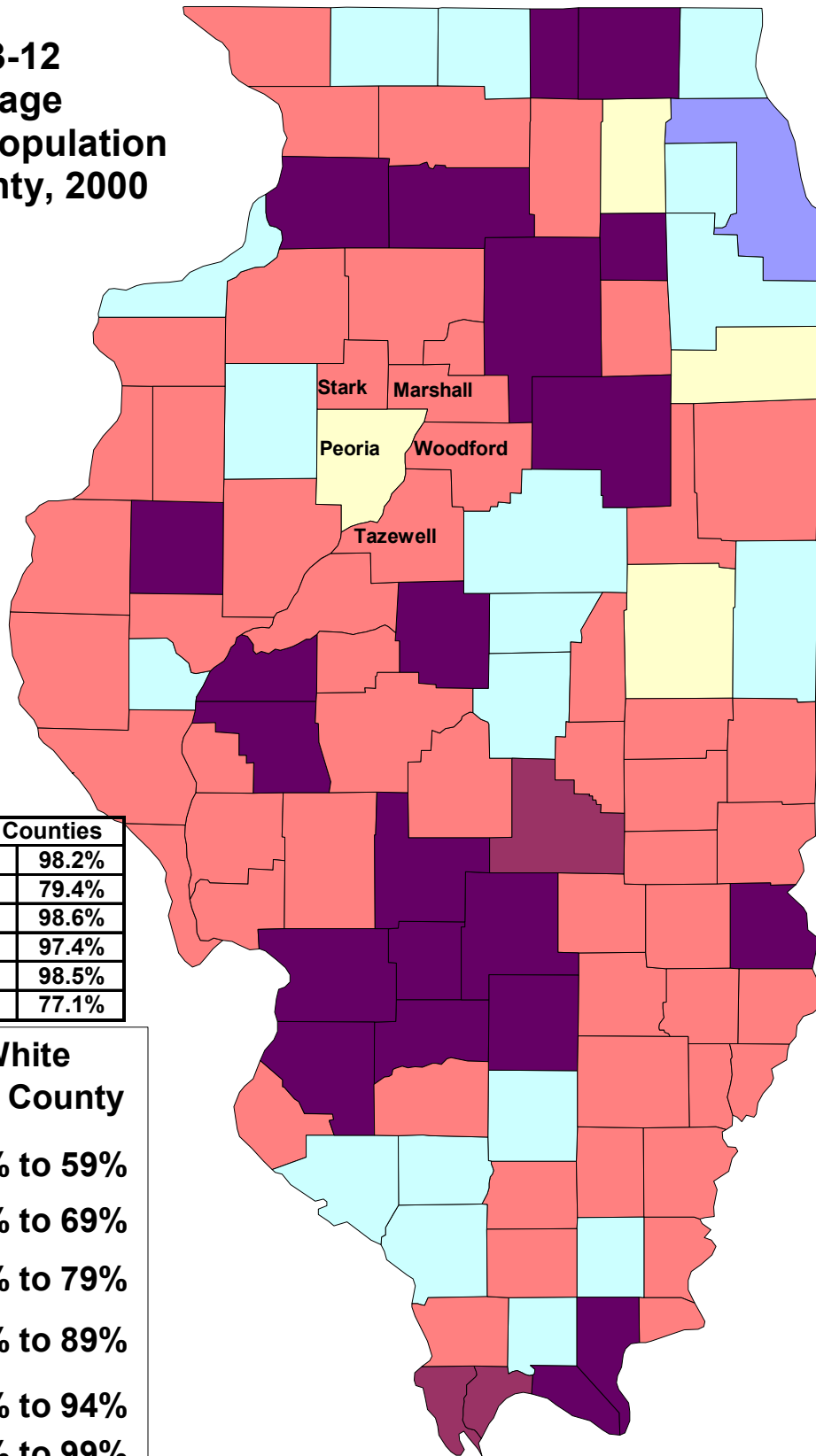
Central Illinois Counties	
Marshall	2.6%
Peoria	0.3%
Stark	-3.1%
Tazewell	3.9%
Woodford	8.6%
Central Illinois	2.5%

Percent Population Change by County

- 9.7% to -0.2%
- 0.3% to 8.6%
- 8.7% to 24.8%
- 24.9% to 42.9%

Sources: Illinois Department of Commerce and Community Affairs and the U.S. Census Bureau.

**Figure 3-12
Percentage
White Population
by County, 2000**



Central Illinois Counties	
Marshall	98.2%
Peoria	79.4%
Stark	98.6%
Tazewell	97.4%
Woodford	98.5%
Central Illinois	77.1%

**Percent White
Illinois by County**

- 50% to 59%
- 60% to 69%
- 70% to 79%
- 80% to 89%
- 90% to 94%
- 95% to 99%

Sources: Illinois Department of Commerce and Community Affairs and the U.S. Census Bureau.

Figure 3-13
Population Change in Central Illinois and Neighboring Counties,
1900 to 2000

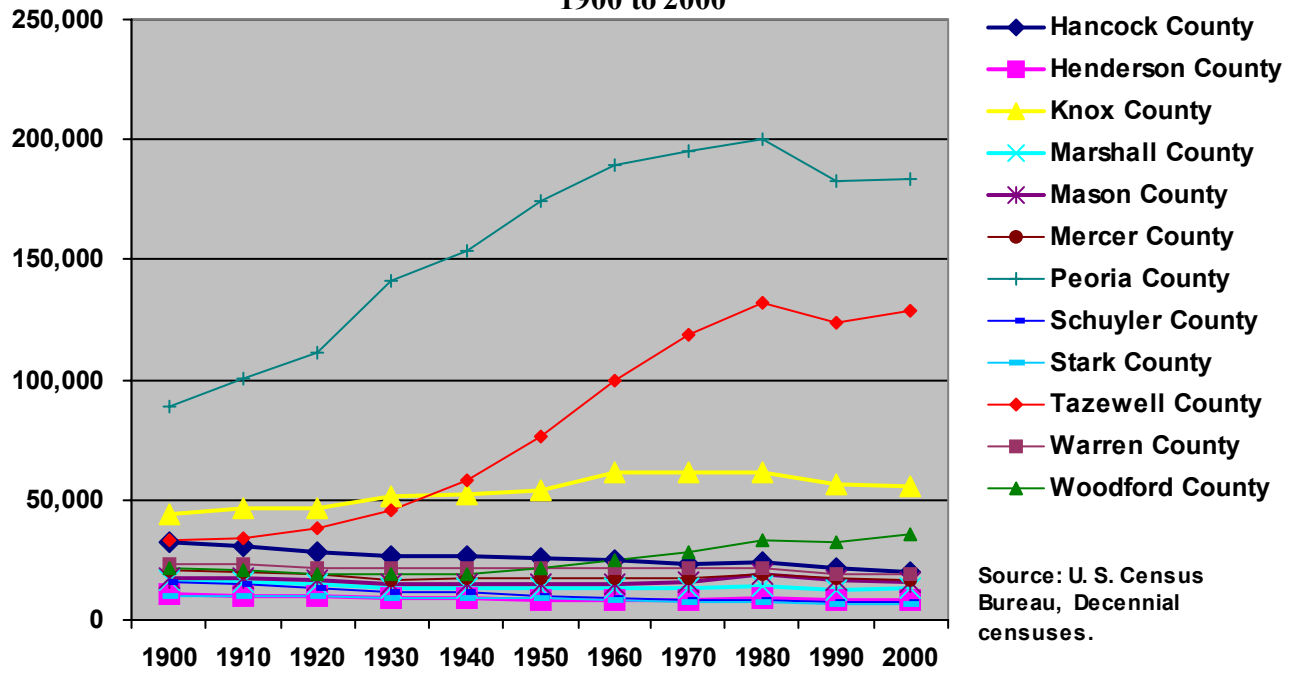
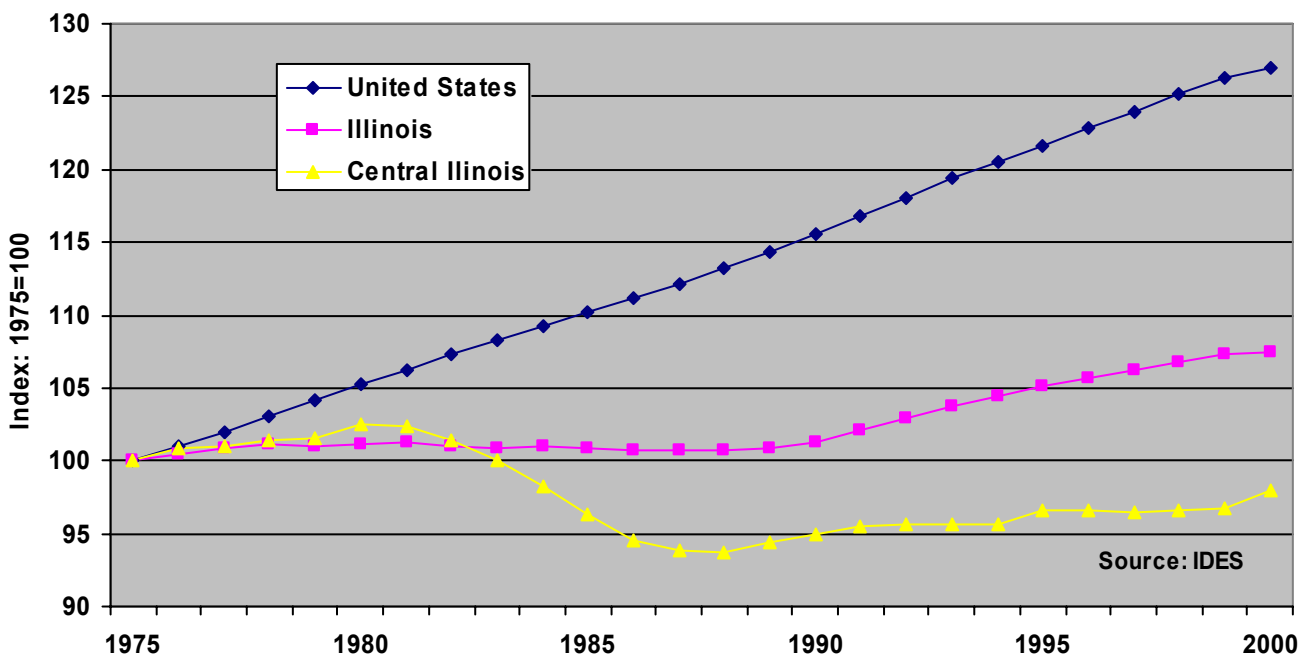


Figure 3-14
Index of Population Change, U.S., Illinois, and Central Illinois,
1975-2000



share, which will rise from 10% to 13% of the age group 16 to 64.

Another significant aspect of Illinois population change during the decade 1990-2000 was its lopsidedness (Figures 3-10 and 3-11). More than 90% of the net increase in the state's population during the decade came in ten contiguous counties in the extreme north-eastern part of the state.² These counties together notched a population increase of more than 893,000 persons.

Not surprisingly, the slowest growth comes in those counties where the bulk of the state's non-Hispanic, white population is concentrated (Figures 3-11 and 3-12).

McLean County, the eastern neighbor of the five-county area of Central Illinois, was the only county not in the Chicago area to make the top ten Illinois counties in terms of population gain for the decade.

The five-county area of Central Illinois recorded a gain of 8,347 people during the decade. All of the five counties gained population

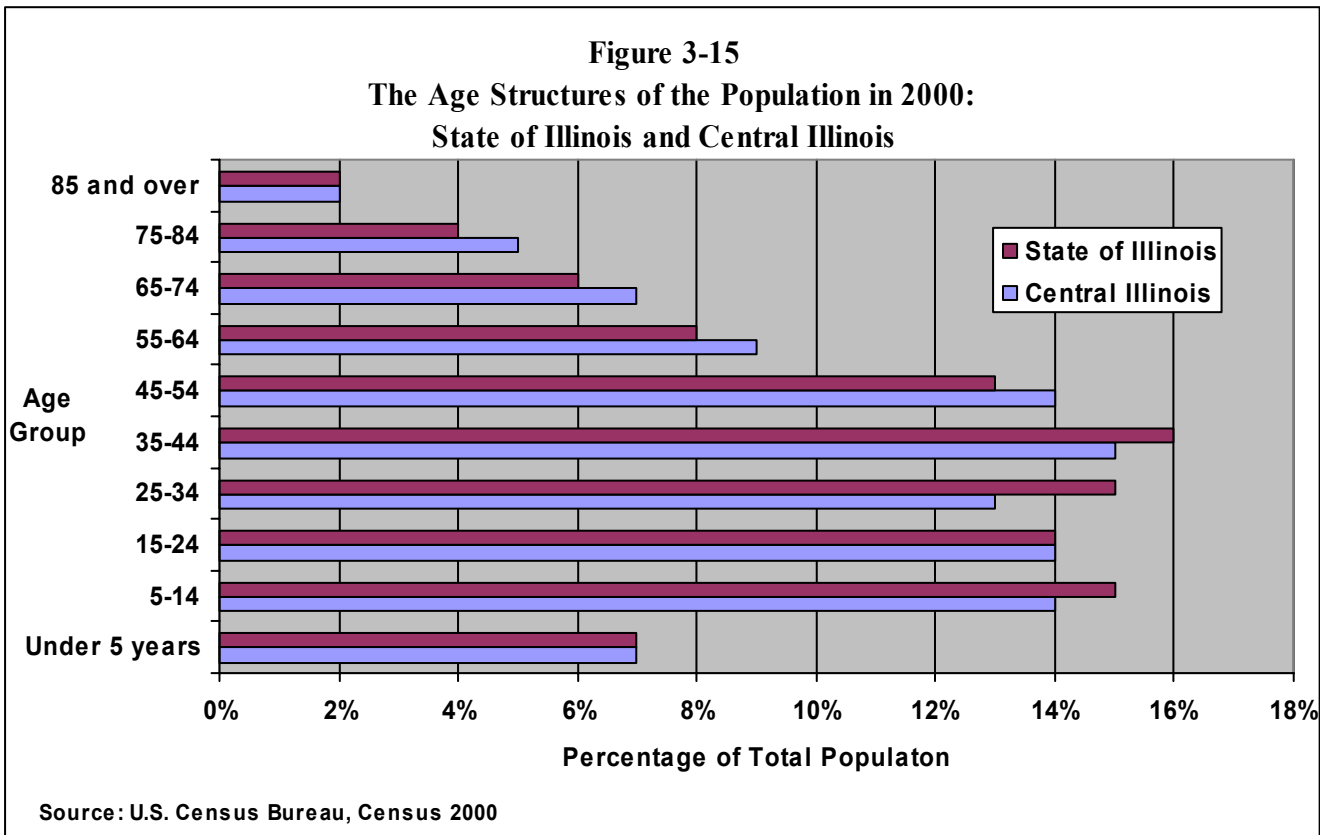
except Stark County, which showed a small loss of 202 people.

Twentieth century population growth in Central Illinois and its neighboring counties shows two very significant patterns (Figure 3-13):

- Rapid growth of Peoria and Tazewell counties during the first eight decades of the century, followed by two decades of decline or stability;
- Stagnating or declining population in virtually all other counties of the area.

The Midwestern Workforce Well Begins to Run Dry

One very important result of demographic stagnation or actual depopulation in rural areas of Illinois and Iowa throughout the first eight decades of the 20th century was the creation of what seemed to be an ever-present reservoir of potential workers for the region's growing manufacturing sector. Young people who were



no longer needed on the farms or in the villages serving farming communities flocked to Greater Peoria (Peoria and Tazewell counties) and to urban centers beyond Central Illinois.

By the 1980's, however, the population flight from the countryside had subsided for two major reasons. First, the population was aging rapidly but many older rural residents were choosing to "age in place" by simply moving from the farms to local towns. Second, there were ever fewer young people available to migrate to the cities. The result was a drying up of the workforce pool that had seemed so inexhaustible in earlier decades.

For their population growth in the 21st century, the urban areas of Central Illinois will need to rely increasingly on their own internal growth and their ability to attract migrants from places other than the rural areas of Illinois, Iowa, and other rural communities of the Midwest. As Figure 3-14 shows, however, the population of Central Illinois has seriously lagged behind that of Illinois as a whole and, even more dramatically, behind that of the nation.

The age structure of Central Illinois' population differs somewhat from that of the state as a whole (Figure 3-15). According to Census 2000, 34% of the state's population was aged 45 years or older, whereas for Central Illinois, the number was 38%. Marshall (44%) and Stark (43%), like many other predominantly rural counties, had the highest percentage of residents aged 45 and above.

Central Illinois is ethnically much less diverse than the state of Illinois (Table 3-1). Whereas only 68% of the state's population is white, non-Hispanic, the comparable number for Central Illinois is 86%. Hispanics comprise a tiny 2% of Central Illinois population, compared to 12% for the state. African-Americans, also, are proportionally about half as numerous in Central Illinois as in the state as a whole.

Within Central Illinois, only Peoria County shows significant ethnic diversity. The 2000 Census showed that African-Americans consti-

tute 16.1% of that county's population. The white, non-Hispanic share of the total population comprised over 97% in all four of the other counties in the area.

Table 3-1
Ethnic Composition of the Population,
Central Illinois vs. the State of Illinois,
According to Census 2000

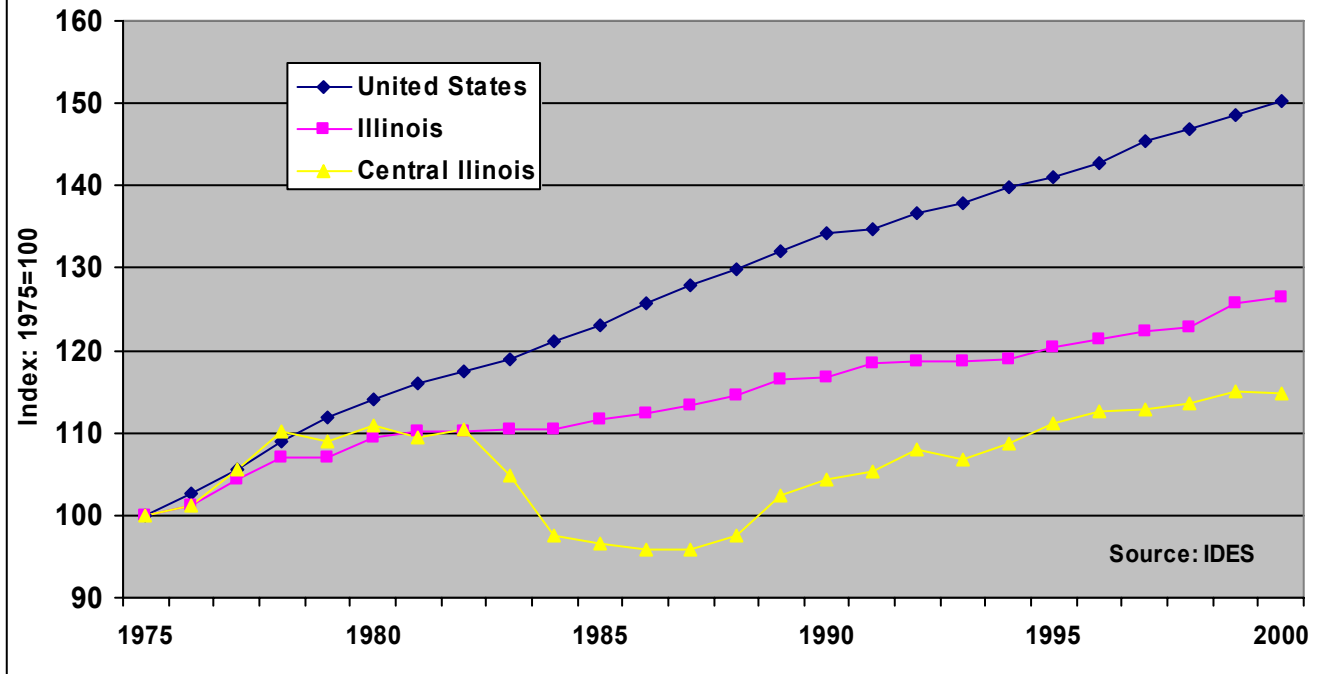
	<i>Illinois</i>	<i>Central Illinois</i>
Non-Hispanic	88%	98%
White	68%	86%
Black	15%	8%
Asian or Pacific Islander	3%	1%
American Indian or Alaska Native	0%	1%
Other	0%	1%
Multiracial	1%	1%
Hispanic	12%	2%
Total	100%	100%

Source: Census 2000

Summary of the Forces of Demographic Change and Their Implications for Central Illinois

- World population and workforce growth in the early 21st century will come mainly in developing countries such as China and India. These mushrooming markets and industrial workforces will present both opportunities and growing competitive challenges to the world's established industrial economies, including that of Central Illinois.
- U.S. population growth will come mainly in the South and West during the early 21st century, just as it did in the latter decades of the 20th century. The Midwest, and Illinois in it, is projected to grow more slowly than the national average.
- The U.S. population and workforce are aging. This is particularly true in the Midwest and of white non-Hispanics. The number of workers in the age group 30-39 will drop sharply in the present decade.

Figure 3-16
Index of Workforce Size,
U.S., Illinois, and Central Illinois, 1975-2000



- Hispanics are projected to comprise fully half of the net new entrants into the nation's workforce in the early 21st century. Illinois' Hispanic population and workforce are growing rapidly too, particularly in Chicago and the collar counties, which are the most rapidly growing parts of the state.
- The economy, particularly of the Midwest, will need to retain the older workers in the workforce. At the same time, the aging baby boomer generation will exercise an increasing demand for health services and other products geared toward an older population.
- There is a large outflow of Illinois residents to other states, principally to the South and West. That outflow is particularly notable among white non-Hispanics.

Central Illinois Population and Workforce Trends

Central Illinois' Slow Population Growth

The size of the Central Illinois workforce grew little during the last quarter of the 20th century (Figure 3-16). Although it kept pace with the state (though not the nation) until 1983, the region's workforce faltered until the late 1980's when it began an anemic growth that lasted until 2000.

By the year 2000, Central Illinois' workforce was slightly less than 15% greater than it had been in 1975. Meanwhile, the Illinois workforce was more than a 25% greater and the nation's was more than half again as large as it had been a quarter century earlier. What are the prospects for reversing this relative quantitative stagnation?

Figure 3-17
Percentage Change in Population and Workforce,
Counties of Central Illinois, 1975-2000

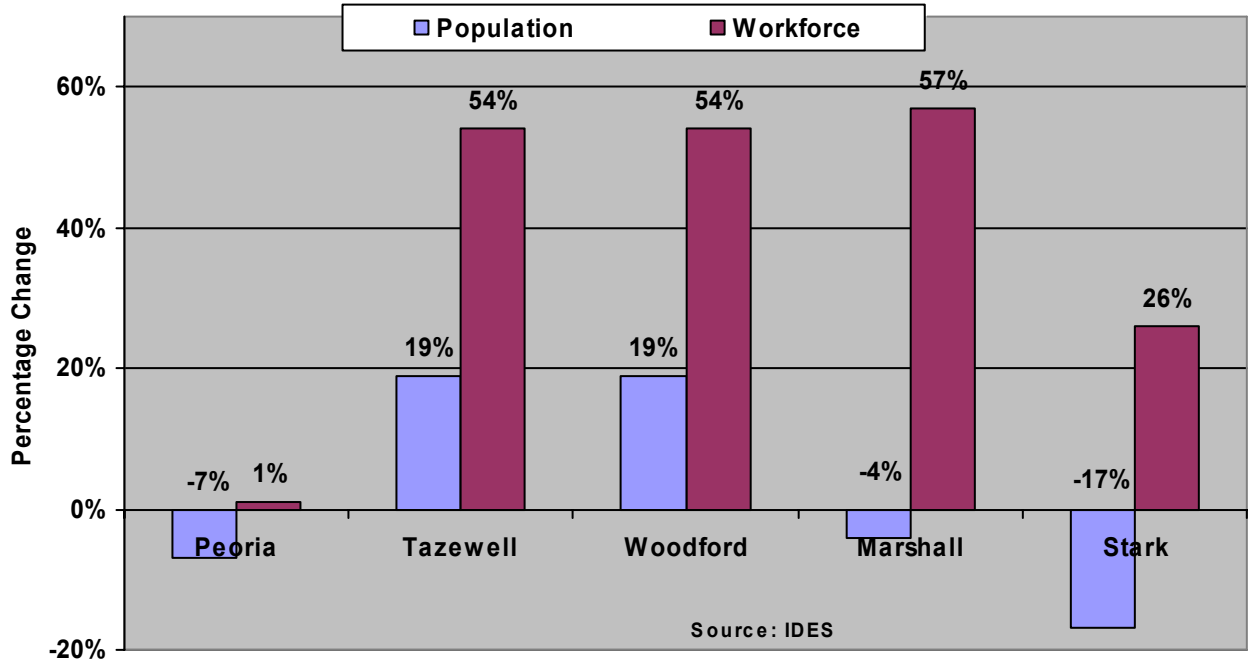


Table 3-2
The Working Age Population*
of Central Illinois and the State of Illinois,
Projected, 2000-2020

Area	2000	2005	2010	2015	2020
Marshall	7,961	8,102	8,062	8,192	8,483
Peoria	120,153	121,835	121,880	121,433	120,283
Stark	3,878	3,905	3,866	3,876	3,871
Tazewell	82,645	83,831	83,883	83,829	84,136
Woodford	23,443	24,576	25,091	26,281	28,006
Total: Central Illinois	238,080	242,249	242,782	243,611	244,779
State of Illinois	7,849,055	8,087,130	8,341,367	8,506,765	8,596,844
Central Illinois as a percent of the State of Illinois	3.0%	3.0%	2.9%	2.9%	2.8%

* The "working age population" as defined here includes all persons ages 16 to 64.
 Source: Illinois Department of Commerce and Community Affairs

Slow Workforce Growth Ahead

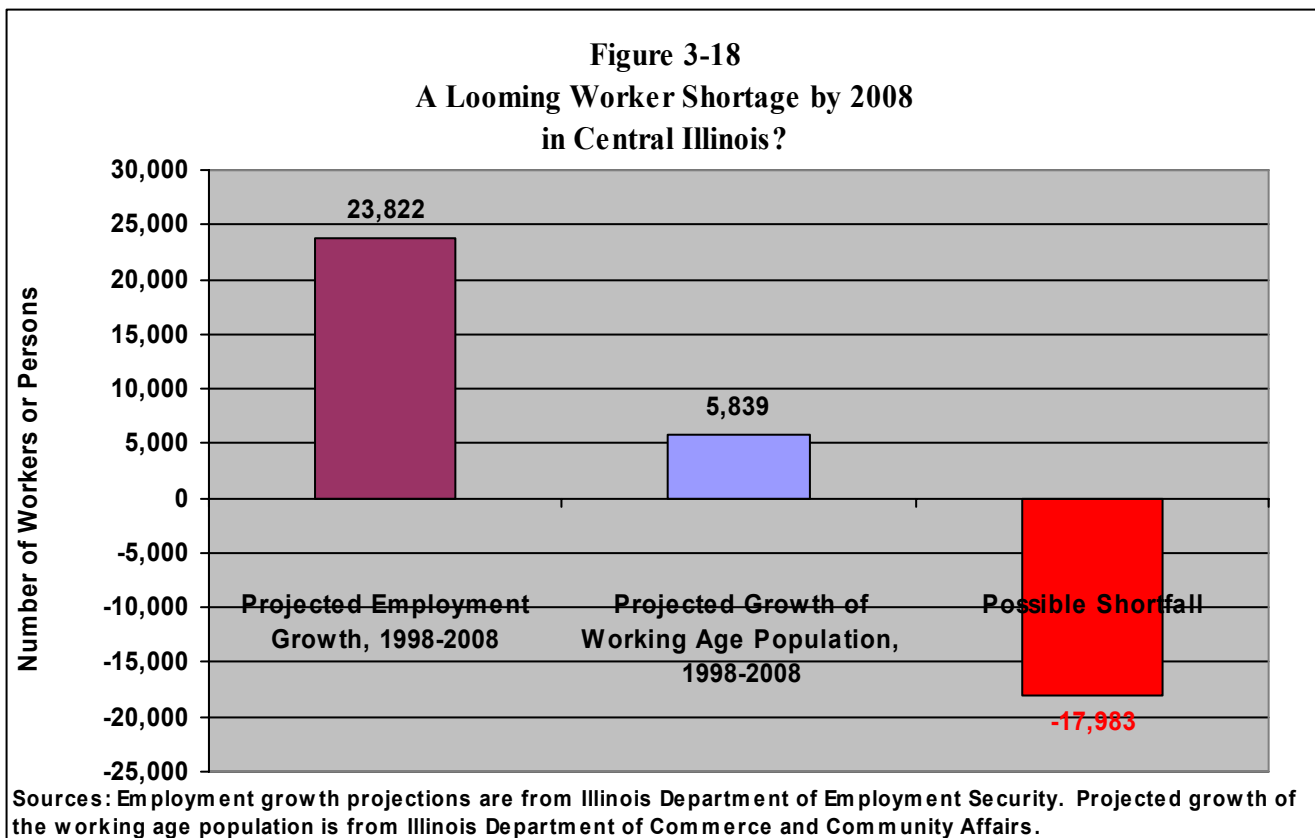
Clearly, Central Illinois' workforce growth is lagging seriously behind that of the nation and state. Given the region's stagnant population growth, as shown in Figure 3-16, it could hardly be otherwise. Within Central Illinois, it is apparent that the greatest population loss (in numeric though not in percentage terms) and workforce stagnation has been in Peoria County (Figure 3-17). All four of the other counties have shown robust workforce growth, although two of them experienced population loss over the quarter century from 1975 to 2000.

What of the future? The official projections of Central Illinois' prime working age population (i.e., ages 16 to 64) show extremely slow growth for first two decades of the 21st century (Table 3.2).³ In this decade, from 2000 to 2010, the area's population is expected to grow by only 2%. The working age population of the entire state of Illinois, meanwhile, is projected to grow by as much as six percent.⁴

Will There Be Enough Workers to Sustain Economic Growth in Central Illinois?

Given the extremely slow growth in the area's working age population, the question that heads this section begs an answer. Potential "worker dearth" in Central Illinois is a very valid concern. The IDES projects employment in Central Illinois to grow by 13% from 1998 to 2008 (Figure 3-18). Scenario Two ("Things Go On As They Are") is built around those same projections. Meanwhile, the working age population is projected to grow by fewer than 6,000 persons. Are these two sets of projections consistent, or is the region looking at a worker shortfall of nearly 18,000?

The answer is that the two sets of projections can be made compatible only if *workforce participation rates* in Central Illinois *sharply increase*. In 1998, the ratio of employment to the working age population was about 76%. That would need to rise to about 84% by 2008 in order for employment growth to reach the level projected by IDES. Can this be done? Yes, but



it will require a major effort to bring people into the workforce who are not presently in it.

That Central Illinois has a workforce problem of a *quantitative* nature is not generally recognized. It is nevertheless true that the worker dearth resulting from continued stagnation of the area's working age population could constitute a serious threat to the area's continued economic growth. Worker dearth can be overcome by some combination of the following:

- Raising workforce participation rates;
- Augmenting the size of the workforce pool by attracting working age people and reducing the outflow of workers;
- Decreasing unemployment levels;
- Raising rates of productivity increase.

Workforce Quality in Central Illinois

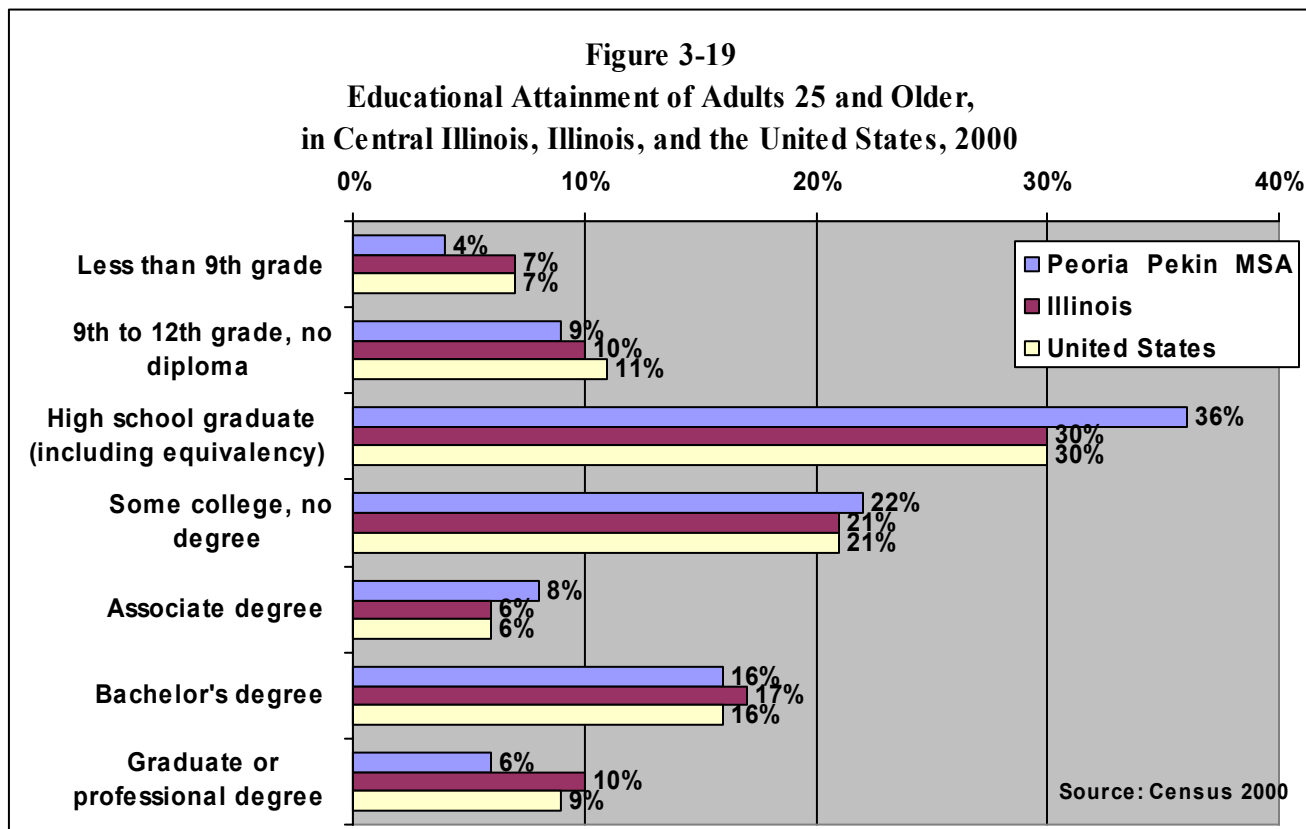
A company's or a community's rate of productivity increase depends on many things, including technology, investment in plant and

equipment, managerial acumen, the mix of goods and services produced, and more. *Nothing, however, has a more positive impact on productivity growth than to constantly improve workforce quality.*

As in many other locales, data on workforce quality in Central Illinois unfortunately are lacking. Consequently, we must make do with surrogates. The most frequently used surrogates for worker quality are educational levels. Figure 3-19 compares the educational attainment of adults in Central Illinois, Illinois as a whole, and the nation, as revealed by Census 2000.

Adult Educational Attainment

The average educational attainment of Central Illinois' adult population is somewhat different from that of the state or nation. Larger percentages of the local population have high school educations, some college education, or associate's degrees than either of the two larger jurisdictions. On the other hand, the percentage of Central Illinoisans with graduate or professional degrees is two-thirds that of the Illinois



average and 60% of the U.S. average.

At the low end of the educational spectrum, there is good news and not-so-good news. The not-so-good news is that 14% of local adults lack at least a high school education. The good news is that this percentage is lower than that of the state (17%) and the nation (18%).

To lack a high school education in America's 21st century workforce is to be virtually condemned to a life with few opportunities to earn a decent living and even fewer attractive lifestyle options. Of course, if most of the Central Illinoisans who lack high school educations are older adults, already in retirement or near it, the workforce implications will be less serious than if many of them are young, early in their working lives. Unfortunately, the Census 2000 data shed no light on the age composition of the poorly educated in Central Illinois.

One set of data points directly to the high loss of human talent in the area. This would be data on high school dropouts in Central Illinois school districts.⁵ During the academic year 2000-2001, nearly 700, or about 4%, of the area's high school students dropped out of school. Some of these presumably will re-enroll and complete high school; others will earn a GED. Still, it is probably conservative to estimate that 500 of these dropouts will never receive their high school diploma or the equivalent.

Over the course of ten years, that comes to roughly 5,000 Central Illinois youngsters who are condemned to adult lives of dismal jobs and meager earnings. Furthermore, a large portion of these will be members of ethnic minorities. Neither the individuals nor the community can tolerate this waste of human potential.

Employers' Perceptions of Worker Quality

In the summer of 2001, the Central Illinois Workforce Development Board commissioned an employer survey that eventually collected 2,481 valid responses.⁶ Respondents were asked to indicate ways in which recently hired employees could be considered deficient. The

tabulated results point to ways in which the area's workforce could be improved through education, training, and other workforce development efforts.

Employers were asked the question, "What are the two most common deficiencies among recently hired employees?" They could choose among seven "deficiencies":

- Clerical skills;
- Reading and/or writing;
- Mathematics and/or money-handling skills;
- Technical and/or computer skills;
- Teamwork skills;
- Customer service skills; or
- Other.

Anecdotal evidence from many sources indicates that "soft" skills are increasingly important for the 21st century knowledge economy. The results of the Workforce Development Board's employer survey provide strong confirming evidence that this is true in Central Illinois. Nearly a third (32%) of responding employers cited customer service as one of the two areas in which their recently hired employees were deficient (see Figure 3-20). The second most frequently cited deficiency was teamwork.

Contrary to conventional wisdom, perhaps, employers' complaints about employee's cognitive skills were more muted. True, a substantial share of employers (28%) found technical and computer skills wanting in their recently hired employees. From there, however, dissatisfaction dropped off sharply for the conventional "schoolroom" skills, such as reading, math, and the like. Very few employers complained about their employees' clerical skills. "Other" deficiencies troubled 20% of employers.

Not surprisingly, employers' perceptions of employee deficiencies differed widely among different industrial sectors (see Table 3-3). In

manufacturing, for example, employers were most concerned about their employees' deficient technical and computer skills. Deficient teamwork skills, as well as reading and writing deficiencies, also troubled them. They were, however, relatively satisfied with employees' customer skills, presumably because many manufacturing employees do not come into direct contact with customers.

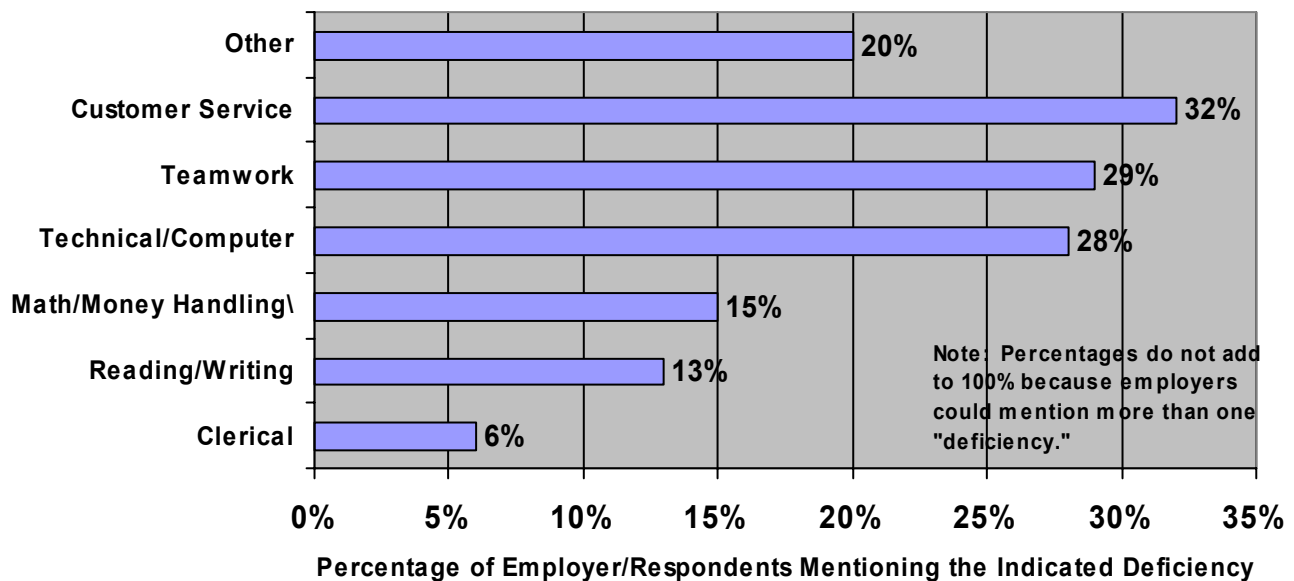
Customer service skills are very highly valued, not surprisingly, in those sectors where direct contact between customers and employees is close and frequent. This includes the lodging and hospitality industries as well as finance, trade, and all the service industries. Interestingly, employers in both government and education appeared relatively satisfied with their employees' customer service skills. One interpretation could be that most educators and public officials deploy excellent skills of this type. An alternative interpretation could be that education and government employers make such modest demands for customer service that they are easily met by most employees.

Teamwork skills were overwhelmingly important, especially to employers in the health services and all the service sectors. Once again, education and, especially, government employers were relatively sanguine concerning their employees' teamwork skills. Here also, two alternative interpretations present themselves. Perhaps employees in these two sectors are excellent team players. Alternatively, employers' perceptions of the importance of teamwork may be so modest that few workers in these two sectors give cause for their bosses to complain.

Figure 3-20 and Table 3-3 provoke thought. If the employer responses summarized in the table are representative of all employers, and there is no apparent reason to think that they are not, then some change in emphasis may be warranted in workforce development. With the exception of technical and computer skills, employee deficiencies in the traditional cognitive skills (e.g., reading, writing, mathematics, etc.) are less troubling to employers than deficiencies in the "soft" or "people" skills that come into play in teamwork with fellow employees

Figure 3- 20
Employers' Perceptions of Employee Deficiencies

Survey question: "What are the most common deficiencies among your recently hired employees?"



Source: Central Illinois Workforce Development Board Survey, Summer 2001

and service to customers. This suggests that these skills need greater emphasis in schools and post-secondary institutions. They may also deserve greater stress in the training and re-training programs sponsored by workforce development agencies.

Findings and Conclusions

- The population of Central Illinois is growing very slowly. Between 1990 and 2000 it grew by only 2.5%, compared to 8.6% for the state of Illinois as a whole. Although this area's population growth rate was low during the 1990's, it was greater than virtually all predominantly rural counties in the state.
- The depopulation and aging of Midwestern rural counties means that they no longer can serve as reservoirs for manufacturing and other urban workforces as they did throughout most of the 20th century.
- African-Americans constitute Central Illi-

nois' only sizable minority population—and then only in Peoria County. The area has not yet attracted significant Hispanic or other international in-migration. The Hispanic population of Central Illinois is negligible, amounting to only 2% of the population according to Census 2000. That means that the Central Illinois population and workforce so far have insignificant representation from the ethnic groups that are growing most rapidly in the nation and state.

- The demographic situation facing Central Illinois is hardly peculiar to these five counties. The same situation faces most of Illinois and the entire Midwest. Outside of some major metropolitan areas, very few Midwestern counties are likely to show appreciable population growth in the early 21st century.
- Central Illinois' workforce growth was very slow in the last two decades of the 20th century, lagging well behind that of the state and nation. The most noticeably lagging county in the area has been Peoria County.

Table 3-3
Employers' Perceptions of Employer Deficiencies
by Industrial Sector and Type of Deficiency

(Employers were asked: What are the two most common deficiencies among recently hired employees? The table shows the percentage of responding employers who indicated the corresponding "deficiency.")

Sector of Industry	All Respondents	Manufacturing	Business Services	Retail	Health Services	Education	Finance	Services	Government	Construction	Lodging	Transportation & Communications	Wholesale
Clerical	6%	3%	2%	5%	11%	15%	5%	7%	15%	6%	11%	5%	3%
Reading/writing	13%	22%	15%	11%	11%	15%	13%	14%	8%	13%	11%	7%	14%
Math & Money Handling	15%	16%	4%	31%	9%	7%	7%	7%	23%	11%	11%	9%	10%
Technical/Computer	28%	35%	40%	16%	26%	74%	29%	28%	54%	24%	22%	30%	27%
Teamwork	29%	29%	32%	26%	46%	15%	24%	34%	8%	28%	33%	28%	29%
Customer Service	32%	6%	32%	44%	30%	11%	45%	31%	8%	13%	56%	28%	40%
Other	20%	25%	23%	16%	11%	7%	18%	20%	31%	37%	11%	26%	17%

Source: Central Illinois Workforce Development Board's Employer Survey, Summer 2001. There were 2,481 respondents in total.

- Although workforce growth has been slow, it grew much faster in all five counties than did population during the last quarter of the 20th century. This is a non-sustainable trend. Workforce growth cannot for long outpace population growth.
- Official projections anticipate extremely slow future growth of the prime working age population (i.e., ages 16 to 64) in Central Illinois, only 3.2% in total for the entire first two decades of the 21st century.
- Central Illinois clearly has a quantitative workforce challenge. The projected stagnation in workforce growth threatens economic growth in the area. That challenge can be met in a combination of four ways:
 1. Increase workforce participation rates of the resident population;
 2. Augment the workforce pool by increasing the net migration of workers into the area;
 3. Decrease unemployment levels; and
 4. Raise the rate of productivity growth.
- One major route to increased rates of productivity growth lies in improving workforce quality.
- The education attainment levels of Central Illinois' adults differ from the state and national averages. A larger share of the local population has only high school educations; a slightly smaller share has completed bachelors or advanced degrees; an even smaller share has less than a high school diploma.
- High school dropout rates wreak a high cost in human tragedy and workforce loss. Unless this challenge is met, roughly 5,000 Central Illinois youngsters in this decade will be condemned to adult lives of dismal jobs and meager earnings. Furthermore, a large portion of these will be members of ethnic minorities.

Neither the individuals nor the community can tolerate this waste of human potential.

- When asked, employers in Central Illinois say that they find the lack of “soft” or “people” skills to be the greatest deficiency among recently hired employees. Those soft skills include customer service skills and teamwork skills. Employers in the most rapidly growing industrial sectors (e.g., business services, finance, hospitality, and other services) most acutely perceive this lack.

Chapter 4: Workforce Development in Central Illinois

This chapter aims first to dissect and examine the most important parts of Central Illinois' workforce development system, and, having accomplished that, to evaluate how well each of those parts currently operates in order to identify potential for improvement.

The chapter begins with a discussion of the targets and tools of workforce development. Workforce development is seen as a three-part process: (1) Augmentation of the workforce pool; (2) improving workforce quality; and (3) improving the way workers and jobs are matched together.

After that exposition comes an examination of "traditional" workforce development and the multiplicity of agencies and programs that deliver workforce development services in Central Illinois. Next is a discussion of Central Illinois' implementation of the federal Workforce Investment Act ("WIA") of 1998 which seeks to streamline the nation's workforce development system and make it more responsive to the needs of workers and employers alike.

The K-12 schools are the most important single piece of the workforce development system. As a result, a large portion of this chapter is an evaluation of the performance of Central Illinois public high school students. Briefer discussions of the area's post-secondary educational and training capabilities. The chapter concludes with a summary of the ways workers are matched with jobs in Central Illinois.

The Targets of Workforce Development

The "targets" for workforce development in Central Illinois are, of course, the workers and potential workers of the area. Without greater specificity, though, this definition is not much help. We find it useful to think in terms of four workforce sub-populations:

1. The *entrant* workforce, which consists of young people entering the world of work for the first time.
2. The *marginal* workforce, which comprises those persons who, for one reason or another, find it difficult to become and remain employed.
3. The *incumbent* workforce, which consists of all persons who are normally employed.
4. The *elite* workforce, which consists of highly skilled persons possessed of much sought-after talents and qualifications.

The Tools of Workforce Development

In Central Illinois, as in any other area, workforce development can occur by using some combination of three kits of tools:

1. By *augmenting the size* of the workforce pool (this can happen by increasing the number of potential workers in the area and by raising the labor force participation rates of persons in the area).
2. By *improving the quality* of the workforce.
3. By *improving the match* between workers and jobs.

Workforce development occurs when one or more of the tools are brought to bear on one or more of the target sub-populations. Figure 4-1 is a matrix illustrating the intersection of the three strategies and the four subcategories. We will use it throughout this chapter to chart our discussion of the ways and means of workforce development in Central Illinois.

Figure 4-1 The Targets and Tools of Workforce Development

<u>Tools</u> →			
<u>Targets</u> ↓	Augment Quantity	Improve Quality	Improve the Match of Workers to Jobs
Entrant workforce			
Marginal workforce			
Incumbent workforce			
Elite workforce			

Augmenting the Quantity of the Central Illinois Workforce

Recruiting and retaining a sufficient pool of properly qualified workers was a daunting challenge for many if not most Central Illinois employers during the last half of the 1990s. Unemployment rates, which averaged 6.27% in 1996, sank to under 3.56% in October, 2000.

With the Recession of 2001 and its weaker labor market came a rise in joblessness. By all indications, however, this respite for hard-pressed employers is likely to be brief. Certainly, the demographic projections provided in preceding chapters foreshadow slow growth rates both of the working age population and of the workforce throughout the remainder of the present decade and beyond. “Worker dearth” promises to be a permanent feature of the Central Illinois labor market, at least with respect to workers who are best skilled and qualified for the 21st century knowledge-based economy.

Augmenting Workforce Quantity			
	Augment Quantity	Improve Quality	Improve the Match of Workers to Jobs
Entrant workforce			
Marginal workforce			
Incumbent workforce			
Elite workforce			

Increasing the size of the workforce pool, or, at least, important parts of it, is one potential part of a company’s or a community’s response to worker dearth. Certainly, that is what recruitment and retention is all about. When a company sends recruiters outside the area to locate workers of any skill level, it is attempting to augment the area’s workforce. When that same company works hard to retain its valued employees, it is attempting to maintain the quantity (as well as the quality) of the local workforce.

The size of any community’s workforce pool depends on three factors:

- The size of the section of its population that is able to work;
- The labor force participation rates of its various age, gender, and ethnic components;
- The net number of persons commuting periodically (daily, weekly, etc.) from/to other areas.

While recruitment, sometimes on a large scale, has long been a standard feature of private employers’ human resource management activities, it has rarely been so with public or semi-public workforce development bodies. Until recently, increasing or decreasing the size of the population that is able to work simply

was not considered a proper activity for workforce developers. But as the worker dearth of the late 1990s intensified, bodies concerned with economic and workforce development in some communities actively began to assist their employers' recruitment efforts and otherwise to try augmenting the size of local workforces.

Where public or semi-public workforce augmentation efforts are made, the stress is usually on highly qualified professionals, that is, on members of the elite workforce.¹ But there are exceptions, namely, community efforts to help recruit migrant and other temporary workers or even hourly workers for the hospitality and other industries.

Inadvertently, traditional workforce development efforts directed at the marginal workforce (those on welfare, the unemployed, disadvantaged, hard to employ, etc.) have, to the extent that they are successful, the result of increasing the share of persons actually working among those who can work, that is, increasing the labor force participation rate.

Other than in the way just described, we have unearthed no signs that Central Illinois workforce development organizations have explicitly attempted to assist local companies' recruitment or retainment efforts or otherwise augment the size of the area's workforce. As labor markets tighten again in the next few years and worker dearth returns, this will need to change. Most significantly, Central Illinois needs greater understanding of and attention to the factors that attract and repel executives, professionals, and other members of the elite workforce. These include such community attributes such as safety and public order, esthetic attractiveness, educational variety and quality, leisure time possibilities, and other quality of life factors.

Improving the Quality of Central Illinois' Workforce

As the rate of workforce growth slows, the sole remaining way to maintain buoyant economic growth in the Central Illinois region is to

increase worker productivity. This can be accomplished in various ways, including greater and better use of technology, more and better capital equipment for workers to work with, and more efficient use of all factors of production including labor. Additionally, one should note that improving the quality of the "human capital" is a vital part of any effort to raise worker productivity and must be a central focus of every effective workforce development program.

The main avenue for raising the prosperity of Central Illinois is by shifting a larger share of area jobs from low-skill, poorly-paid to high-skill, high-paid occupations. What is needed is a virtuous cycle that proceeds simultaneously in two ways:

- The jobs that grow most rapidly in Central Illinois must be those that require higher skills (and therefore pay better), and
- The Central Illinois workforce must constantly raise its level of skills, knowledge, and other workforce competency so as to be able to fill those better jobs.

Developing the Entrant Workforce

Traditional workforce development, with its principal focus on the marginal workforce, is essentially remedial in nature. It is remedial in the sense that it tries to rectify the problems of individuals who, for one reason or another, find themselves ill-equipped to cope successfully in the workplace. It is important, but, essentially, it is job-oriented social work.

Improving Workforce Quality			
	Augment Quantity	Improve Quality	Improve the Match of Workers to Jobs
Entrant workforce			
Marginal workforce			
Incumbent workforce			
Elite workforce			

Many members of the “incumbent workforce” experience unemployment at one time or another during their working lives and may need unemployment insurance to sustain them during short periods of joblessness. Nevertheless, a relatively small percentage of them have historically made much use of traditional workforce development services. The most important form of workforce development that most working members of society ever experience is their education. While it is impossible to exaggerate the importance of early childhood and primary education, we focus here on the secondary and post-secondary levels.

Public High School Education

The formal workforce development preparation of many workers ends with their high school education. For many others, a high school diploma is the springboard to college or professional education. The fact is that the high schools of Central Illinois are among the most important, if not *the* most important, workforce development institutions in the area. There are 30 public high schools in Central Illinois. The remarks and analyses of this particular section pertain only to them.

How well are these high schools preparing the area’s younger generation for the adult world of work and continued study? Fortunately, the Research Division of the Illinois State Board of Education provides much information with which to address this question.

Six Key Performance Indicators

Preceding pages of this study have shown convincingly that the skills and knowledge that were good enough for yesterday’s jobs will be inadequate for those of tomorrow. Today’s jobs demand much better cognitive, communication, and people skills than did the jobs of yesterday. Tomorrow’s jobs will demand still higher levels of skills, knowledge, and—perhaps most critical of all—the willingness and ability to keep on learning throughout one’s adult life.

In the 21st century workplace, a good basic

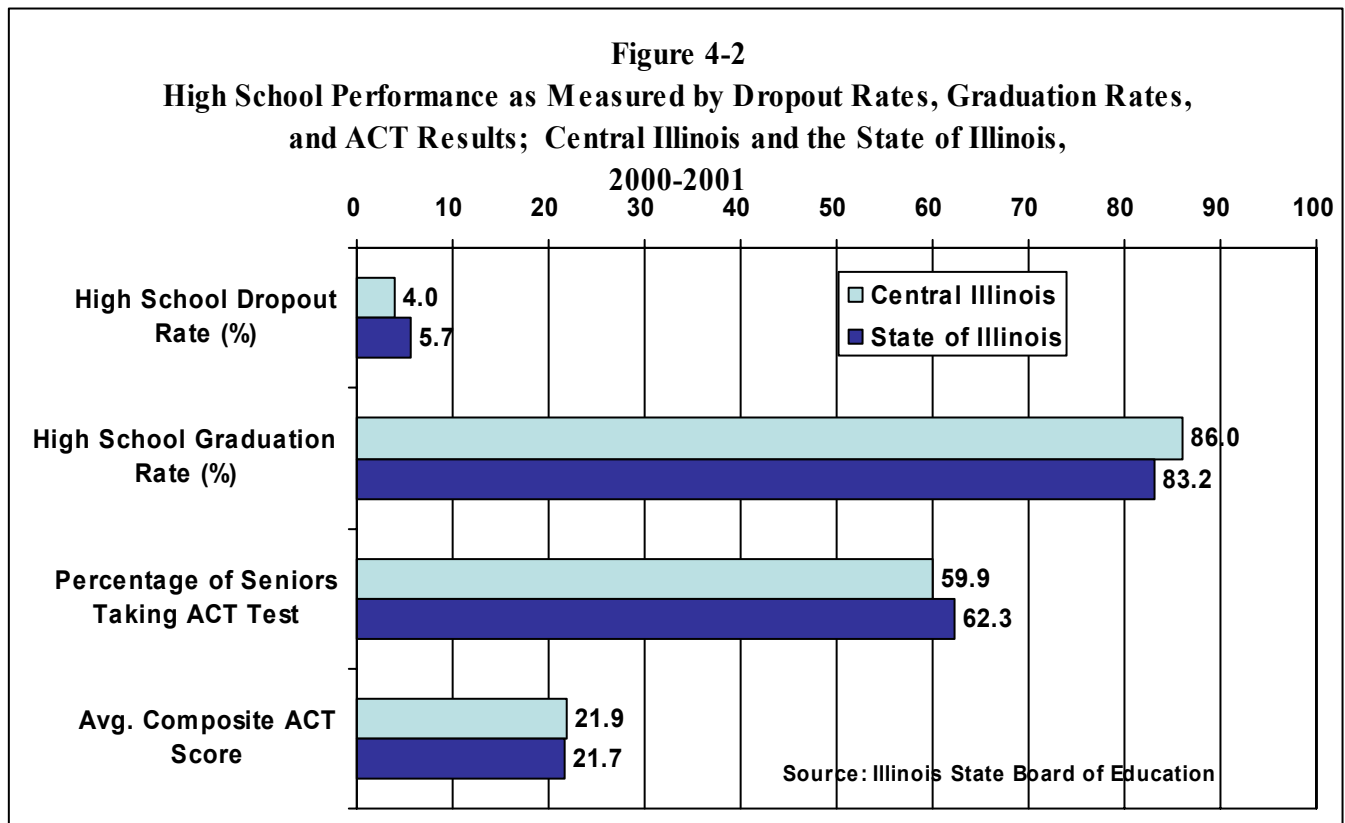
education is the single most important asset that a worker can own. Of course, the bar of what constitutes a “good basic education” continues to rise. A generation ago, when Central Illinois’ economy was mainly farms and factories, a “good basic education” for a majority of workers might have ended at the 8th grade. In those days, most women were not in the formal workforce. As recently as 1970, only 43% of American females were in the workforce, and a large proportion of those who were part of the workforce were employed in clerical and other jobs requiring no more than an 8th grade education. By 2000, over 60% of the nation’s women were in the workforce and an increasingly large share of them held professional and other knowledge jobs requiring higher levels of skills and education.

The point is that most 21st century jobs, whether they are in the service- or the goods-producing sectors, and whether men or women hold them, *require the equivalent of at least a full high school education*. For that reason, our first two educational performance indicators are:

- The high school dropout rate; and
- The high school graduation rate.²

As many employers—and also many workers—have found to their dismay, the mere fact that a person holds a high school diploma is no guarantee that he or she has acquired the knowledge or skills required by the 21st century workplace. For that reason, we need indicators of how successfully Central Illinois high school students actually learn what they need to open the way for their success in later life. Two available measures are:

- The percentage of Central Illinois 11th graders meeting or exceeding the standards set in the Prairie State Achievement Examination (PSAE) given in the spring of 2001.
- The percentage of 10th graders meeting or exceeding the standards set in Illinois Standards Achievement Test (ISTAT).³



Some form of post-secondary education has become necessary for a rising percentage of jobs in the knowledge economy. This trend will continue—indeed, it will accelerate—in the years ahead. For the 21st century workforce, the *readiness of young people to pursue education beyond high school* becomes ever more important. Consequently, our next two educational performance indicators are:

- The percentage of high school students who take the ACT test, and
- The students' actual scores on that test.

Figure 4-2 compares the Central Illinois public high school students' performance on four of these indicators with their peers throughout the entire state of Illinois for the school year 2000-2001.

Although the differences were not vast, the (weighted) **average dropout rate** for Central Illinois' high school students was lower than the statewide average (4% vs. 5.7%).⁴ Similarly, this area's (weighted) **average high school graduation rate** (86%) exceeded the

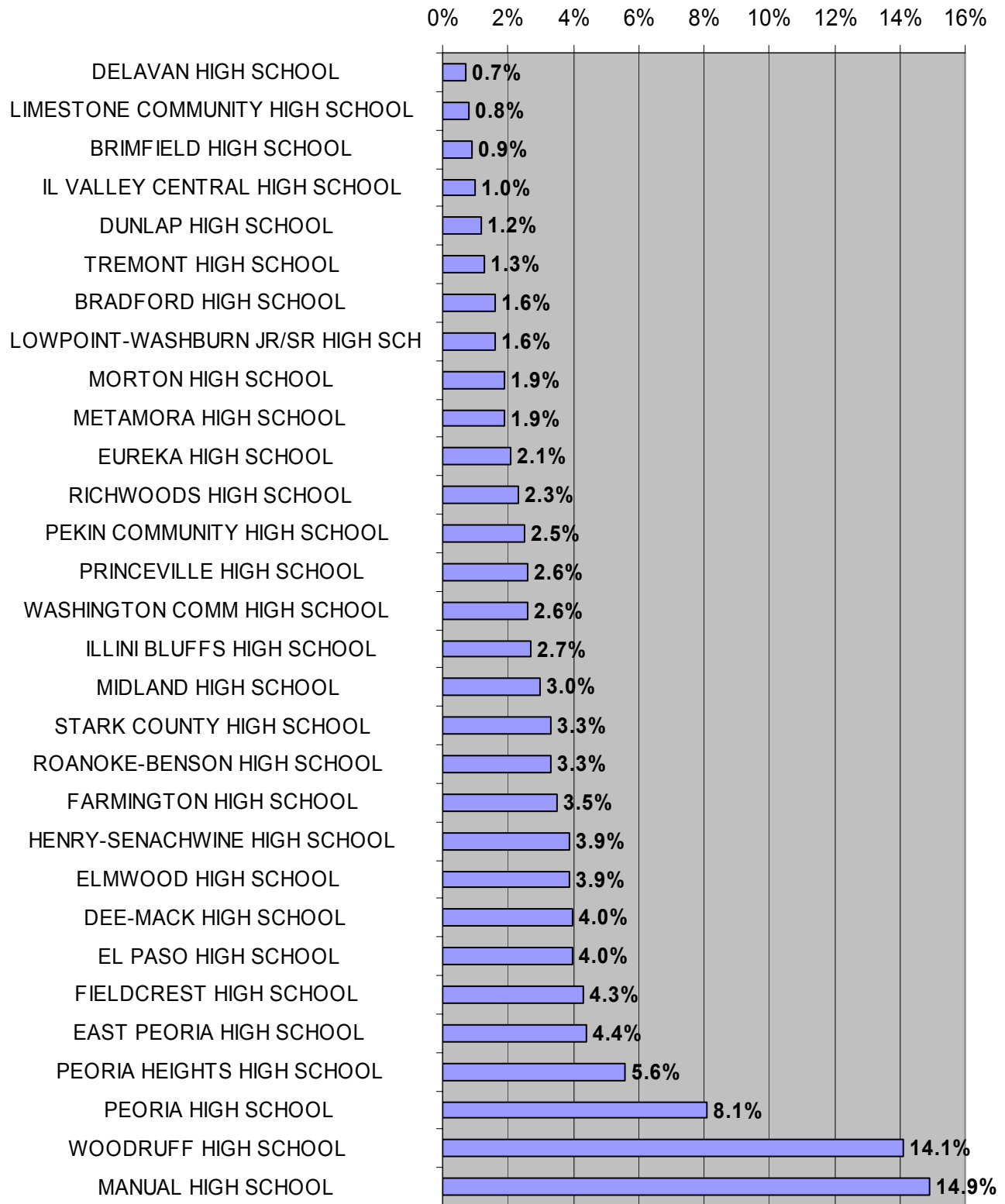
Illinois average (83.2%).

It is, of course, gratifying that both high school completion indicators cast favorable light on Central Illinois' performance relative to the state average. But is an 86% average graduation rate for this area's high schools good enough? It means that 14% of Central Illinois high school freshmen in the fall of 1997 failed to receive a diploma by the spring of 2001. We can hope, of course, that many of these will eventually complete their high school education or get a GED. But what about those who do not? *What jobs will be open to them in the 21st century workforce of Central Illinois, or anywhere else, for that matter?*

The 30 public high schools of Central Illinois perform quite differently with respect to dropout rates and high school graduation rates (See figures 4-4 and 4-5). Delavan High School in Tazewell County, with a dropout rate of 0.7% and Dunlap High School in Peoria County, with a graduation rate of nearly 99%, set examples to which all other area schools may aspire.

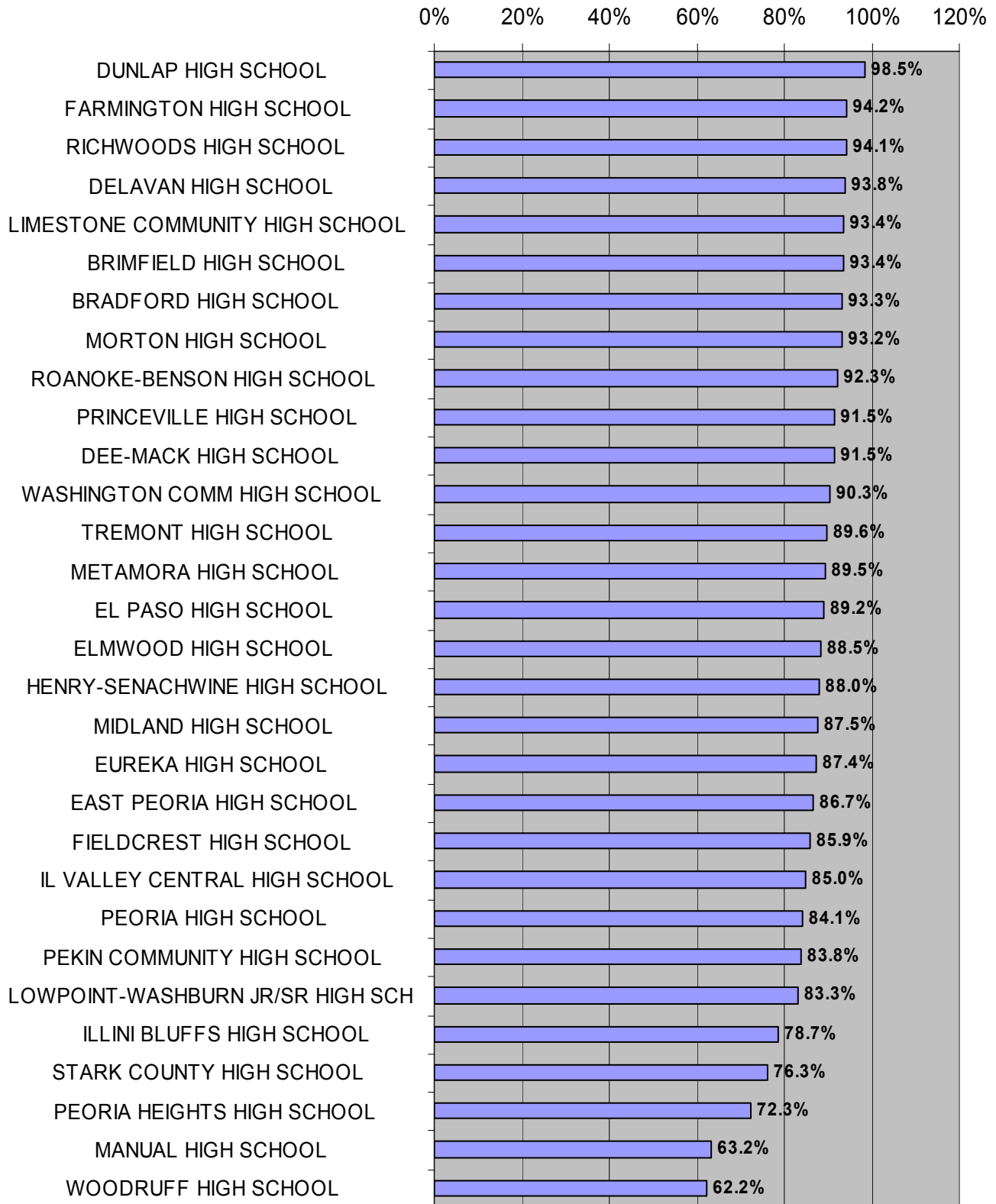
In 2000-2001, Dunlap High's graduation rate

**Figure 4-3:
Dropout Rates in Central Illinois High Schools, 2000-2001**



Source: Illinois State Board of Education

Figure 4-4
Graduation Rates in Central Illinois High Schools, 2000-2001



Source: Illinois State Board of Education

scored in the top 2% of all Illinois high schools; only 14 others in the state exceeded it.⁵ Fourteen area high schools notched graduation rates of at least 90%, which may be considered the minimum tolerable level. All but five Central Illinois high schools had graduation rates above the state’s average of 83.2%.

The **Prairie State Achievement Examination (PSAE)** was given for the first time in the spring of 2001. All Illinois 11th graders were required to take it except certain special education students or those with limited English proficiency. About 113,000 students took the test, which measured students’ mastery of core material in reading, mathematics, writing, science, and social science.⁶ According to their scores in each of these subject areas, students were placed into one of four categories:

- Academic Warning
- Below Standards
- Meets Standards
- Exceeds Standards

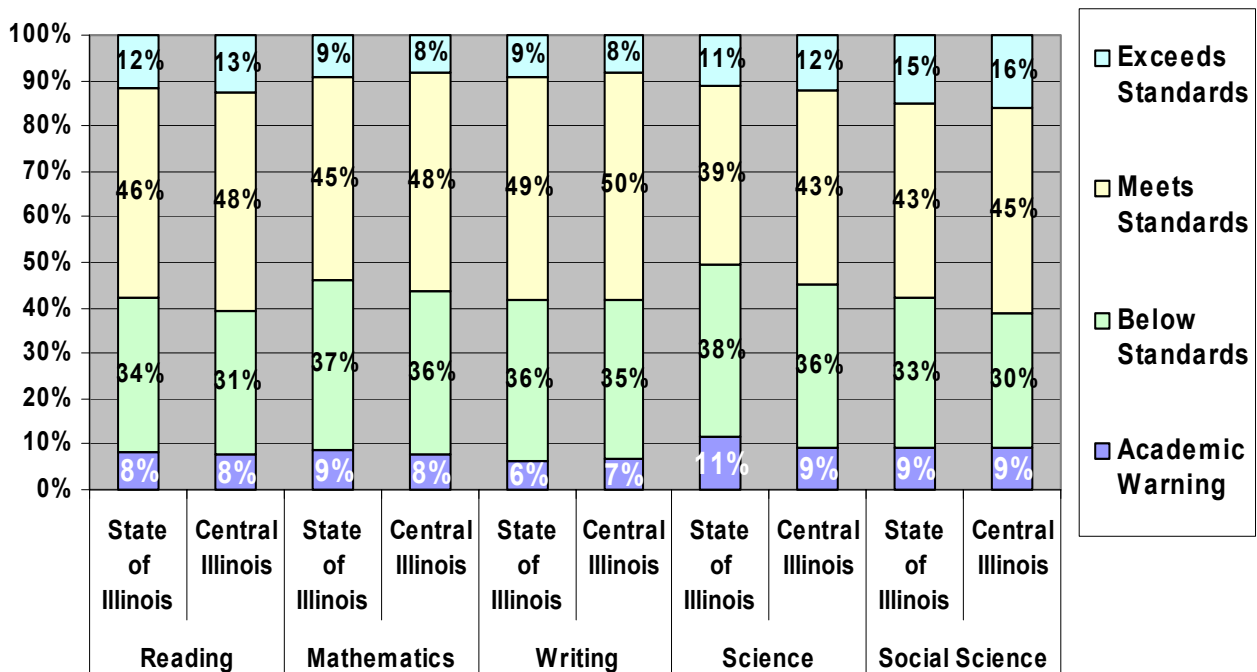
In Reading, as Figure 4-5 indicates, 61% of

Central Illinois 11th graders met or exceeded the PSAE standards compared to 58% for the state as whole.⁷ Among the five counties of this area, there was significant difference in student performance. Stark County, with 68% of students at or above the standards, led the pack.

As with dropout and graduation rates, the PSAE revealed large differences among Central Illinois high schools. Table 4-1 paints the picture. Morton High School, with an all-subject average of 78.3% of students at or above state standards, deserves high marks. Dunlap High School was close behind and, with only 17% of its 11th graders below reading standards, stood in the top 10% performing high schools in the state. In Mathematics, Tremont High School deserves kudos for with 79% of students at or above the standard.

On the **ACT** itself, the Central Illinois average composite score of 21.9 was marginally better than that of Illinois as a whole (21.7) (see Figure 4-6). Local 11th graders outperformed the rest of the state in English, Reading, and Science, but not in Mathematics.

Figure 4-5
Performance of Central Illinois and Illinois High Schools as Measured by the 2001 PSAE Results



Source: Illinois State Board of Education

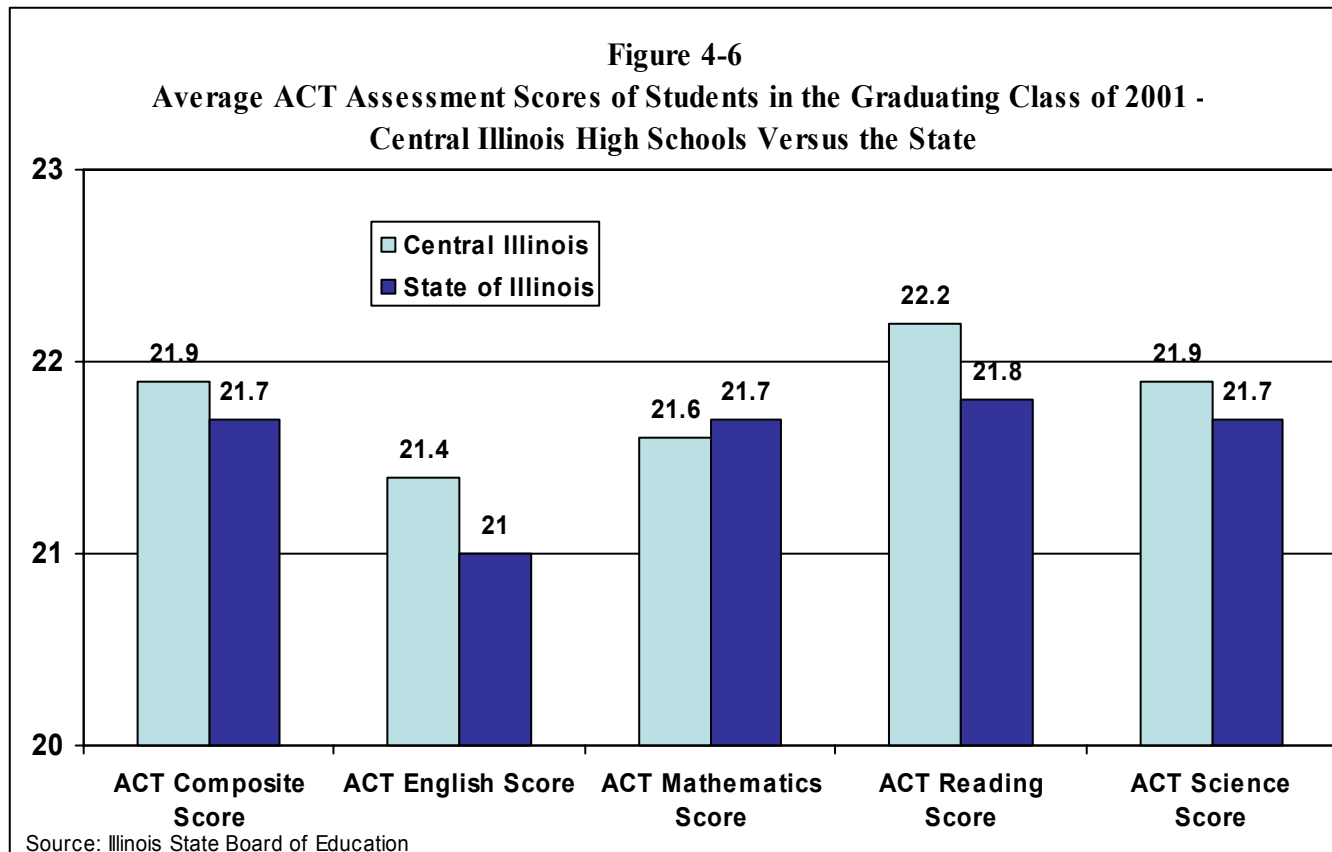
Table 4-1
Percent of Central Illinois 11th Graders
Meeting or Exceeding Standards on the Spring 2001 PSAE Test

	<i>Reading</i>	<i>Mathematics</i>	<i>Writing</i>	<i>Science</i>	<i>Social Science</i>	<i>Average</i>
MORTON	78%	76%	74%	77%	86%	78.3%
DUNLAP	83%	77%	74%	73%	82%	77.9%
TREMONT	77%	79%	75%	68%	77%	75.2%
DELANAN	73%	70%	78%	65%	83%	73.6%
ROANOKE-BENSON	77%	73%	73%	68%	73%	72.7%
ELMWOOD	75%	67%	69%	78%	70%	71.8%
BRIMFIELD	67%	73%	75%	73%	67%	70.8%
METAMORA	64%	69%	75%	66%	70%	68.9%
EUREKA	68%	66%	73%	64%	61%	66.5%
IL VALLEY CENTRAL	66%	66%	60%	65%	72%	65.7%
RICHWOODS	71%	61%	71%	59%	65%	65.5%
FARMINGTON	68%	62%	66%	56%	73%	65.1%
STARK COUNTY	71%	51%	64%	62%	73%	64.1%
PRINCEVILLE	61%	63%	65%	63%	65%	63.2%
EL PASO	63%	58%	71%	54%	67%	62.5%
WASHINGTON COMMUNITY	62%	68%	58%	61%	62%	62.0%
DEE-MACK	64%	63%	63%	54%	61%	61.0%
MIDLAND	61%	56%	56%	58%	65%	59.2%
BRADFORD	53%	67%	53%	60%	53%	57.3%
PEKIN COMMUNITY	57%	54%	57%	54%	61%	56.9%
ILLINI BLUFFS	63%	60%	61%	46%	54%	56.7%
FIELDCREST	56%	54%	59%	53%	51%	54.5%
HENRY-SENACHWINE	55%	52%	43%	48%	61%	51.8%
EAST PEORIA	58%	49%	46%	48%	56%	51.3%
PEORIA	38%	46%	67%	36%	62%	49.6%
LIMESTONE COMMUNITY	51%	40%	50%	49%	52%	48.3%
PEORIA HEIGHTS	67%	27%	35%	26%	36%	38.2%
WOODRUFF	37%	32%	32%	29%	34%	32.8%
MANUAL	28%	19%	19%	18%	25%	21.8%

Source: Illinois State Board of Education

In evaluating a high school's ACT scores, it is important to consider not only the score itself but also the percentage of the school's soon-to-graduate class that actually takes the examination.⁸ Among Central Illinois high schools (see Figures 4-7 and 4-8), the ranking of average ACT composite scores as well as the percentage of students taking the exam is generally similar to that of the other performance indicators previously discussed.

Only two of the eight **WorkKeys**[®] tests were administered as part of the Prairie State Achievement Examination in the spring of 2001. Those were the tests in Reading and Applied Mathematics. As with many of the other indicators, the overall WorkKeys[®] results for the five counties of Central Illinois were quite similar to those for the state as a whole. Figures 4-9 and 4-10 display those summary results.



Summing up this survey of recent high school student performance in Central Illinois, we can note the following:

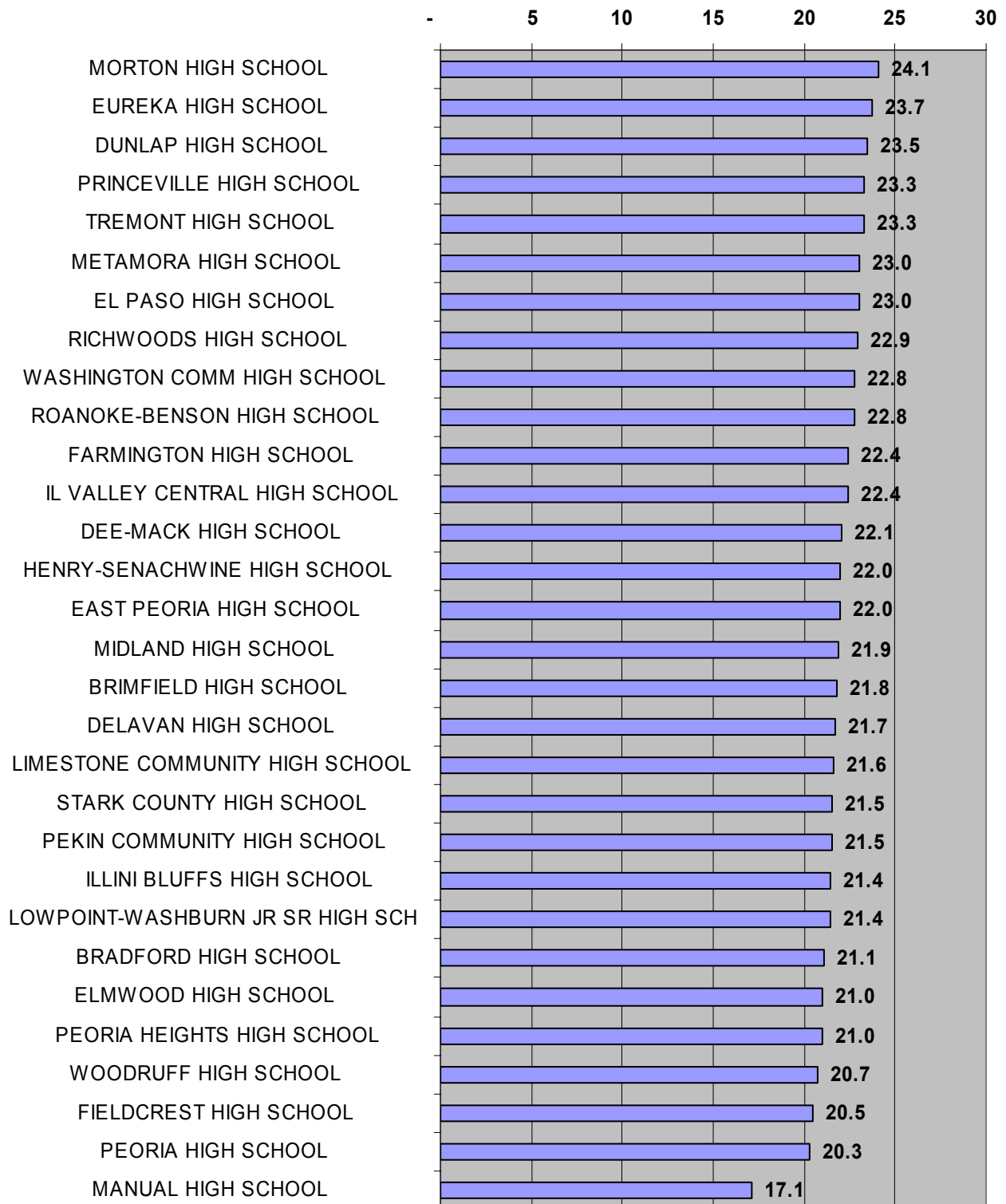
- Several of the area's high schools perform quite well according to the indicators employed above (low dropout rates, high graduation rates, and good scores on standardized tests).
- No area high school is among Illinois' very best as measured by these indicators.
- Great variation in student performance exists among the area's 30 high schools.
- A few area high schools perform very low according to every indicator.
- Too many young people in this area emerge from adolescence into young adulthood without completing high school or, if they do manage to graduate, without appearing to learn much of what they need
- There appears to be a serious gap between many 11th graders' proficiency levels, es-

pecially in Reading and Applied Mathematics, as measured by WorkKeys[®] and the requirements of the area's future jobs. In Mathematics, more than a third of Central Illinois 11th graders scored at levels 3 and 4, which are below what is required for the job growth implied by the region's ambitious economic development aspirations. To a lesser degree, the same proved true on the WorkKeys[®] Reading exam.

Accounting for the Variance in Student Performance Among High Schools

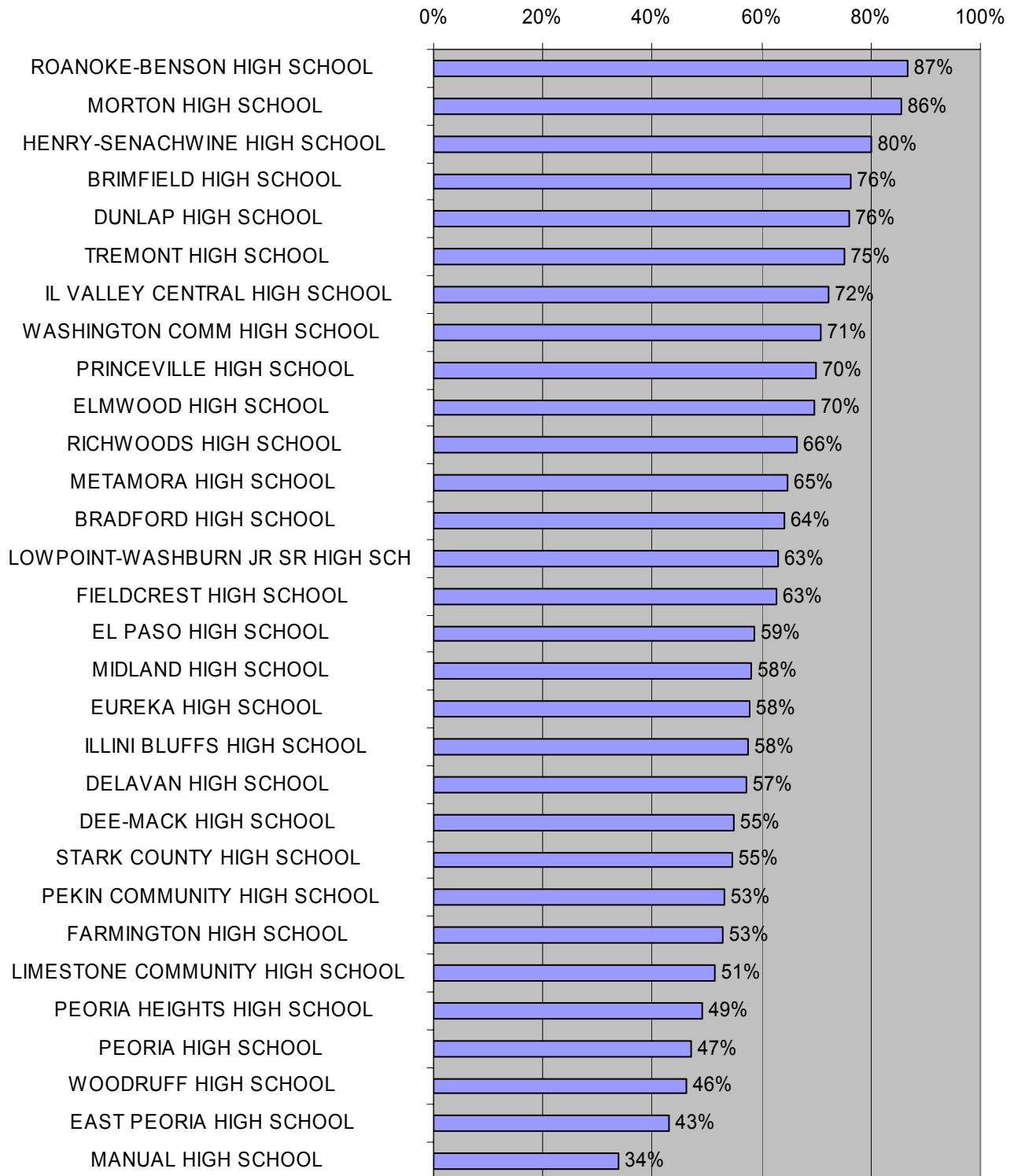
How are we to account for the remarkable variation in student performance among the 30 public high schools of Central Illinois? Educators and analysts agree that a school's performance is highly correlated with the socio-economic composition of its student body. Most studies, including this one, find that most of the variation in dropout rates among Illinois high schools is "explained" by socio-economic composition of the student body:.

Figure 4-7
Average ACT Assessment Composite Scores of Students in the Graduating
Class of 2001 - By Central Illinois High School



Source: Illinois State Board of Education

Figure 4-8
Percent of Students in the Graduating Class of 2001 Who Took the ACT
Assessment During Grade 10, 11 and/or 12 - By Central Illinois High School



Source: Illinois State Board of Education

Figure 4-9
WorkKeys® Reading Scores
Central Illinois and State of Illinois High Schools, 2001

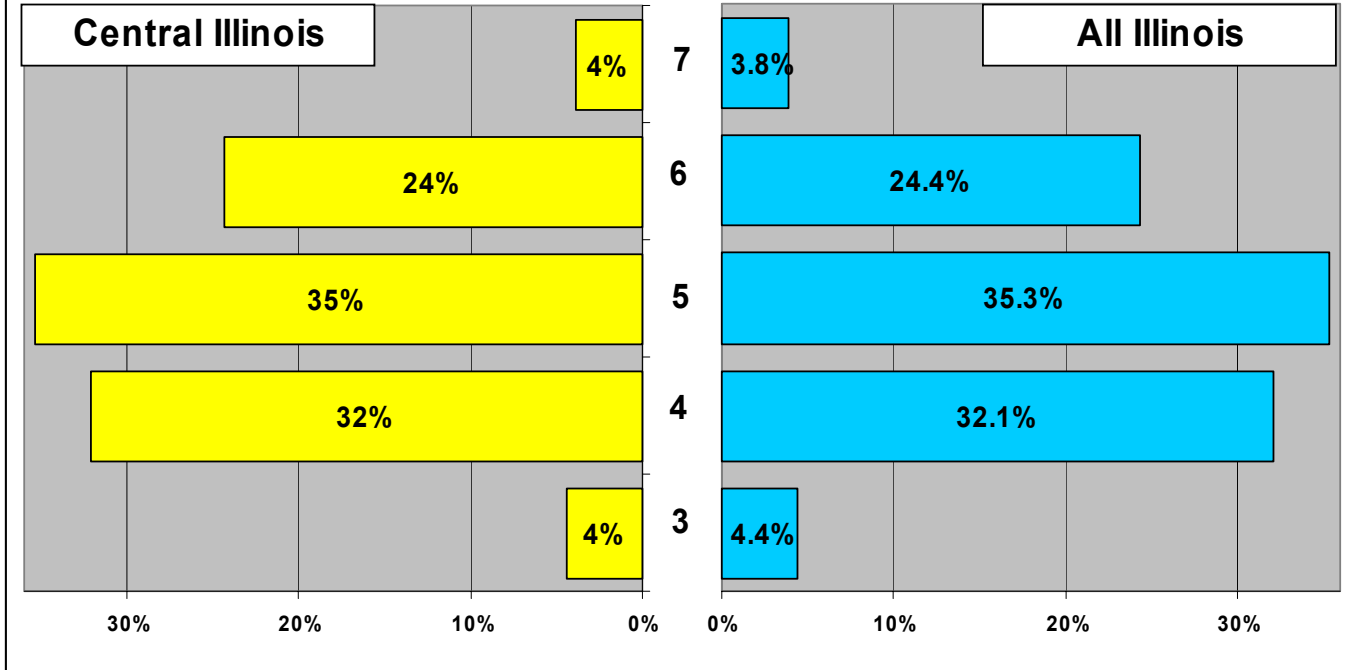


Figure 4-10
WorkKeys® Mathematics Scores
Central Illinois and State of Illinois High Schools, 2001

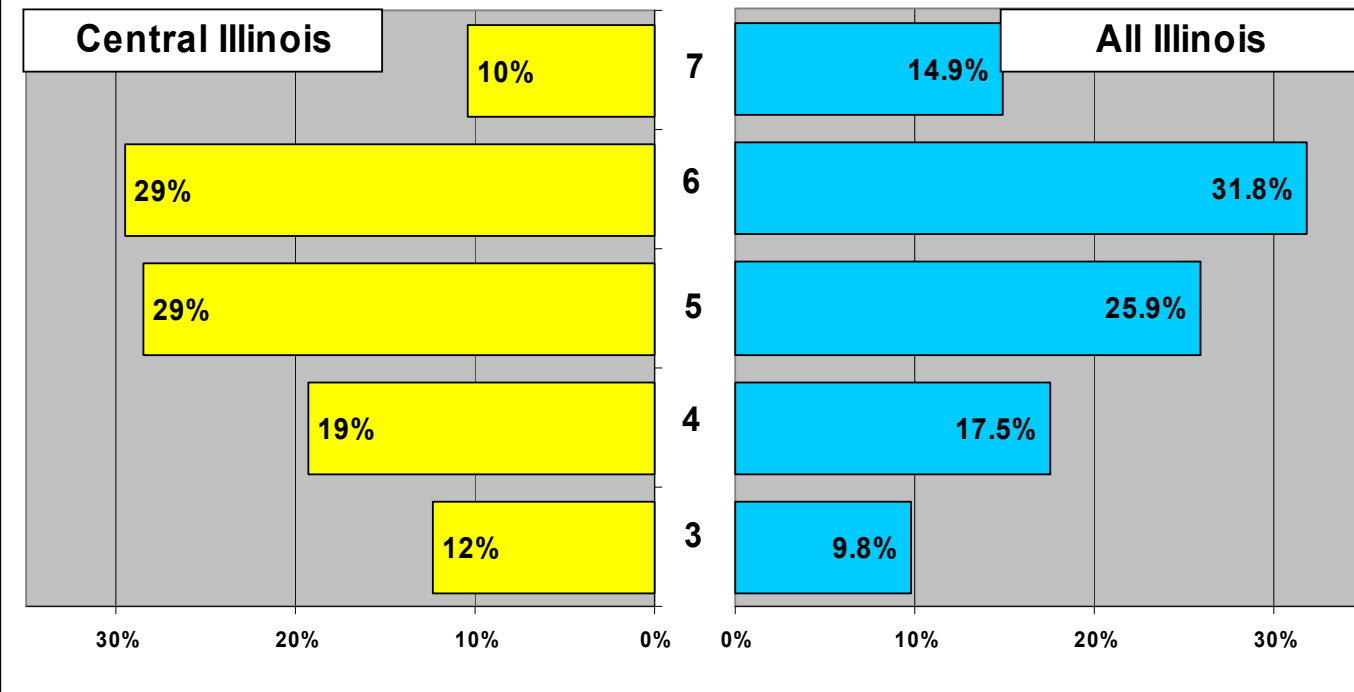
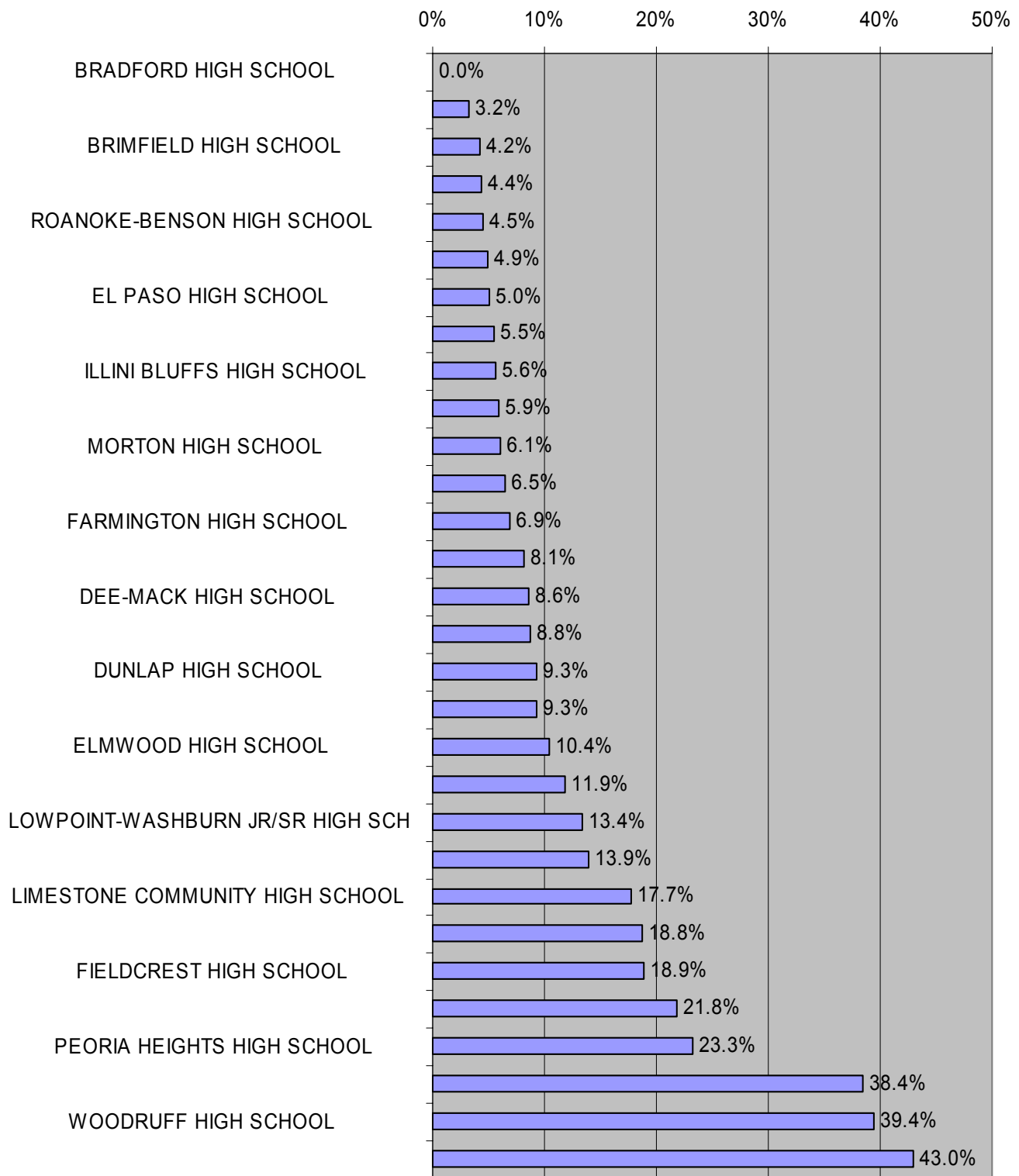


Figure 4-11
Turnover Rates in Central Illinois High Schools,
Academic Year 2000-2001



Source: Illinois State Board of Education

While there can be no denying that a student's ethnicity and economic circumstances may bring him or her educational advantages or disadvantages, these two factors are not decisive by themselves. The quality of the education work done within the schools themselves is also a hugely important factor enhancing or detracting from the final result.

There are some Illinois high schools with higher percentages of minority and low-income students than in any Central Illinois school that, nevertheless, perform significantly better than the worst performing of this area's schools. In other words, higher performance can be achieved despite socioeconomic disadvantages; some schools in some communities are already doing it.⁹

One other factor, when combined with minority and low income status, plays a hugely important role in frustrating satisfactory performance. That factor is "turnover," or the movement of students from one school to another, especially during the course of the academic year.¹⁰ Just as turnover in the workplace reduces employee productivity and bleeds employer profits, turnover in the "schoolplace" disrupts student focus and morale. The result is the same: lower productivity, whether on the job or in the schoolroom.

Multivariate analysis performed in the course of the study reported here indicates that minority (i.e., non-white) status, low family income, and student turnover account for 71% of the variance in dropout rates among 652 Illinois high schools. This same analysis showed that, among these three factors, it was turnover that exercised the greatest deleterious result.¹¹

Where turnover is low in Illinois, even in poorer minority communities, the dropout rate is much lower than in Manual, Woodruff, or Peoria High Schools, where the turnover rates are exceptionally high (see Figure 4-11). In other words, students in these three District No. 150 high schools, on average, perform below what would be expected on the basis only of

their ethnic and economic circumstances.

One can only imagine how disruptive to schoolwork it must be for the 43% of Manual High School students who churned in and out of the revolving doors of that school during the 2000-2001 academic year. Only slightly less disruptive would it have been for students at Woodruff High School (39.4% turnover rate) or Peoria High School (38.4%). In the world of business, it is only low-skilled, poor-paying jobs in the service and retail sectors that display such high turnover rates. And, barring major remedial efforts, it is only for jobs such as those that so many of the unfortunate dropouts, low-achievers, and rapidly churning students will be qualified in the 21st century workforce—if, that is, they can stay out of prison and find any jobs at all.

Although it is often used as an excuse, it is necessary to stress that students from minority and low-income families are *not destined* to perform poorly and below standards. Indeed, there are numerous counterexamples in the state and nation where schools with predominantly low-income and minority students perform well academically. It should become a major community goal in Central Illinois to raise every school's performance to that level.

It Can Be Done: Some Schools Have Lowered Their Dropout Rates and Raised Their Graduation Rates

In the mid-1990s, the City of Pekin and Pekin Community High School District No. 303 faced a situation of high dropout rates and very low graduation rates. To Pekin's great credit, people there recognized this situation as intolerable. To its even greater credit, the community decided to do something about it.

In 1996, the district, five feeder elementary school districts, and the community decided to confront the problem. They studied it. They researched its causes. They sought successful practices in similar Illinois communities. They formulated an action plan. Most importantly, they executed the plan. The astonishing results

Table 4-2
Dropout and Graduation Rates of Pekin Community High School
and the State of Illinois, 1996-97 and 2000-2001 Compared

	1996-97		2000-01	
	<i>Pekin Community High School</i>	<i>Illinois</i>	<i>Pekin Community High School</i>	<i>Illinois</i>
Dropout rate	7.70%	5.90%	2.50%	6.00%
Graduation rate	73.70%	80.50%	83.80%	79.00%

Sources: Illinois State Board of Education and presentation of Perry Soldwedel to PACC Education Vision Taskforce, September 5, 2001

are shown above in Table 4-2:

As Figures 4-12 and 4-13 show, Pekin Community is hardly the only Central Illinois high school to make dramatic progress in lowering dropout rates and raising graduation rates over the past five years. Other schools that merit praise for lowering dropout rates include Lowpoint-Washburn (7.5% to 1.6%), Peoria (13.9% to 8.1%), and Woodruff (25.7% to 14.1%) high schools. For raising graduation rates, special recognition goes to Delavan (78.7% to 93.8%), Peoria (72.8% to 84.1%), and Lowpoint-Washburn (72.2% to 83.3%) high schools.

Unfortunately, some high schools have lost some ground. Among them were Illini Bluffs (93.8% to 78.7%), Stark County (81.8% to 76.3%), Peoria Heights (83.7% to 72.3%) and Manual (78.3% to 63.2%).

There is still much room for improvement, but the fact that some Central Illinois high schools are making notable progress shows that it can be done.

Vocational Programs in Central Illinois High Schools

District No. 150 in Peoria has developed three unique Academy programs that are designed for specific careers. The three are the Business Academy, the Health/Science Academy and the Industrial Technology Academy.

The Business Academy involves area businesses in a variety of ways, including planning, mentoring, field trips, and summer job opportu-

nities.

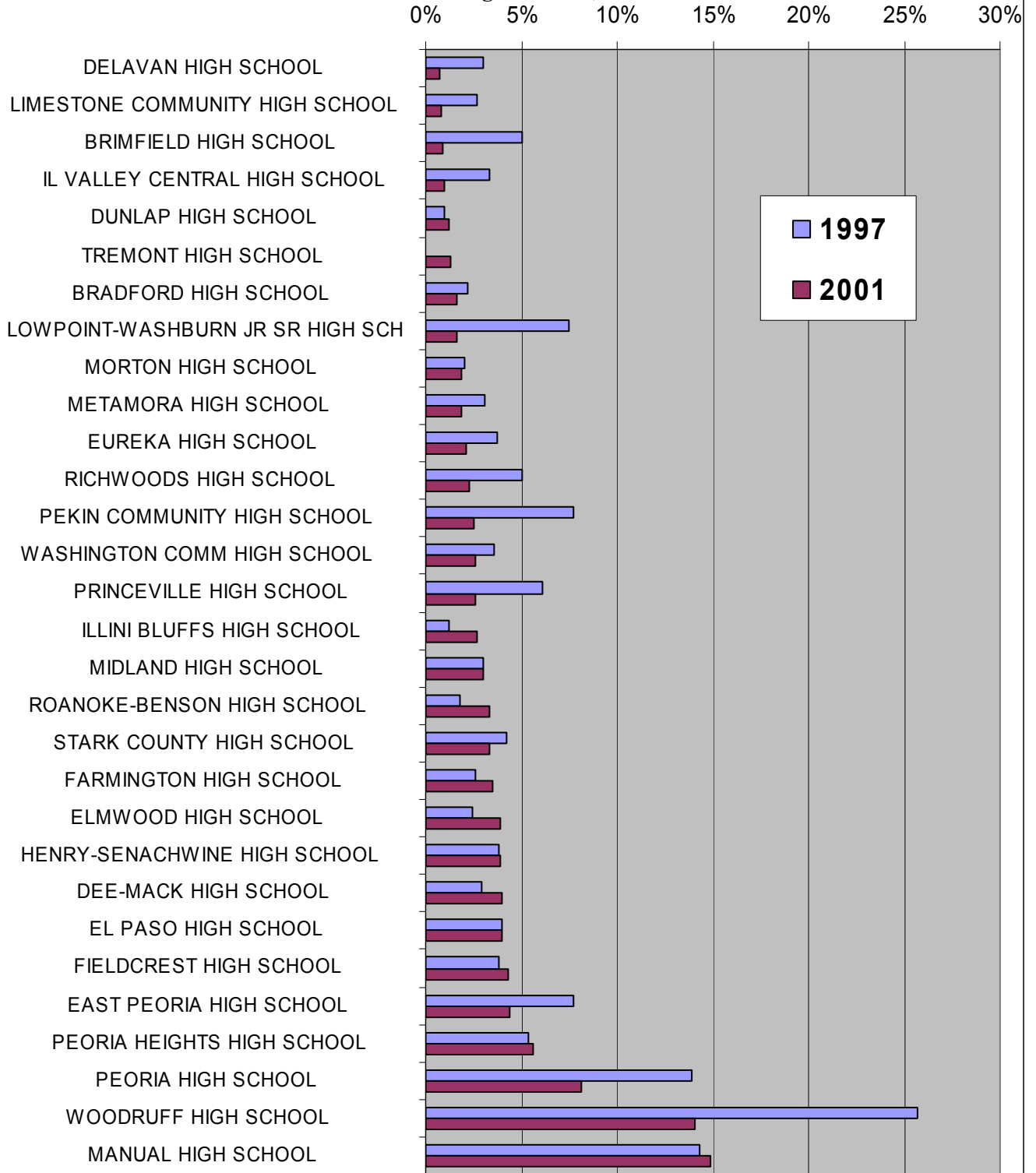
The Health/Science Academy offers comprehensive health occupation training and exposure to high-tech health equipment. There are approximately 75 students in this Academy.

The third program, the Industrial Technology Academy, provides students with training in CAD/CAM (Computer Assisted Drafting and Computer Assisted Manufacturing) and CNC (Computer Numerical Control), as well as industrial welding, robotics, and new technologies. There are 150 students in this 5-year program. CAT, Komatsu, and other area businesses support it generously.

Because of the lack of marketing and broad support, there are not as many students as there could be in these academies. With stronger community support, possibly as a part of implementing the Central Illinois Regional Bioscience Strategy, each of them could handle 70-75 students per year by adding bio-sciences and pre-engineering courses.

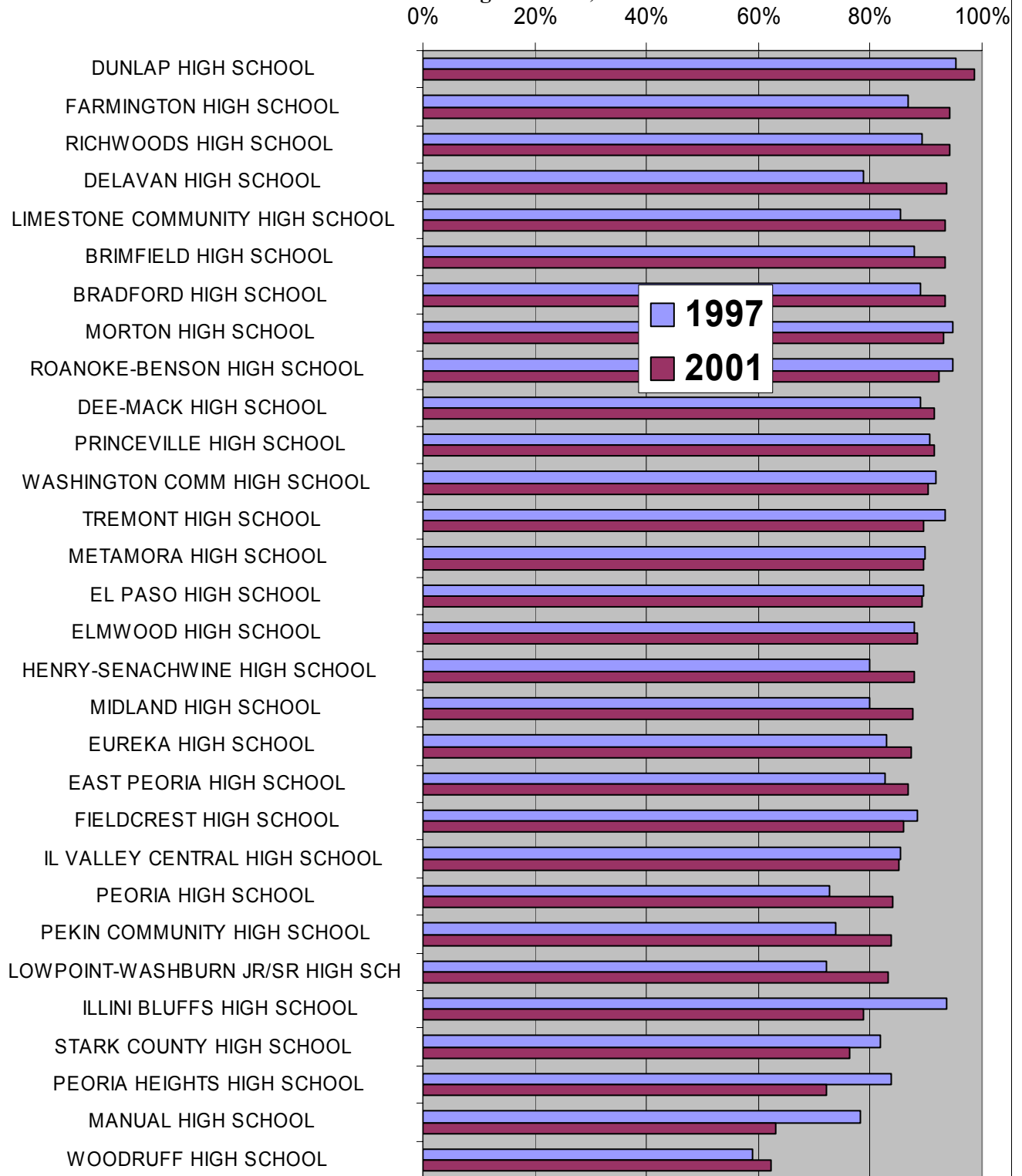
The Academies and other skilled trade programs in construction and culinary arts are coordinated through Peoria Educational Region for Employment and Career Training, better known as PERFECT.¹² The Academies are part of the Tech Prep program that PERFECT administers in conjunction with ICC. In addition, PERFECT has arranged funding for twenty-five schools in Peoria County to begin using the Internet based Kuder® Career Planning System. This system includes an electronic career portfolio, career search interest inventory, skills

Figure 4-12
Progress in Lowering Dropout Rates
in Central Illinois High Schools, 1997 to 2001



Source: Illinois State Board of Education

Figure 4-13
Progress in Raising Graduation Rates
in Central Illinois High Schools, 1997 to 2001



Source: Illinois State Board of Education

assessment, work values inventory, and an administrative database management system. This effort complements the career awareness days for students and teachers that PERFECT holds throughout the year for close to 1,000 students and faculty.

School/Business Partnerships

In many schools across America, career and guidance counseling takes a back seat to virtually everything else that goes on. The results are serious and sad. Young people find themselves making some of the most important decisions of their lives without adequate information and advice.

The unpleasant truth is that career and guidance counselors themselves too often lack fresh and accurate information about the real world of work outside the schools. They need more and better information about emerging occupations so that they can better advise their students.

Both counselors and teachers need a deeper awareness that customer service, leadership, and team building skills are increasingly important in the 21st century workplace. These, among many others, are areas in which business and schools can fruitfully partner.

Among the many partnerships between schools and businesses in Central Illinois, there is an especially notable one: College YES! - Youth Education Scholarships, which benefits current and future students at Manual High School in Peoria, and has been recognized. CILCO funds the scholarship and mentoring program in partnership with Manual High School and Illinois Central College. All selected students are assigned a personal mentor who is a CILCO volunteer, an ICC faculty or staff member, or some other community leader. Students and mentors actively participate in monthly special events as well as additional supplemental academic opportunities. Students who participate in a minimum of 70% of the scheduled activities and graduate from Manual High School in good standing at their scheduled

time receive a two-year scholarship to ICC. Evidence mounts that the College YES! Program works: It was recognized as an Exemplary Partnership at the annual Illinois Business-Education Partnership Conference.

Beyond colleagues' kudos, success is beginning to show up on the numbers: Results of Program's the first year ('98-'99) included a 95% retention rate and solid grade improvements for the 15-20 high school sophomores who participated.

ICC sponsors the Education to Careers (ETC) program in the Central Illinois area. To date, thirteen area schools have received mini-grants to conduct career awareness days and distribute materials about careers to students in middle and elementary schools.

This is a commendable effort, and it deserves to be promoted by the business community, parents, and teachers so that all Central Illinois students will be reached at least once a year throughout their K-12 educational experience with increasing information and projects to better understand the 21st century workplace and requirements for jobs in which they will be operating.

The young people of Central Illinois will need earlier and broader familiarity with the world outside this region. The integration of the area's economy into the larger global economy is proceeding fast apace. To succeed in global marketplaces, the area's businesses will need people with foreign language proficiency and knowledge of other peoples' ways and cultures.

In the "global war for talent," the businesses of Central Illinois must be able to recruit and retain talented people not only nationally but internationally. To help meet these needs, School District No. 150 and Caterpillar recently launched the International Baccalaureate (IB) Program at Richwoods High School. Nationally and internationally, the 50-year-old IB program is well known, exceedingly rigorous, and prized among well-educated parents as a desir-

able program for their own children. Since the IB degree is globally transferable, students in this program will be recognized for their accomplishments no matter where they attend university. This program needs to be supported and strengthened.

Private and Parochial Schools in Central Illinois

There are more than twenty parochial schools in the Peoria area and at least one non-denominational private K-8 school. Because the Illinois State Board of Education does not release statistics about private and parochial schools, however, we are unable to analyze the strengths and challenges of these schools in producing graduates who will prosper in the 21st century workforce in Central Illinois.

An inventory of their career counseling programs, business and community collaborations, and test results would be helpful to the Central Illinois community in fully understanding the extent and quality of education and workforce development in all schools in the region.

Conclusions About Central Illinois High Schools

Several conclusions emerge clearly from this analysis and survey of Central Illinois high school performance:

- Only a tiny fraction of students are so handicapped or disadvantaged that they cannot meet Illinois' academic achievement standards.
- Every student can and should learn.
- Improvement is possible. The records of other schools in the state and nation, as well as in Central Illinois itself, demonstrate that determined school and community leadership can improve student performance even in difficult circumstances.
- Some schools have very high dropout rates and very low graduation rates. These indi-

cators appear worse than they should be, even taking students' ethnicity and poverty fully into account. The community can and should address the exceptionally high turnover rates among students where they occur. To repeat and re-emphasize, reducing student turnover is a shared responsibility between the community and the schools of the district.

- Beyond reducing turnover, there is much that can and should be done at the district and school level to improve dropout rates, graduation rates, and ISTAT or PSAE performance in certain Central Illinois schools.
- At the end of the day, improvement of school performance is a *community* challenge and responsibility. To ignore this challenge or shirk the responsibility is to imperil the future of the area's workforce and economic development. It is also to imperil the area's future social stability and tranquility.
- More programs are needed to better inform career and guidance counselors about emerging occupations that their students need to be aware of in order to make rational career choices.

Other Education Providers in the Central Illinois Workforce System

High schools are, obviously, not the only important providers of educational services in the Central Illinois workforce development system. What follows is a brief survey of some other key players.

Post-Secondary Educational Institutions

Central Illinois is home to several post-secondary educational institutions that already play key roles in workforce development and must do even more in the future if the area's economic development aspirations are to be realized.

ICC and Workforce Development			
	Augment Quantity	Improve Quality	Improve the Match of Workers to Jobs
Entrant workforce			
Marginal workforce			
Incumbent workforce			
Elite workforce			

Illinois Central College (ICC)

ICC enjoys a fine reputation as an educational institution in Central Illinois. At the time of this writing, a separate study of ICC and its strategic directions is in progress. Consequently, no attempt is made here to cover ground that will be covered in that study. What follows are a few observations emanating from interviews with members of the business community and ICC faculty and staff, as well as a focus group of students.¹³

To make the Regional Bioscience Strategy for Central Illinois a reality, ICC needs to market its health and science and engineering programs more aggressively. As a recent report by the American Association of Community Colleges points out, these fields are in high demand and they pay very well. ICC needs to continue its leadership role in ensuring that high school students understand that a two year program in these fields can benefit them financially and professionally.

Students in the focus group at ICC and students who participated in the Central Illinois Higher Education Consortium study both commented about the lack of guidance and career counseling that they received.¹⁴ Since too many students flounder during their late teen years and their twenties trying to make up their minds about a career that they like and are prepared for academically, ICC should take a serious leadership role in improving the quality of its internal counseling functions. Providing courses and internships for high school guidance counselors to learn about emerging occupations and to use the hardware and software

that are abundantly available to teach students about new careers could also be useful. In addition, ICC should offer WorkKeys[®] job profiling to students to assess their workplace skills. WorkKeys[®] profiling could also be made available to employers who want to assess their workers and job candidates.

The most recent projections of the Bureau of Labor Statistics, for the period 2000 to 2010, indicate that 18.6% of all job openings will require an Associate’s Degree or a postsecondary vocational award. They also indicate that 69.8% of job openings will require some kind of on-the-job training. ICC has primarily focused on its undergraduate degree programs and now only receives 4% of its revenue from contract training. To prepare Central Illinois’ incumbent and emerging workers for their current jobs as well as the more demanding occupations in the near future, it seems logical that ICC should devote and market itself far more aggressively to employers for short term training. Online courses and classes customized for the employer could also help meet this need.

Central Illinois’ Universities and Research Institutions

A recent issue of *US News and World Report* ranks Bradley University twentieth nationally in the quality of its undergraduate engineering programs. Bradley was compared to schools across the nation that do not offer Ph.D. programs. It also ranked well among private Midwestern liberal arts colleges.

Bradley features as a major player in the Central Illinois Regional Bioscience Strategy. As was noted in the Battelle report that laid out

Universities and Workforce Development			
	Augment Quantity	Improve Quality	Improve the Match of Workers to Jobs
Entrant workforce			
Marginal workforce			
Incumbent workforce			
Elite workforce			

that strategy, Bradley University's new addition to the Olin Hall of Science is nearing completion. Bradley is making major efforts to garner research grants to improve its status as a research institution. For example, the National Science Foundation awarded Bradley University \$131,000 in 1999. This is a good start toward building stronger industry collaborations and technology commercialization connections within the Central Illinois region.

Bradley also hosts an annual Berlin-Prague Seminar. These are two areas of the world that are known for their emphasis on science and technology. More international connections would help Bradley and Central Illinois reach their joint goals of being more connected to the global economy.

Other important institutions that are vital to the Regional Bioscience Strategy for Central Illinois are the University of Illinois College of Medicine at Peoria and the U.S. Department of Agriculture's National Center for Agricultural Utilization Research (NCAUR).

With virtually no exceptions, the regions in the United States where economic development is most buoyant are home to one or more universities with top-quality research and graduate education programs. A yeasty symbiosis between such universities and private industry explains much of the recent entrepreneurial dynamism of many economic growth centers in the country. The examples of Silicon Valley (Stanford and UC Berkeley); Eastern Massachusetts (MIT, Harvard, and others); North Carolina's Research Triangle (Duke, UNC); Austin, TX (University of Texas); and Denver-Boulder (Colorado & Denver universities) serve to make the point.

To spur its future economic and workforce development, Central Illinois clearly needs to nurture such a symbiosis. Such a symbiosis would require at least one university with top-quality research and graduate education programs in, at least, engineering, business, computer science, health sciences, and other biosciences.

In Central Illinois, Bradley University is an obvious candidate to become a nucleus of research and graduate education. Bradley University now offers seven Masters Degree programs in Engineering and Nursing. As the Battelle Institute report on the Regional Bioscience Strategy for Central Illinois points out, adding Ph.D. programs in these fields will greatly help the region attract top talent that will want to tap that expertise and/or teach in these programs. The engineering program in particular has close connections with Caterpillar, which increases its viability and relevance to Bradley engineering graduates. That program could become the core of the Center for Advanced Manufacturing envisioned in Scenario Number Three (see Chapter One).

Nursing is an essential piece of the Regional Bioscience Strategy for Central Illinois and health care delivery in the area. Central Illinois is fortunate in having five programs that turn out many fine graduates every year. These programs reside at Illinois Central College, Methodist Hospital, OSF St. Francis Hospital, Bradley University, and the University of Illinois College of Medicine at Peoria. Although there is a short physical distance between these institutions, they do not seem to collaborate or coordinate to an optimal degree. We are concerned that the isolated operations of these five current nursing programs in Central Illinois will not meet the future needs for trained nurses that are implied by the Regional Bioscience Strategy for Central Illinois.

Given a present and projected shortage of training nurses, a strong case can be made for a concerted, area-wide effort to better acquaint young men and women with nursing as a career. For that, guidance counselors would need to be educated about the professional opportunities, compensation, and lifestyle choices afforded by the nursing field. The unfolding Regional Bioscience Strategy for Central Illinois can play a major role in helping to foster the collaboration among the nursing schools necessary to meet Central Illinois' economic development and health care needs.

Central Illinois aspirations for economic development hinge significantly on area employers' ability to recruit and retain skilled engineers and other professionals. A shortage of such skilled professionals looms in Central Illinois, as in most other areas of the nation, because too few young people prepare themselves academically for these careers.

A relatively new university/community collaboration attempting to address this problem is Bradley University's Engineers for Tomorrow program (EFT). EFT was started in 2001 and is designed to let middle and high school students learn about the extensive opportunities in engineering. Summer camps, job shadowing, internships, and scholarships, as well as close contact with the business community and schools should help in raising awareness about the importance of engineering as a career ladder in Central Illinois for its young people. The EFT program also strongly encourages women and minorities to pursue engineering degrees.

Greater **entrepreneurism** must be an important ingredient of Central Illinois' future economic development. Fortunately, Bradley University's business school has recently increased its emphasis on entrepreneurship and entrepreneurial studies. Its incubator is already filled with starter companies. Nonetheless, more space needs to be made available for even more companies to focus on bioscience activities. The University's small business development courses are also well subscribed to, but enrollment needs to rise to higher levels. Room for improvement exists, for example, in adding courses such as NxLevel and in marketing the school's Development Center to the region more strongly.

Reflecting an anticipation that most Americans will have more than one career and will be in business for themselves at some point in their lives, ICC began the SET - Self-Employment Training Program in 1990. SET provides small business management workshops on a regular basis on 10-15 topics to help entrepreneurial wannabees. The program also offers two business plan credit classes: a 5-week overview

called Developing a Small Business Plan, and a 16-week research and development class called "Working For Yourself." More than 1,500 people have gone through both the workshops and business plan classes. Approximately 185 have graduated from the "Working For Yourself" class. A website and online courses are due to be released during 2002, which will add greatly to the need for entrepreneurial dynamism in the region.

More collaboration by ICC with Bradley's SBDC program and joint marketing of both programs in all public workforce development centers in the five-county area would be desirable in conjunction with the Chamber of Commerce's efforts to boost economics education and Junior Achievement clubs.

Private Training Providers

Central Illinois' incumbent workforce, people who are normally employed, constitutes the bulk of the area workers. Although the federal Workforce Investment Act of 1998 (WIA) mandates that the workforce development system should concern itself with the incumbent workforce, the research performed as part of this study has seen little evidence of that concern, at least in the public and semi-public parts of that system.

Private Sector Training and Workforce Development			
	Augment Quantity	Improve Quality	Improve the Match of Workers to Jobs
Entrant workforce			
Marginal workforce			
Incumbent workforce			
Elite workforce			

Sometimes it is thought that workforce development is carried on only in the public sector. Nothing could be farther from the truth. Even a cursory look at private sector companies and union sponsored apprentice programs reveals that there are close to fifty organizations in Central Illinois offering training in such fields

as nursing, vocational fields, construction, computer hardware, software, and networking. These training institutions are vital in providing customized training to new graduates and to members of the incumbent workforce who need to upgrade their skills.

Unfortunately, there is no systematic compendium in Central Illinois of these private training providers and their services. A survey of private training providers could provide highly useful information about these organizations, their programs and services, their clients, as well as the outcomes and measurements used to measure their success. Such information would enlighten both workforce and economic developers about the breadth of resources that already exist in Central Illinois. It would also facilitate collaboration between the private and public sectors and help avoid duplication and unnecessarily overlapping services.

Beyond private training firms, many companies in various other industries devote much money and energy to the in-house training of their employees. Alas, no data exist on the scale and magnitude of this private investment in workforce development. Here too, it would be useful to conduct periodic surveys of companies in Central Illinois to discover the kinds of in-house training programs provided by companies to their own employees, as well as how (and if) those firms work with outside training providers, whether in the public or private sector. A complete survey of all the training needs within Central Illinois would be a highly useful tool for all workforce and economic development professionals.

Improving the Match of Workers With Jobs			
	Augment Quantity	Improve Quality	Improve the Match of Workers to Jobs
Entrant workforce			
Marginal workforce			
Incumbent workforce			
Elite workforce			

Improving the Match of Workers to Jobs

All markets exist to bring buyers and sellers together and to facilitate their transactions of exchange. In this respect, labor markets are no different than other markets. Like other markets, labor markets are efficient to the extent that they produce an expeditious and optimal match of sellers (job seekers) with buyers (employers) at the lowest costs to all concerned.

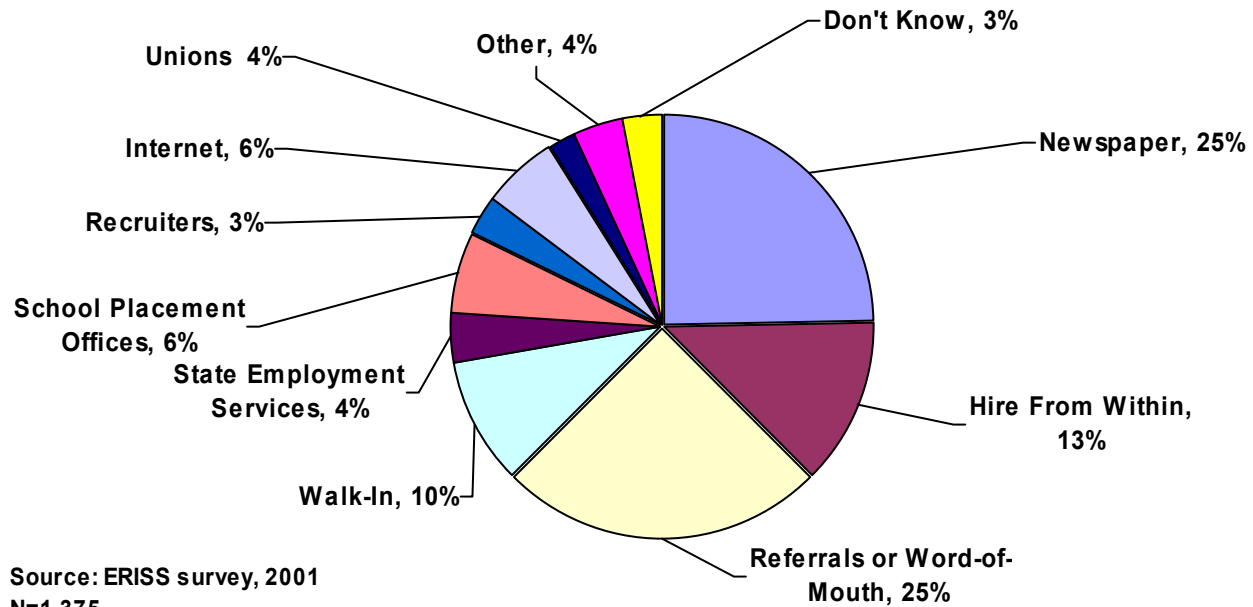
The efficiency with which labor markets operate has long been a central concern of public policy makers and labor economists. An appreciation for efficient labor markets is best gained by contemplating their opposite, i.e., inefficient ones. Symptoms of inefficient labor markets include:

- High unemployment rates;
- Long-duration unemployment for job losers;
- Workers working in jobs for which they are ill suited;
- Protracted and costly searches by job seekers for work;
- Protracted and costly searches by employers for the workers they need;
- High worker turnover rates;
- Significant numbers of discouraged workers dropping out of the workforce;
- Low labor force participation rates.

Generally, markets work best when there are few impediments to voluntary contracting between would-be buyers and would-be sellers. Markets tend to work well, to be efficient, when all buyers and sellers are well informed about what they want to buy and/or what they have to sell, as well as about the options and terms available to them in the marketplace. Good information and its easy availability to all market participants, then, are critically important to labor market efficiency.

Figure 4-14

Recruitment Methods Favored by Central Illinois Employers
(Percentage of survey respondents indicating that they found the method to be effective)



What are the institutions that provide labor market information in Central Illinois? How good is the information they provide? One indication of how and where job seekers and employers get information about one another comes from a 2001 survey of 1,375 local businesses from Peoria, Woodford, Tazewell, Marshall, and Stark counties that was conducted by the ERISS Corporation for the City of Peoria Workforce Development Department and the Central Illinois Workforce Development Board. Respondents in this survey were asked to indicate which recruitment methods they found most effective. Figure 4-14 displays the aggregate results.

Newspaper advertisements and “Referrals or Word-of-Mouth” each were cited by a quarter of employer/respondents as one of their most effective recruitment methods. In third place was “Hire From Within” and then, with 10%, came the even more informal method of “Walk-In,” presumably meaning that job candidates simply appeared at the employer’s door seeking a job. Evidence that employers and job seekers

were using more formal or systematic matching services was slim.

“School Placement Offices” figured importantly, with 6% of the employers surveyed. This seems small until we consider that it pertains only to entrant workers (i.e., those coming directly from school to work) and not to the incumbent, marginal, or elite workforces; thus it may not be such an unreasonably low percentage.

“State Employment Services” was mentioned by 4% of responding employers overall. Manufacturing, with 8% of respondents, was the only major industrial sector in which employers seemed to make significant use of this recruiting method (See Table 4-3). Unions were important only in the mining and construction industries, where they dominated as the most important recruiting method.

The major conclusion emerging from these survey results is that labor market information in Central Illinois is exchanged between employers and job seekers primarily by traditional

Table 4-3
Recruitment Methods Favored by Central Illinois Employers,
By Major Industrial Sector
 (Percentage of survey respondents indicating they found the method to be effective)

	<i>Newspaper</i>	<i>Hire From Within</i>	<i>Referrals or Word-of-Mouth</i>	<i>Walk-In</i>	<i>State Employment Services</i>	<i>School Placement Offices</i>	<i>Recruiters</i>	<i>Internet</i>	<i>Unions</i>	<i>Other</i>	<i>Don't know</i>
Agriculture	27%	2%	44%	6%	0%	11%	0%	0%	0%	6%	5%
Mining	0%	25%	0%	25%	0%	0%	0%	0%	50%	0%	0%
Construction	10%	8%	25%	8%	4%	0%	2%	3%	29%	8%	2%
Manufacturing	21%	17%	21%	13%	8%	4%	5%	3%	4%	2%	2%
Transportation & Utilities	29%	13%	27%	9%	3%	3%	2%	5%	1%	3%	4%
Wholesale	25%	11%	30%	8%	4%	7%	5%	5%	0%	3%	2%
Retail	18%	13%	30%	19%	4%	4%	3%	3%	1%	1%	2%
Finance	25%	18%	25%	9%	4%	5%	3%	6%	0%	3%	4%
Services	26%	13%	25%	10%	3%	7%	3%	6%	1%	3%	3%
Government	20%	11%	11%	5%	2%	10%	2%	10%	2%	18%	10%
All	25%	13%	25%	10%	4%	6%	3%	6%	2%	4%	3%

Source: ERISS Survey, 2001 N=1,375.

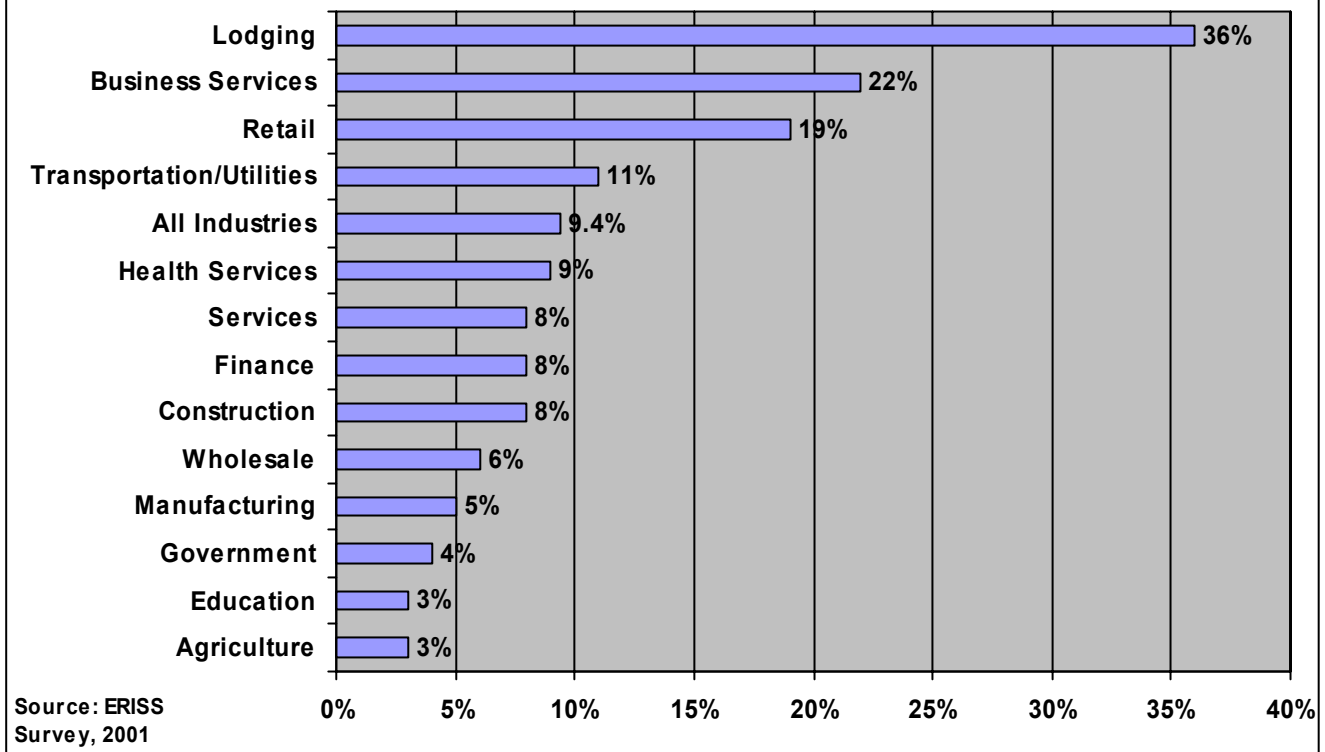
means, such as newspapers, word-of-mouth, and walk-ins. Formal employment services, whether public or private, play relatively insignificant roles. The “Internet” scored a surprisingly high 6%, a number that is likely to rise in the future as more employers and job seekers employ electronic means of connecting with one another.

Even though most employers find traditional labor market information systems to be most effective, it would be a mistake to conclude that the Central Illinois labor market works poorly. None of the symptoms of inefficient labor markets seem to be present. Unemployment rates in the area have not recently been high com-

pared to state or national averages. There is no evidence that persons who do lose their jobs are forced to suffer inordinately long periods of unemployment. The recruitment methods favored by Central Illinois employers, whatever else may be said of them, are relatively inexpensive. There are no evident signs that significant numbers of discouraged workers are dropping out of the workforce.

Typically, when a large percentage of workers find themselves in jobs for which they are ill-suited or unhappy, the worker turnover rate (i.e., the percentage of workers changing jobs within a 12-month period) will be high. But that does not seem to be the case in Central Illi-

**Figure 4-15
Turnover Rates in Central Illinois,
by Industry Sector**



**Table 4-4
Labor Turnover Rates in
All Industrial Sectors, Various Areas
(Average annual turnover rates)**

VA- Southwestern Virginia	7.1%	KY- Cumberland	11.6%
CA- Los Angeles County	7.5%	TX- Waco/Heart of Texas	11.9%
CA- Verdugo	7.6%	OH- Ohio	12.0%
CA- Foothills	7.8%	CA- Central Valley	12.2%
VA- Hampton Roads	8.4%	FL- Polk County	12.4%
CA- Orange County	9.2%	VA- Crater Region	12.9%
IL- Central Illinois	9.4%	TX- San Antonio/Alamo	13.1%
PA- Pittsburgh	9.6%	VA- Greater Richmond	13.8%
IL- Chicago	9.9%	TX- Tarrant	15.9%
FL- Jacksonville	10.2%	CA- Riverside	27.8%
FL- Treasure Coast	10.4%	IN- Central Indiana	33.0%
FL- Palm Beach	11.5%		

Source: ERISS Employer Survey 2001.

data are available (Table 4-4).

The only industrial sectors in Central Illinois showing high turnover rates are lodging, business services, and retail. ERISS employer surveys in other jurisdictions always show high turnover rates for these three sectors. For all three of these sectors, turnover rates in Central Illinois are lower than in most of the other areas as well.

The fact that Central Illinois labor markets appear to be operating as, if not more, efficiently than those of other areas is no cause for complacency. All

nois (see Figure 4-15). The average turnover rate reported by all employers surveyed by the ERISS Corporation in 2001 was 9.4%, which is significantly below the median rate measured in 23 jurisdictions for which comparable ERISS

workforce professionals and HR managers in the area need to be trained to use the labor market information intelligence system (<http://www.usworks.com/Peoria>). The same applies to the Illinois Skills Match system at

<http://www.illinoisskillsmatch.com/>, and to Illinois' Job Bank at <http://www.ajb.org/il/>, which is part of America's Job Bank. Nearly all of the major Central Illinois employers feature employment or career pages on their websites, but many more need to do so. Already, the Internet is favored as a recruiting method by 6% of area employers; undoubtedly that share will rise in the years ahead.

Summary and Conclusions.

- Workforce development occurs through the application, singly or in combination, of three general tools—augmenting the workforce size, improving the workforce quality, and improving the match between workers and jobs—to the workforce pool, which consists of four subgroups—the entrant, the marginal, the incumbent, and the elite workforces.
- "Worker dearth," especially among the most skilled and qualified workers, promises to pose a continuing challenge for the Central Illinois economy in the coming decades. Increasing the size of the workforce is one direct way of dealing with this challenge. The area will need to focus on recruiting and retaining as many qualified workers as possible, both in the public and the private sectors. Public workforce organizations will need to contribute to existing efforts by local companies much more than they have historically. Furthermore, much greater understanding is needed of what attracts and repels workers.
- Central Illinois will also need to focus on improving the quality of its workforce, in order to deal with the challenges of a potentially slowly growing workforce. The main way to do this is to shift from predominantly low-paid jobs requiring low skill levels to predominantly higher paid jobs with higher skill requirements.
- The jobs that grow most rapidly in Central Illinois must be those that require higher skills (and therefore pay better).
- The Central Illinois workforce must constantly raise its level of skills, knowledge, and other workforce competency so as to be able to fill those better jobs.
- Education is absolutely vital to workforce survival and development. Most 21st century jobs will require at least a full high school education or the equivalent, and many students will need to be prepared to continue education beyond high school.
- Central Illinois schools are generally on par with or in slightly better shape than the state of Illinois as a whole when comparing high school graduation and dropout rates, standardized and ACT test scores, and percentages of students taking the ACT exam. Even so, Central Illinois has room for improvement in all of the noted categories. For some of the area's schools, it is an absolute necessity if the area's youth are going to be at all competitive in the 21st century workforce.
- Central Illinois' best schools are nonetheless not among the state's very best.
- Some Central Illinois high schools tend to have embarrassing records when it comes to test scores and graduation and dropout rates. The performance of students in some of these schools is below what would be expected statistically based on their socioeconomic composition.
- Minority status, poverty, and higher student turnover rates all have a statistically deleterious effect on high school dropout rates across the state of Illinois. Of these, high student turnover rates are the greatest and most definite threat to student success. Central Illinois needs to work energetically to decrease student turnover rates.
- The community can and should address the exceptionally high turnover rates among students in some districts. To repeat and

re-emphasize, reducing student turnover is a shared responsibility between the community and the schools of the district. To their credit, some area high schools and their communities already have arisen to meet this challenge.

- Beyond reducing turnover, there is much that can and should be done at the district and school level to improve dropout rates, graduation rates, and ISTAT or PSAE performance in Central Illinois schools.
- Bringing students into closer contact with the working world, for example via vocational programs and school/business partnerships, can do great things for the entrant workforce. Such programs need support, enhancement, and marketing in order to live up to their full potential.
- An inventory of their career counseling programs, business and community collaborations, and test results would be helpful to the Central Illinois community in fully understanding the extent and quality of education and workforce development in all schools in the region, public and private.
- Universities and research institutions are vital to any major economic development. Central Illinois' universities and research institutions—Bradley University, the University of Illinois College of Medicine, the National Center for Agricultural Utilization Research, Illinois Central College—will be vital to any effort at major economic development in the region. These institutions should be supported to the maximum extent possible.
- Nursing education is critically important to the realization of the Regional Bioscience Strategy for Central Illinois. The several nursing programs in the area are generally strong but could be made stronger and more attractive via fuller coordination among the institutions offering nurse training programs.
- The training of the incumbent workforce, though mandated by the WIA and essential for raising worker productivity in Central Illinois businesses, has yet to be fully embraced by the public sector of the area's workforce development system.
- Private sector companies and organizations invest a great deal of time and money in the training and retraining of their employees. Few data exist on this subject, however. It would be highly instructive and extremely helpful to document the workforce needs and workforce training practices throughout the Central Illinois region, so as to improve and expand the training of the incumbent workforce.
- Central Illinois' labor market appears to be relatively efficient compared to other jurisdictions. There appears to be little or no evidence of exceptionally high worker turnover, protracted unemployment, or low workforce participation rates. But this should be no cause for complacency.
- Central Illinois employers use mostly traditional labor market information systems (e.g., newspaper advertisements, employee referrals, word-of-mouth) to recruit new workers. Internet-based methods will assume much greater importance in the years ahead.
- The area's workforce professionals should make full use of Internet resources including those in the private sector. Internet-based job boards (e.g., Monster.com, America's Job Bank, Nationjob.com, and Illinoismatch.com) will become the job search tools of choice to younger generations of Americans.
- Newspapers, for which job advertisements historically have been large revenue producers, will need to improve their online capabilities greatly in order to compete.

Chapter 5: Institutions of Workforce Development in Central Illinois

The term “workforce development” is a relatively new entry in America’s public policy lexicon. Many of the programs and activities now associated with that term developed historically as independent strands of federal and state policy that were designed to focus on specific problem areas. This chapter briefly surveys the history of public workforce development institutions in the United States and explores how such institutions have evolved in Central Illinois. It concludes with observations on desirable future steps.

Traditional Workforce Development

Perhaps the earliest of the nation’s efforts to address what we now call “workforce” issues were those focused on veterans’ job needs. Their needs and those of others impacted by the Great Depression were significantly addressed by the Wagner-Peyser Act of 1933, which established the United States Employment Service at the federal and state levels. That act funded a labor exchange designed to match employers with qualified out-of-work applicants. It linked that labor exchange to an unemployment compensation program with the aim of helping applicants filing for unemployment benefits to find new job opportunities.

In the post-war decades, the Wagner-Peyser Act was supplemented and then amended by a multitude of separate legislative initiatives at both the federal and state levels. Among the most important supplements was the Manpower Development and Training Act (1962), which aimed to retrain heads of families displaced by technological and economic change, and the Comprehensive Employment and Training Act (CETA) of 1973, which intended “. . .to provide training, employment and other services to economically disadvantaged, unemployed, and underemployed persons, leading to self-sufficient unsubsidized employment.” There were also many others, such as the Servicemen’s Readjustment Act of 1944 (the “G. I. Bill of Rights”), which provided education and other job benefits for ex-servicemen.

Major amendments to the Wagner-Peyser Act came with the Job Training Partnership Act

Traditional Workforce Development			
	Augment Quantity	Improve Quality	Improve the Match of Workers to Jobs
Entrant workforce			
Marginal workforce			
Incumbent workforce			
Elite workforce			

(JTPA) of 1982, which highlighted training as the key to putting jobless people to work. In 1990 came the Individuals with Disabilities Education Act (IDEA), with provision for services as “a coordinated set of activities for a student, designed within an outcome-oriented process, which promotes movement from school to post-school activities, including post-secondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation.” Later still came Welfare to Work (the Personal Responsibility and Work Opportunity Reconciliation Act of 1996) and various Temporary Assistance to Needy Families (TANF) programs with provision for training and job placement assistance for welfare recipients.

For present purposes, the important points about these traditional governmental workforce development initiatives are these:

- They are all directed at the problems of what are here called the “marginal” and “entrant” parts of the workforce, as shown by the shaded cells of the small matrix above.

System or Non-System?

[W]hat was called the employment and training “system” was really, upon closer scrutiny, not a system at all. Rather, what existed was an enormous collection of federal and state agencies and programs each with its own set of legislative histories and mandates, administrative policies and procedures, and its own set of services and products. As a result, individuals and employers who accessed one of these agencies or programs would often find that the range of possible services was limited to whatever that agency or program had to offer. If the individual or company had other needs, these were often left unmet or, worse, undiscovered.

It wasn’t that their needs couldn’t have been met by another program with another set of services and expertise. It was just that too often staff at local, state, and federal employment and training agencies did not possess adequate information, training and incentive to know what resources were available elsewhere and how to help connect customers to those resources. And, in those cases where customers were able to access services through multiple programs, getting their needs met was further confounded by having to fill out stacks of similar forms at each agency, being assigned multiple case managers, and then finding out that obtaining information and decisions about their “case” often took days and weeks because of an inability of one agency’s computer system to talk to another’s.

Clearly, this is not a system. Or if it is, it isn’t a functioning one.”

Performance Excellence in One-Stop Career Center Operations, a Guide for Workforce Boards, Workforce Excellence Network, 2000.

- They are very large in number, many more than suggested by the few that were noted in the preceding paragraphs.
- They spawned a correspondingly large number of essentially uncoordinated programs, agencies, and other entities at the federal and state levels, each supported by its own funding stream. The tendency has been for each of these entities to guard their existences, independence, and funding quite jealously.
- To the “customer,” whether job-seeker or employer, this uncoordinated multiplicity of entities is confusing in the extreme.

WIA Attempts to Reform Traditional Workforce Development

After years of political wrangling and mounting frustration with the perceived deficiencies of the hodge-podge “system” of traditional workforce development, the U.S. Congress passed and the President signed the Workforce Investment Act of 1998. With its 313 pages of

single-spaced type and convoluted prose and compromise, WIA defies simple summary.¹ Even so, the main objectives of the act were clear:

- Refocus the nation’s workforce development (or—in WIA’s language—“investment”) agencies and institutions from their nearly exclusive concentration on the marginal workforce to a much broader population including, specifically, the incumbent workforce;
- Bring greater system simplicity, responsiveness, and effectiveness to America’s

WIA’s View of the Workforce Development Domain			
	Augment Quantity	Improve Quality	Improve the Match of Workers to Jobs
Entrant workforce			
Marginal workforce			
Incumbent workforce			
Elite workforce			

chaotic jumble of programs and agencies dealing with workforce-related issues.

To achieve better focus and strategic direction to workforce development efforts, WIA called into being a network of “workforce investment boards” (hereafter, WIB or WIBs) at state and local levels throughout the nation. In Illinois, the state-level board is called the Human Resource Investment Council/Illinois Workforce Investment Board. The Central Illinois Workforce Board serves the City of Peoria as well as Peoria, Woodford, Marshall, and Stark counties (Workforce Investment Area 15). Tazewell County is under the aegis of the United Workforce Development Board, with headquarters in Pekin.

Table 5-1
Workforce Issues That WIBs are Addressing Across the United States

Linkages with Economic Development	73%
Industry Downsizing	66%
Incumbent Worker Training	62%
School-to-Work Issues	52%
New Industry Moving Into Area	49%
Transportation Issues	47%
Child Care Issues	36%
One Stop Operations	5%
Youth and Youth Council Issues	4%
Sectoral Employer Initiatives	4%
Source: Second National WIB Survey Report, National Leadership Institute for Workforce Excellence, 2002	

Supplanting the “private industry councils” (PICs) that existed under the old Job Training Partnership Act (JTPA), a majority of members of the new WIBs is required to represent the sector of private employers. Additionally, each WIB is charged with the development of a five-year strategic plan for workforce development in its area of jurisdiction. The WIB is also to oversee and coordinate all workforce development (investment) efforts and activities in the area of its purview. More specifically, WIA outlines nine key functions that WIBs should carry out:²

1. Designing, certifying, and overseeing

One-Stop Career Centers;

2. Identifying eligible training providers and making recommendations to the State;
3. Developing and entering into memoranda of understanding with One-Stop Center partners;
4. Developing a budget;
5. Establishing local performance measures;
6. Providing program oversight and assisting in the development of a statewide employment statistics system;
7. Coordinating employer linkages with workforce development activities and promoting the participation of private employers in the statewide workforce investment system;
8. Establishing a “youth council” that operates as a subgroup within each Board and is responsible for the selection and oversight of local youth programs; and
9. Providing grants for youth activities.

The primary vehicle envisioned by WIA to streamline, integrate, and rationalize the delivery of workforce development services are the so-called “One-Stop Career Centers” (or, more briefly, the “One-Stops”).

To accomplish these things, the One-Stops are supposed to be organized around customer needs and demands, rather than around programs and funding sources. The “customers” of a One-Stop are supposed to be of two equally important types: (1) employers and (2) workers and would-be workers. Within the workforce development system, the One-Stops are supposed to play two fundamental roles:³

1. To provide simple access to the entire array of employment, education, training, and workforce development services available to the customer; and
2. To serve as reliable and impartial sources

of many kinds of information, including the availability and quality of education and training options, labor market information, job and candidate availability, career and skill assessment, and financial aid alternatives.

One-Stop Career Centers are supposed to offer a set of core services to all customers who want them, without eligibility requirements. The intent is to make access to these services easy and customer-friendly, and to provide individuals and employers with the information they need to make good choices about their education, training and/or job-related needs. According to WIA, the fundamental objectives of every One-Stop Career Center should be to integrate services across agencies and programs, thereby dismantling bureaucratic “silos;” to reduce redundancy; to improve customer access; and to improve quality.⁴

The ideal One-Stop, in terms of WIA’s objectives, is one that presents a highly responsive and integrated face to the customer, whether he or she is an individual or an employer. It should be “seamless” in that it surmounts and erases all bureaucratic, programmatic, and funding disparities that detract from providing the best possible customer service.

Building top quality One-Stop Career Centers is clearly a “work in progress” across the nation and in the state of Illinois. From the experience of hundreds of these entities, however, some useful lessons are being learned. Several of those are briefly summarized in the box on the next page.⁵

How closely do Central Illinois’ One-Stops come to the “ideal” envisioned by WIA? The short answer is that much progress has been made thanks to the seriousness with which the Central Illinois Workforce Board has embraced its WIA-assigned role. Still, there remains a considerable distance to travel to achieve the goal of full and seamless integration of service delivery.

Some of the main players in the Central Illi-

nois workforce development system are identified in Table 1 of the Appendix. One-Stop Career Centers in the area are as follows:

- The Workforce Network, operated by the City of Peoria Workforce Development, operates four offices under the purview of the Central Illinois Workforce Board:
 - ⇒ Headquarters at One Technology Plaza, 211 Fulton Street, Suite 300, Peoria, Illinois 61602
 - ⇒ Marshall County Satellite Office, 324 Fifth Street, Lacon, Illinois 61540
 - ⇒ Stark County Satellite Office, 203 Main Street, Toulon, Illinois 61483
 - ⇒ Woodford County Satellite Office, 148 Main Street, Eureka, Illinois 61530
- The Illinois Department of Employment Security operates a One-Stop Center in Central Illinois:
 - ⇒ 200 South Second Street - Suite 10, Pe-kin, IL 61554
- In addition, the United Workforce Board administers the Unemployment Insurance program as well as the Wagner-Peyser, Skills-Match, Veterans’ and other programs from its office at:
 - ⇒ 406 Elm Street, Peoria, Illinois 61605

Although progress has been real, many of the workforce entities still operate too much in their narrow organizational “silos.” Such parochialism clearly detracts from the WIA objective of building a fully integrated system whose bureaucratic and programmatic seams are invisible to the system’s customers. The efforts and activities of the local offices of the Illinois Department of Employment Security certainly need to be brought into closer harmony with the other entities operating under the aegis of the Central Illinois Workforce Board.

For proper strategic planning and integrated

workforce development, the entire Central Illinois “workshed,” that is, the regional labor market, needs to be considered as an organic whole. Peoria, East Peoria, Pekin, Morton, and Washington all lie within a circle whose radius is a mere ten miles. They obviously comprise a single labor market. Unfortunately, county, municipal, and other jurisdictional boundaries, which may make sense for other purposes, can

and do impede rational planning and policies for economic and workforce development.

Can Central Illinois, in an increasingly competitive 21st century environment, afford these vestiges of earlier eras—and the mental boundaries that persist with them? We doubt it.

Accountability for results in workforce de-

What Makes a Top Quality One-Stop Career Center?

Leadership Matters

- ⇒ Local leadership is crucial to one-stop center success.
- ⇒ Local Workforce Boards need to play a pivotal role in one-stop center quality.
- ⇒ One-Stop operators and partners provide solid leadership at high quality centers.
- ⇒ States can accelerate – or slow down – innovation.

Management Matters

- ⇒ Center managers need to be responsible for the full operation and provide crucial direction.
- ⇒ Investments in management tools are essential.
- ⇒ Neutral sites, i.e., those not attached to specific service providers, become stars faster than old agency offices do.
- ⇒ Staffed, quality resource rooms are the focus in thriving centers.
- ⇒ *Center design flexibility is enhanced if unemployment compensation benefits are not managed on site.*

Employer Services Are Reinvented

- ⇒ Centers enhance employer services by creating unified teams of account representatives.
- ⇒ *Centers need to strategically decide on which employers to focus their attention.*

Creating a Market Identity Is Hard but Matters

- ⇒ Brand-building requires time and resources.
- ⇒ *Ensuring the new identity is associated with quality is essential.*

One-Stop Center Measurement Is Just Beginning

- ⇒ Centerwide *measures* are just now being created.

Adapted from *Benchmarking One-Stop Centers, Understanding Keys to Success*, January 2002.

velopment is a major objective of WIA as well as of the state and Central Illinois WIBs. But accountability is impossible without measurement and measurement is impossible without measures. The Illinois WIB recently adopted a set of measures developed by its Evaluation and

Accountability Committee (EAC) These measures are sketched in the box below. Some of these measures are similar or identical to those used in this study. Others break new ground. In any case, it is a laudable set of measures well worth implementing.

Workforce Development Measures Endorsed by the Illinois WIB

WORKFORCE QUALITY

1. Educational level of working-age adults

⇒ Measured at the statewide level by annual census/Current Population Report.

2. Percentage of working-age adults in education or workforce training

⇒ Measured by the number of working-age adults enrolled in post-secondary education, apprenticeship programs, and WIA programs in relation to the total number of working age adults in Illinois.

⇒ *The EAC recommends the development of a tool which will measure adults enrolled in short-term education and training, and in education provided by employers, industry associations, unions and for-profit vendors.*

3. Percentage of high school graduates transitioning to education or workforce training

⇒ *Measured by the number of high school graduates transitioning to post-secondary education, apprenticeship programs, and WIA programs within one year of graduation in relation to the total number of Illinois high school graduates.*

◆ **Interim Measures**

◆ **High school dropout rate**

◆ **The number of youth transitioning from 8th grade to 9th grade.**

4. Adult literacy

⇒ *The EAC recommends the development of a tool to measure adult literacy in Illinois on an annual basis.*

EARNINGS

5. Percentage of working-age adults at self-sufficiency

⇒ Measured by the cost of living and working in relation to geographic area and family size.

6. Average growth in pay (adjusted for inflation)

⇒ Measured by *annual* changes in the average payroll per worker.

COMPETITIVE BUSINESS ADVANTAGE

7. Net job growth

⇒ *Measured* at the state and regional level, and based on type of job and industry

8. Productivity per employee

⇒ *Measured* by the market value of the goods and services produced by the labor and property in Illinois in relation to the total number of workers in the state.

Chapter 6: Ideas, Recommendations and Promising Practices for Building a 21st Century Workforce for Central Illinois

This study has sought to build a topographical map of the territory that Central Illinois must traverse for its economic and workforce development in the early 21st century. It is up to the people of the area to decide where they want to go and then build the roads across that territory to reach their objectives.

What follows is a list of ten key challenges for Central Illinois. After that comes a mixture of ideas, recommendations, and “promising practices” that are keyed to the ten challenges. These are accompanied by a liberal sprinkling of references to potentially useful websites. The aim is not to prescribe specific actions but to point out promising paths and ideas that may be of interest to the region.

Developing a 21st Century Workforce for Central Illinois: Ten Key Challenges.

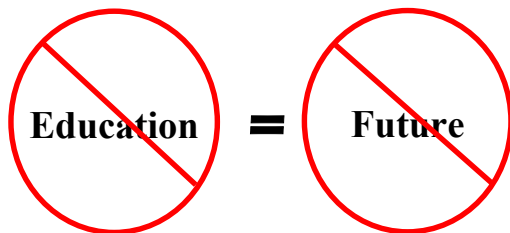
1. Make Central Illinois a “Learning Community.” Motivate youth and adults alike to be flexible and to become ever more adept at acquiring new skills and knowledge.
2. Reduce dropout rates and raise graduation rates in Central Illinois high schools.
3. Improve educational outcomes of K-12 education with special emphasis on reading, communication, mathematics, reasoning, teamwork, and customer service skills.
4. Ensure that a proper mix of educational and training opportunities as well as of top-quality career guidance and counseling is available and accessible to all students and residents of Central Illinois.
5. Work with employers and all training providers, private as well as public, to make Central Illinois’ worker training and retraining system the nation’s most responsive and efficient.
6. Focus on the recruitment and retention of a skilled workforce pool for Central Illinois.
7. Reduce barriers to workforce participation for all who want to work, irrespective of age, disadvantages, or disabilities.
8. Make Central Illinois a highly attractive place to live and work for the types of human talent needed by the area’s economy and its businesses.
9. Work together for the benefit of all in the region. Banish bureaucratic blinders. Get governments and institutions to collaborate, not to compete. Central Illinois cannot afford petty parochialisms.
10. Understand the workforce needs of making the Central Illinois Regional Bioscience Strategy a reality, and then exert every effort to help meet those needs. Do the same for other well-considered economic development initiatives that mature in the next few years.

1. Make Central Illinois a “Learning Community”

Raising Public Awareness of the Importance of Education and Continuous Learning

Building a “Learning Community” starts by building motivation at the grass roots level. Families, students, and the general public need to be educated and constantly reminded about personal responsibility for career preparation and the need for continuous learning.

The availability and accessibility of educational and training opportunities are obviously necessary. But they are hardly sufficient. Without personal motivation, students and workers, are unlikely to put forth sufficient lifetime effort to educate, train, and retrain. But, in the words of a highway billboard now decorating North Carolina highways: “No Education Equals No Future.” This message bears repeating with all insistence and skill that modern marketing can muster.



Expanding and Raising Awareness of Employability Certificate Programs

Workers’ sense of professionalism helps foster the ethos of the “Learning Community.”

Many professional associations have local chapters that offer cram courses enabling busy professionals to study together. The American Society of Association Executives, for instance, has among its members hundreds of professional associations that regularly offer certificates for completed courses of study. They can be reached online at <http://www.asaenet.org>. Letters after a worker’s name add prestige,

build pride, and indicate that the individual is actively involved in staying up-to-date in his or her profession, to say nothing of the actual value of the skills gained through such education.

Currently, ICC offers a few certificate programs developed in conjunction with employers to train students for certain specific needs. The Caterpillar manufacturing programs and the CISCO certificates are two examples. The Consortium for Advanced Legal Education (CALE) is sponsoring brand new Advanced Specialty Courses for paralegals using distance-learning technology through ICC.

The health care, legal, insurance, engineering, information technology, human resource, public, private, and non-profit executives and managers, insurance, and those in real estate professions all have certificate programs that can be accessed online. These programs are an effective way of demonstrating one’s willingness to upgrade one’s skills through self-study and examination.

Streamlining the Creation of Training Curricula

The “Learning Community” will have aggressive, responsive, and creative providers of post-secondary vocational training.

Currently, ICC must undergo a rigorous and time-consuming process of demonstrating demand, interest, and perceived need in order to add a new curriculum. This impedes ICC’s ability to be responsive and innovative toward workforce development issues in the region. Some of the needed changes in this process can be made only at the state level. The Illinois Community College Board, which governs the entire community college system, could allow community colleges the flexibility to be more dynamic and create effective solutions. Changing the method of adding curriculum also entails making changes to the funding system that currently puts tremendous enrollment and financial pressures on colleges.

Two examples that could serve as models of creativity and adaptability in creating programs responsive to the training needs of incumbent workers are the “Centers of Excellence” and “Quick Start” program in Georgia community colleges. See <http://www.dtae.org/>. A third is the half-price tuition arrangement offered by Houston-area community colleges during “off-peak” hours—early morning, at night, and on weekends—that started during the spring, 2001. Already, these colleges have increased their revenues and have provided opportunities for hundreds of workers who could not have taken advantage of a standard 9-5 community college day. See <http://www.hccs.cc.tx.us/>.

Marketing the Illinois Virtual Campus

The 21st century “Learning Community” will provide multiple avenues for learning at times and places that are personally convenient and accessible. The Internet is spurring an upsurge of distant learning opportunities. The “Illinois Virtual Campus” (IVC) now offers more than 2,100 courses online that have been accredited by the Illinois Board for Higher Education.

Explore them at <http://www.ivc.illinois.edu/>. These year-round courses cover nearly 40 academic subject areas and offer 80 certificate, Bachelor’s, and Master’s Degree programs from a variety of institutions. Currently ICC and Bradley offer a number of online courses. The average for community colleges is 25, with Danville Community College offering 73 Internet courses.

IVC has already teamed up with ICC’s Business Development Center and Bradley University’s Center for Economic and Business Research to reach out into the Central Illinois community and take full advantage of its offerings and to customize online courses for area businesses. There are also opportunities for businesses to become mentors to young people who want to take courses online or are already taking them.

Marketing Contract and Customized Training by the Community College System

Private companies of all sizes in a “Learning Community” will be dedicated to improving the quality of their workforces. Large companies can often afford to mount their own training programs. Others will find it advantageous to outsource some or all of them. Small and medium sized companies often cannot afford much of an in-house training effort. To support businesses already resident in the community and to buttress the attractiveness of the community to newcomers, a top-notch customized training capability is essential. But having the capability is not enough; it must also be marketed aggressively.

A model here is Kirkwood Community College in Cedar Rapids, Iowa, where customized training to area businesses and the incumbent workforce accounted for nearly 25% of the college’s revenue in 2000. This contrasts to 4% annually for ICC. Kirkwood was recently honored as the 2000 Community College of the Year by the National Alliance of Business. It was recognized for outstanding contributions to regional workforce education through active collaboration with local business and its ability to create lasting business partnerships, coalitions and consortiums that have addressed specific industry sector workforce needs while creating cost-effective programs shared by several industry players. More information available at <http://www.kirkwood.cc.ia.us/continuinged/>.

Another model may be the University of Wisconsin at the Fox Valley campus, which provides training in the following areas:

- Leadership skills, including thinking on your feet, performance management, strategic thinking, planning and management, marketing and advertising; and
- Communications skills, including conflict resolution, listening skills, personality styles, career development, decision-making, dealing with difficult people, and effective speaking.

Fox Valley has also offered classes in leadership and performance management for first time supervisors. This was in response to an employer survey that noted that poorly trained supervisors often contributed to high turnover rates in their firms. More online at <http://www.fox.uwc.edu/conted/>.

To buttress the marketing of customized training and other business-oriented services, the State of Georgia has established the position of “Vice President for Economic Development” within its technical school system, and it has met with considerable success (for more information, see <http://www.dtae.org/>). Elevating the responsibility of local economic development promotion has several advantages:

- It highlights the importance of economic development to ICC and the region;
- It focuses accountability for the institution’s promotion of local economic development in one individual or department;
- It provides strong incentives and the organizational structure to market the college’s services to businesses;
- It creates a One-Stop for businesses, economic developers, and others who may be a market for college services.

2. Reduce Dropout Rates and Raise Graduation Rates in Central Illinois High Schools

Raising Graduation Rates

Pekin Community High School and several other Central Illinois schools are to be commended for their concerted efforts in the last five years to raise their graduation rates.

An instructive example of promising practice is found in Appleton, Wisconsin, a community about the equivalent size of Central Illinois, with paper manufacturing as its economic base. The graduation rate is 96.80% on average in the community’s high schools. More than 75% of

graduates head to post-secondary institutions. Practically all of their high school students are taking at least one Advanced Placement (AP) course each year and 78% of students pass the AP test. The drop out rate is less than 1%, according to their online reports to parents. For more information see <http://www.aasd.k12.wi.us>.

Persistence in high school depends on student interest and motivation. Adolescents too often find high school curricula boring and seemingly unrelated to life. Linking schoolwork to students’ interests and their lifestyle aspirations can help build greater motivation. The Appleton school district actively supports several initiatives designed to do this. It supports the Junior Achievement program which fosters entrepreneurship and economics education. www.ja.org. There is considerable Appleton community involvement in the First Lego League, which is designed to give young people teamwork and problem solving skills. For more, see <http://www.firstlegoleague.org>.

A Teachers’ Summer Academy Where Teachers Learn How to Integrate Workforce Skills into Their Regular Curricula

A model for this is the Appleton Chamber of Commerce initiative entitled the Christa McAuliffe Academy. The Christa McAuliffe Academy is a week-long summer learning experience for public and parochial elementary, middle, and high school teachers. This seven year old project has expanded from a skills emphasis for math, science, and technology teachers to include basic reading and writing programs in demand by teachers. Teachers, who can take courses for college credit, spend one day of the academy visiting work sites and working in small groups with businesspeople. See <http://www.wasdi.org/christa.html>.

Lowering Dropout Rates

There have been innumerable studies about programs to reduce dropout rates. One recent national study looked at 21 school districts

across the country that included two general program approaches to dropout prevention. Restructuring programs focused on changing whole schools with dropout-prone populations.

Targeted programs operated as smaller-scale programs within schools or community organizations, and enrolled students identified as at risk of dropping out. Some targeted programs focused on preparing students for the General Educational Development (GED) test, and researchers also explored aspects of the decision by some students to pursue a GED instead of a high school diploma.

All programs in the study used counseling to help students overcome personal, family, and social barriers and problems that interfered with their ability to go to school and do well. More successful programs also tried to create smaller and more personal settings, which meant that in general, more money was spent on students in these programs. For more details about this exhaustive study, see the Mathematica Policy Research website, <http://www.mathematica-mpr.com/>.

Reducing Student Mobility Rates

The National Center for Educational Statistics has funded several major studies that indicate that students who change schools, for whatever reason, have lower test scores. If they move during their high school years, their chances of graduating are greatly reduced. See www.nces.ed.gov/nationsreportcard/. These findings are powerfully echoed by the research conducted as part of this study.

There have been major efforts in Chicago Public Schools during the last five years to reduce student mobility. The mission of the “Staying Put” program by The Chicago Panel on School Policy is to improve educational quality for children and reduce the adverse effects of student mobility. To accomplish this, Staying Put was designed to:

- Make educators, students, parents, and other community members aware of the academic

and social consequences of student mobility;

- Promote the establishment of school-based programs and the dissemination of information about school boards’ enrollment policies as an alternative to student transfers to other schools;
- Ensure that the transfer process, when necessary, reduces the disruptions to student learning and achievement.

As is the case with so many education initiatives and projects, it is difficult to ascertain the concrete results of Staying Put in reducing student mobility. Nonetheless, this seems like a well thought-out project, and it has been ongoing for more than five years, which, one would hope, indicates a measure of success. For more information, contact www.chicagopanel.org for a copy of the complete program, which is being implemented nationwide.

The Educational Resources Information Center (ERIC) also reports on efforts in school districts around the country to address the problem of student mobility. Some schools have adopted Welcoming Steering Committees in every school. These committees provide leadership for developing and maintaining a personalized welcoming program for each new student. The groups consist of school administrators, counselors, Title I coordinators, many teachers, staff members, many dedicated parents and members of the business community, and students willing to be classroom buddies. Other schools provide information to parents about the potentially harmful effects of frequent changes of schools. Still other school districts have initiated committees that develop strategies to make it easier for students to remain in their previous school even if they have changed residences. For more information, see ERIC Clearinghouse on Urban Education report, http://www.ed.gov/databases/ERIC_Digests/.

3. Improve Educational Outcomes of K-12 Education, With Special Emphasis on Reading, Communication, Mathematics, Reasoning, Teamwork, Customer Service Skills

Providing Information About the State's Early Learning Web Site in All Training Programs for Working Parents

This special website is designed for parents of preschoolers looking for information on child development, language, and early literacy, which are all important workforce readiness skills. The website offers information and materials in both English and Spanish. It hosts online chats with experts, including physicians, educators, parents, and other providers, and supplies tip sheets on developmental topics. It is located online at

<http://www.illinoisearlylearning.org/>.

Encouraging Increased Alignment Between All Levels of Education, Higher Achievement Through College Preparatory Study, and Expanded and More Rigorous Alternatives to the Traditional Senior Year

The demands of a highly skilled economy raise the value of at least two additional years of formal post-secondary education. To better prepare high school graduates for that, more states are mandating that all students should have "college preparatory" courses as their default high school curriculum. Many school districts are providing more flexible use of students' high school time in order to allow them to experience college-level work, especially during their senior year. This is regarded as a necessary cure for "senioritis," that all-too-common affliction that undermines the motivation of high school seniors. Senioritis leads to costly remediation for college freshmen, high dropout rates, and poor academic skills among high school graduates joining the entrant workforce. Several states, including Colorado, Utah, Washington, Texas, and Iowa, currently offer fiscal incentives for dual enrollment. For more information, see

www.commissiononthesenioryear.org/.

Incorporating Soft Skills into School Curricula

WorkKeys[®] is a validated assessment tool that is already familiar to Illinois educators. At present, all students in Illinois schools take the Applied Mathematics and Reading for Information portions of the WorkKeys[®] tests. The other six tests are far more applicable to assessing students' workforce readiness skills. They include Listening, Locating Information, Observation, Teamwork, Applied Technology, and Writing, all with follow-up testing in grade 12.

Omaha WorkKeys[®] is a partnership between the Omaha Public Schools, OMAHA 2000 (which is a business-led volunteer organization led by the Chamber of Commerce), American College Testing (ACT), and the *Omaha World-Herald*. The purpose of Omaha WorkKeys[®] is to demonstrate their community's commitment to ensuring all students are graduated from high school with the skills necessary to successfully enter the world of work or pursue further formal education.

In Omaha, WorkKeys[®] employs all eight of its skill assessment areas to measure students in grade 10 and then again in grade 12. Each student gets a personal report of the results, which are also linked to their career interest areas. During the 2000-2001 school year, nearly 7,000 Omaha Public School students participated in the WorkKeys[®] assessment program. For more information about this program, go to <http://www.bcer.org/macc/community/ne/Omaha/omahawk.htm>

Expanding Career Academies in High Schools

Career Academies are in place at three high schools in District 150, with ample room for expansion throughout the region. Career Academies can function as year-round programs that enable high school students to complete their high school curriculum, combining high academic requirements in math, science, and language with the development of high-level occupational skills. Students graduate with their

class and are essentially “cross-trained” to enter a career or post-secondary institution. Career Academies are designed to be small learning communities within high schools focused on teaching students the skills that employers need. The three-year program - grades 10, 11, and 12, plus summer sessions - of college-prep level work in a supportive environment produces students with higher standardized test scores, increased college enrollment rates, and improved workplace skills.

In western North Carolina, the Caldwell Community College and Technical Institute (CCCTI) has a similar program called “Career Center,” which is a functioning high school on CCCTI’s campus where students can take additional course work and gain work experience while remaining connected to their home high school.

The Career Center is a joint undertaking of the public school system, the Community College/Technical Institute, and private enterprise to solve problems that include undesirable dropout rates, the need for high-tech training for the industrial and business workforce, and the reality that 85% of the students entering the system's three high schools indicated no plans to attend a post-secondary institution.

Within three years after setting up the Career Center, there has been a 400% increase in the number of high school students taking college credit courses; 42 of 94 Career Center students earned college credit during 2000-2001; and 87% of graduating Career Center students plan to continue to post-secondary education. This program has received extensive state and national attention as a model for troubled school systems. For more information, check out <http://205.152.116.5/careercenter/>.

Internships for High School Students

Internships and/or co-ops have demonstrated their worth in making the transition from school to career or post-secondary institution a much smoother process. Students gain “real work world” experience and employers are able to “try out” potential employees.

In order to prepare students for the world of work, the Columbus, Ohio Public Schools are now requiring students to participate in internships before graduation. This model involves close collaboration between the Greater Columbus Chamber of Commerce and Columbus Public Schools. Online applications are provided to students through ERISS. More than 3,000 students are expected to participate annually. For more information, look at

<http://www.columbus-chamber.org/workforce/studentinternships.htm>

4. Ensuring That a Proper Mix of Educational and Training Opportunities as well as of Top-Quality Career Guidance and Counseling is Available and Accessible to All

Career Guidance and Counseling for All Residents Irrespective of Age

The focus group with ICC students conducted as part of this study, plus interviews with business leaders and educators, revealed that career counseling is mostly an accidental occurrence throughout a student’s K-16 experience in Central Illinois. It appears that the problem is largely one of insufficient community awareness of the main efforts going on in the region.

Locally, for example, PERFECT (Peoria Educational Region for Employment and Career Training, which is accessible online at <http://peoria.k12.il.us/perfect/>) and ICC deserve commendation for purchasing career counseling software to help guidance counselors in 25 schools in Peoria County to begin using the Internet-based Kuder® Career Planning System (<http://www.kuder.com>).

This system includes an electronic career portfolio, career search interest inventory, skills assessment, work values inventory, and an administrative database management system. Initial training classes have been held for guidance counselors. This effort complements PERFECT’s career awareness days, held throughout the year for close to 1,000 students and faculty.

Bradley University has a very active Smith Career Center that works with students and employers to connect students with careers. The Center regularly holds job fairs that have attracted over 1,000 students and alumni seeking internships, cooperative education, and full-time positions in the public, private, and non-profit sectors. There are also separate fairs for nursing and physical therapy, communications and fine arts, part time opportunities, and education. Quarterly email newsletters are sent to area employers to keep them informed of the Center's activities. Visit them on the web at www.bradley.edu/scc.

ICC has a career counseling center with a wide variety of workshops, short courses, and career fairs to help undecided students and those close to graduation to find new jobs. There is also an online direct pipeline service, called ICC Jobs, on which students can post their resumes. Employers will be able to view these resumes via the Illinois Central College website. Work Keys[®] testing is also available. See <http://www.icc.edu/sserv/>.

The Resource Center, which is a major part of Peoria's Workforce Network, assists individuals, businesses, schools, and community organizations seeking information about available jobs and job seekers. It houses 28 computers with software that can assist in creating and updating resumes and cover letters, and conducting job searches on the Internet.

These are all excellent pieces in career counseling that should be marketed broadly to the Central Illinois community on a regular basis. Career counseling needs to be viewed as something that everyone will regularly need in order to compete successfully in the 21st century's rapidly changing economy.

Virtual Career Counseling and Job Fairs

There are thousands of job boards online, scores of assessment tests, and hundreds of free resources in career counseling online. Many workforce boards have added these online resources onto their own websites to encourage

residents to discover the wealth of material available. Michigan's Department of Career Development offers a strong model to be considered. It is available at <http://www.michigan.gov/mdcd>.

Many communities are collaborating in offering virtual job fairs that connect job seekers with local employers electronically. Job hunters can easily navigate through the many options to improve their lifestyle through education, training, and employment services located in their own backyard. One example is <http://www.jobfairohio.com>, which operates in nearly eighty cities throughout the State of Ohio.

5. Working with Employers and All Training Providers, Private as well as Public, to Make Central Illinois' Worker Training and Retraining System the Nation's Most Responsive and Efficient

Workshops for Small and Medium Sized Businesses to Help Them Succeed in Recruiting and Retaining of Workers

It is usually the case that small businesses often do not have human resource professionals on staff. Because of this, they often face the daunting problems of high turnover and difficulties in finding the quality Central Illinois workforce that they need. Linking businesses to training providers and appropriate resources needs to be stressed. A possible model is the Orlando Chamber of Commerce brown bag seminars for business owners and community leaders on workforce issues and strategies to deal with them successfully. These Workforce Academies of Learning are designed to help hire, train, retain, and advance qualified workers; to bridge the gap between employers and workforce development providers and services; and to facilitate change and improvement in local workforce development systems, policies, and practices. The U.S. Chamber of Commerce has adopted the model and is testing it at ten Chamber sites around the country. Learn more at <http://www.uschamber.org/cwp>.

Michigan has recently announced hundreds of online courses for small businesses on topics such as information technology, office skills, and management techniques through its Virtual University. The service is called the BeeFree-way, a new e-education employee training system available at no charge to Michigan's very small businesses. <http://www.mivu.org>.

Opportunities for Direct Interaction Between Educators and Businesses

Special kudos go to the Irving Primary School and the First United Methodist Church for their highly successful reading and arts outreach programs, which have been underway for more than seven years (the "Buddies" programs). This model merits thorough study and possible emulation elsewhere in Central Illinois.

One key consideration in successful workforce development is that educators should fully understand the needs of businesses. Teachers and trainers need to participate in "hands-on" experience to illustrate how the concepts in the classroom are applied in the workplace. The goal would be to expose teachers, administrators, and guidance counselors to such experience in order to stimulate a re-orientation of teaching and learning in the traditional classroom environment. Examples may include programs such as the HOSTS mentoring program, annual open houses and tours of area businesses, hospitals, community centers, etc.; starting Lego/Logo leagues; having Math Pentathlon and Odyssey of the Mind competitions; inviting business leaders as guest teachers in schools; offering job shadowing and paid internships to students; becoming involved in the National Mentoring Partnerships; and offering "real world" experiences for guidance counselors in area businesses during the summer.

Here are websites for more information about the programs mentioned above:

www.hosts.com, www.firstlegoleague.org,
www.mathpentath.com/
www.odysseyofthemind.com/,
www.jobshadow.org/, www.mentoring.org/.

Fostering and Encouraging Entrepreneurship

For the last three generations a large proportion of young people in Central Illinois, like their parents and grandparents, have expected to work at a reasonable salary for large corporations in the area. This expectation no longer corresponds to reality. Business leaders interviewed as part of this study perceive a deficiency of entrepreneurial behavior in the area. Entrepreneurship tends to encourage innovation, creativity, critical thinking, independent decision-making, and leadership. These qualities, while necessary in a successful entrepreneur, are also highly valued and demanded in many other workplaces as well.

Sponsoring Junior Achievement clubs and encouraging economics education in Central Illinois schools were cited by businessmen as ways of improving the entrepreneurial climate of the area. Junior Achievement reaches more than 5 million young people with its programs. It is active in Central Illinois, but not in all of the area's schools. <http://www.ja.org>.

Business leaders also suggested that there should be workshops and networking clubs for entrepreneurs. A model for this is The Venture Club concept. Venture Clubs around the country and in many other countries give potential investors a convenient and on-going source of contact with entrepreneurs who are in search of funding. Members also have the opportunity to interact with other investors and professionals who are dedicated to helping their businesses succeed. Through a Venture Club, entrepreneurs can keep up-to-date on opportunities and new developments in their investment and business community. The closest one to Central Illinois is one in Indianapolis that is more than five years old and has hundreds of members who attend monthly meetings. <http://www.ventureclub.org>.

Bradley University has the Turner Center for Entrepreneurship and Small Business Technology Center. The center provides counseling,

technical information, and training to Illinois entrepreneurs and small businesses interested in pursuing research and development opportunities available to them through various federal and state programs. These programs also provide small businesses with a means of developing new and marketable technologies and innovations and also for enhancing existing products and services.

<http://www.bradley.edu/turnercenter/>.

ICC has a Procurement Technical Assistance Center that offers government contracting services to small and medium-sized existing businesses in Central Illinois, but their reach into the region needs to be strengthened with more marketing and coordinated programs, as well as greater online presence and resources. See <http://www.icc.cc.il.us/ptac/>.

Reflecting the trend that most Americans will have more than one career and will be in business for themselves at some point in their lives, ICC began the SET - Self-Employment Training Program in 1990. SET provides small business management workshops on a regular basis on 10-15 different topics, to help entrepreneurial wannabees. There are also two business plan credit classes: A 5-week overview called Developing a Small Business Plan, and a 16-week research and development class called Working for Yourself. More than 1,500 people have gone through both the workshops and business plan classes. Approximately 185 have graduated from the Working for Yourself class. As a result, there is a 43% start-up rate in the region. A website and online courses are due to be released during 2002, which will greatly add to the need for entrepreneurial dynamism in the region. Learn more at <http://www.icc.cc.il.us/>.

The Workforce Development Board may also want to consider offering specialized entrepreneurship programs for displaced workers, semi-retired folks, and those in outlying rural areas. The Kauffman Center for Entrepreneurial Leadership (KCEL) provides training resources to state employment agencies to help their clients consider the option of starting a business. Among the resources available to states at no

cost, the FastTrac NewVenture™ business development classes offer programs that are designed to train potential entrepreneurs on the basics of starting their own businesses. See <http://www.entreworld.org>.

6. Focus on the Recruitment and Retention of a Skilled Workforce Pool for Central Illinois

Effective “Matching Services” Between and Among Employers, Job Seekers, Training Providers, and Service Providers

The system of linking up job seekers with employers and appropriate services is not currently 100% effective in Central Illinois. Through a collaborative effort and links to current local job boards, a free job matching service on the Internet along with a system that can provide skill matching, job matching, and training information to increase the efficiency of the job search process should be implemented.

A website that is created and operated by a Central Illinois entity could be an effective vehicle through which this is accomplished. The system could also match students with internships, and job seekers with service providers, such as childcare and transportation. This website would also have bilingual web translation to link jobseekers with employers seeking qualified workers, and it would link to the ER-ISS website. The state of Iowa has an excellent website model for Central Illinois to consider. It is called www.SmartCareerMove.com; it is a website run by human resource professionals that lists jobs openings in Iowa starting at salaries of \$30,000. At present, more than 80 Iowa employers use this site, and hundreds of jobs are posted daily.

Another model that many Chambers of Commerce, cities, multiple counties and states, as well as private employers use is www.nationjob.com, a job board where the process of handling job openings online is streamlined.

Another aspect of matching job hunters and employers is having a common language about workforce skills. WorkKeys[®] is, as mentioned earlier in this report, a workplace skills assessment system used nationwide by employers, students, workers, and educators.

Developed by ACT, WorkKeys[®] has become an integral part of many states' workforce preparedness system by giving students and workers an opportunity to document and advance their employability skills. It also provides employers with an opportunity to assess worker skills and customize training for a wide range of skilled jobs. ICC currently has experienced job profilers and can offer the assessment tests to job applicants. More information is available at <http://www.act.org/workkeys>.

Providing Feedback From Post-Secondary Institutions to Central Illinois High Schools and the Public

Full and timely information about how a high school's graduates perform could promote better linkages between K-12 schools and post-secondary institutions. Among the valuable pieces of information that could be provided as a result of such a survey are:

- The number of high school graduates who need college remedial courses in English and mathematics;
- Comparisons of how high school graduates' grades in high school compare with their grades in college;
- The number of high school graduates who perform satisfactorily in their first year and the number that ultimately graduate from college.

The feedback could help to increase communication with the area high schools about what students should know and be able to do, better align K-12 standards with post-secondary level-course work, and more effectively track the progress of schools in preparing students for college.

Recommendations for students and educational institutions to improve their linkages and chances for academic success that came out of the recent "Gateways to Success" study of 50 school districts around the country. <http://www.act.org/news/pdf/gateways.pdf>.

7. Reduce Barriers to Workforce Participation for All Who Want to Work, Irrespective of Age, Disadvantages, or Disabilities

Regular Job Fairs and Recruiting Efforts Targeted on Non-Traditional Workers to Expand the Workforce Pool

With its aging workforce and chronic skilled labor shortages, Central Illinois needs to find a way to tap into the non-traditional labor pool, many members of which have very good skills and experience. These groups include those persons aged 40 years and up, stay-at-home parents, retired military, Hispanics, and disabled workers.

Operation ABLE (Ability Based on Long Experience), a nonprofit agency, has been an innovative leader in the field of employment and training in metropolitan Chicago since its founding in 1977. One example of ABLE's innovation is its highly successful annual job fair for the disabled, which is held in Chicago each fall. Special workshops are held at this job fair for employers to learn how to retain disabled workers effectively.

Other examples of ABLE's work are its sponsorships of career networking groups around the Chicago area for workers age 40 older who are in job transitions. ABLE counselors provide career counseling and leads to new positions. ABLE's programs can be examined online at <http://www.operationablechicago.org> and <http://www.jobhotline.org>.

One employer who recruits from among the soon to be released military is Caterpillar,

which is finding highly skilled technicians through the Army's Partnership for Youth Success program, visible at <http://www.armypays.com>.

Central Illinois' Hispanic population is below the state average, so the region may want to consider attracting more Hispanics into the area. Although lagging behind other minority groups, Hispanics are increasingly moving into the middle class. They are buying computers and homes, entering college, and earning advanced degrees.

The January 2001 Cheskin report noted that the online Hispanic market in the U.S. is rapidly growing, with 47% of U.S. Hispanic households now owning a computer. The 2002 Yankelovich/Cheskin Hispanic Monitor study reveals that simply addressing Hispanics in Spanish is not enough.

Hispanic consumers have unique social and cultural values and attitudes that depend not only on language, but also on other factors like access to technology, education, and level of acculturation as well. See www.cheskin.com for more details.

Many companies and communities are working with the National Council of La Raza (NCLR) and the National Society of Hispanic MBA's (NSHMBA) to recruit workers at all skills levels. Many companies are investing in courses in "survival" Spanish and cross cultural issues and understanding before they start recruiting Hispanic workers. NCLR's website is <http://www.nclr.org>; NSHMBA's is <http://www.nshmba.org>.

Centralizing Services Aimed at Training Disabled Individuals and Those Due To Be Released From Prison

Many programs and/or providers in Central Illinois target their training services at economically disadvantaged individuals. The development of an integrated jobs website by Central

Illinois can play a key role in linking up employers with those newly trained workers. In addition, employers need up-to-date information about credits that they can receive for hiring disabled workers and those due to leave the prison system.

A model for training and hiring released felons may be the Texas RIO (Re-Integration of Offenders) project. Project RIO is a multi-agency initiative designed to link offender education, training, and employment during incarceration with ex-offender employment, training, and education upon release.

Project RIO workforce development specialists are located in nearly thirty workforce centers around the state to assist ex-offenders in finding jobs after their release. RIO staff also provide ex-offenders with information and referral to agencies who offer food, clothing, and shelter resources, as well as additional training and educational programs. This program has been ongoing for more than ten years and has reached thousands of ex-offenders. It has received several national awards for its innovative approaches. Learn more at <http://www.gettingthere.net>.

8. Make Central Illinois a Highly Attractive Place To Live and Work for the Types of Human Talent Needed by the Area's Economy and its Businesses

Marketing The Region As a Place to Live and Work

The *Places Rated Almanac, Millennium Edition* gives the Peoria-Pekin metropolitan area above average marks for being a quality place to live, work, and raise a family. These favorable ratings do not seem to be well understood or marketed locally. At any rate, they are not noted on city or tourism websites. Some communities study the *Places Rated* results to determine strategies to improve these ratings all over the region. See <http://www.bestplaces.net>.

An example of workforce-motivated community marketing is the Greater Austin@Work Partnership, which is a public/private regional workforce initiative spearheaded by the City of Austin, Texas, and the Greater Austin Chamber of Commerce, in collaboration with regional employers, educational institutions, and the Capital Area Workforce Development Board. The goal of the initiative is to build the quality and quantity of talent in Greater Austin by supporting long-term education and workforce development efforts, and to recruit new talent into the region, as well as developing new clusters of economic development. The Partnership also supports an integrated online recruitment portal for Central Texas. The URL for its website is <http://www.AustinAtWork.com>.

Online and Print Marketing Materials That Note The Community's Amenities and Attractiveness to High Skilled Professionals

Highly skilled professionals like a variety of outdoor activities to participate in as well as an array of culture and arts. That's why Iowa's www.smartcareermove.com not only includes hundreds of job openings for positions that start at \$30,000, but also provides an online video about the attractiveness of working, living, and playing in Iowa. This website has added a language-translation tool to its website so that users can translate the site into French, German, Spanish, Italian, Portuguese, Korean, Japanese, or Chinese. This is part of Iowa's effort to be more welcoming to newer and younger international arrivals to the state and to project an interest in doing business internationally.

Another model is Utah's foldout map showing the state's technology and recreation landscapes. One side of the map provides sites of major technology companies and useful statistics for companies looking to do business and job hunters who are looking for jobs. The other side details the state's recreation opportunities. Together, these areas showcase Utah as having a high quality of life and technological know-how. The map also includes the "Utah mes-

sage," which includes its vision for a high skilled work force, a population that is education-minded and tech-savvy, housing affordability, and a recreation-minded and livable space. See <http://www.utah.org/tech/>.

9. Work Together for the Benefit of All in the Region. Banish Bureaucratic Blinders. Get Governments and Institutions To Collaborate, Not To Compete.

Bringing the Public Sector Partners in the Workforce System Together

There are many excellent examples of One-Stop centers that have succeeded in overcoming the "silo" mentality and achieving substantial collaboration and results throughout the country. Many were cited by the John J. Heldrich Center at Rutgers University in its 1999 study of One-Stop centers nationwide. The study was entitled "One-Stop Innovations: Leading Change under the WIA One-Stop System." In a nutshell, the study found that, "[b]ased on visits to the first round sites, several strategies permeate all the sites:

- It was very clear that leadership and management were crucial to the success of the respective sites. Participatory management styles foster an open organization that in turn rewards creativity among its workers.
- Invest in team-building early and persevere, mixing and cross-training staff as much as possible.
- Early team building efforts provided the seamless environment – allowing all direct service staff, irrespective of agency affiliation, opportunity for input into the design of customer flow and management."

The study went on to note that:

"[a]t sites that housed several partner agency representatives, success was registered by the seamlessness of those respective agencies' representatives' service to clients. In these centers,

service is less fragmented and in the best case scenarios, seamless to the point that customers recognized that they didn't have to provide repetitive information for each different agency rep they may have had to speak with.

Successful centers recognize the value of partnerships – with other service agencies, required partners, business and the communities in which they serve.”

The Heldrich Center gave the Peoria One-Stop one of its “Promising Practice” awards in 1999 for community collaboration in the creation and management of the Workforce Network Center, a One-Stop housed at One Technology Plaza in downtown Peoria. The box below contains the Rutgers experts’ remarks about why they considered Peoria’s One-Stop concept so promising.

A more recent study that benchmarked One-Stops around the country was commissioned by the Central Illinois Workforce Development Board and other Illinois workforce boards. It is currently available from the Board.

Regional Websites Linking To All an Area’s Institutions, Organizations, and Assets Online

Central Illinois can also learn from other similar sized metropolitan areas that have increased their population and average family income during the last twenty years. Examples of cities that are working hard to market their images to skilled professionals are Appleton, Wisconsin; Reno, Nevada; and Fort Pierce/Port St. Lucie, Florida. Their websites are comprehensive and stress their quality of life features, ex-

Rutgers Experts Look at the Workforce Networks’ Development Center

Three challenges were addressed as the Network was being formulated that had to be resolved before the Workforce Development Center could achieve any level of success:

A) The partners had to agree that the Center would serve a universal population and would not be restricted to assisting only the poor. Acceptance of this as an operating principle meant that the Center would have to be an attractive place to visit and that it be organized so that customers using it would feel that they were being treated as first class citizens. The inclusion of the Center in One Technology Plaza, an attractive, modern, renovated building, reflected this view of the Center.

B) The partners had to overcome a “stove pipe” mentality in their service delivery approach. There had to be a willingness by the partners to rearrange some agency operating procedures so that customers could be served with the minimum of bureaucratic constraints. Working out these arrangements was time consuming and difficult but had to be accomplished if customers were to avoid a maze of agency specific hurdles in order to access services.

C) The partners had to come to terms with the benefits of co-location. For many this was not a problem, but it was for some. Agency tradition and culture with respect to who was served and how services were provided caused a few agencies to question whether they could function effectively as part of the Center. These agencies had to be convinced that they would not have to give up their distinct character nor change the nature or quality of the services they provided if they participated in co-location.

“One-Stop Innovations: Leading Change under the WIA One-Stop System.” John J. Heldrich Center at Rutgers University, 1999. <http://www.heldrich.rutgers.edu/>.

ceptional schools, year-round entertainment opportunities, and a safe environment to raise a family. They have sophisticated websites that instantly connect possible new workers with job opportunities and regular and timely information from local governments that make these communities welcoming places to outsiders.

For example, Appleton, Wisconsin, has a quarterly online newsletter that portrays tremendous civic pride and activity – from library programs to historic preservation, recycling drives and clean up campaigns, to improved golf and tennis in the parks, immunization drives, volunteer opportunities, and public transportation. One gets the sense of a warm and caring community right away. Two useful websites: <http://www.appleton.org>, and <http://www.foxcities-marketing.org>.

Reno, Nevada, also has a very extensive website that includes job postings and convenient ways for businesses to apply for permits online. There are extensive sections about cultural, arts, and recreational amenities as well. <http://www.cityofreno.com>.

Fort Pierce/Port St. Lucie, Florida, offers Workforce Academies of Learning, which were begun in Orlando to help that cities businesses tackle workforce issues. Fort Pierce/Port St. Lucie is also known for its Take Stock in Children program, which helps low-income children succeed by providing for them 4,000 college and vocational scholarships, volunteer mentors, student advocates/case managers, tutoring, early intervention and long-term support, high standards, parental involvement, and other support. See <http://www.takestockinchildren.com/>. The city also has a website that covers all the well known public and private institutions and offers an inviting promotional video (see <http://www.cityofpsl.com/>). Port St. Lucie also publishes a very comprehensive newsletter for teachers and parents, to let its community know what's happening with regard to school events, professional development, and issues of mutual concern.

<http://www.stlucie.k12.fl.us/documents/>.

10. Making the Central Illinois Regional Bioscience Strategy (and Other Major Economic Development Initiatives) a Reality

Recruiting Students to Nursing and Engineering Programs

Recruiting students to attend area colleges, hospitals, and universities in targeted fields such as nursing and engineering can provide another avenue for augmenting the workforce pool. An example of this in action is the South Florida Nursing Shortage Consortium that was funded by the Fuld Trust in 2000, and is housed at the University of Miami. The Consortium, a collaboration of 40 nursing schools, employers, and community groups, engages in activities focused on attracting students, primarily at the high school level, into nursing careers. A key activity is “A Day in the Life of a Nurse,” a highly successful, annual event offering high school students the opportunity to spend one day shadowing a nurse on the job. More information is available at:

http://www.fuld.org/nursing_shortage.htm.

California is using part of its Workforce Investment Act funds to address nursing shortages in its state by funding training and internship positions in hospitals, community colleges, and its state university system. It is also using a regional workforce collaborative to train hundreds of licensed nurses through the community colleges and the university system. Central Illinois may want to volunteer to be involved in a pilot program of this nature in Illinois. See <http://www.futurehealth.ucsf.edu/cwi.html>.

Online classes are now being offered in many nursing programs around the country to ease the acute shortage of professionals in the field. Florida Atlantic University, for instance, has an extensive nursing program that offers online classes via its website at:

<http://www.fau.edu/divdept/nursing/>.

Engineering, Mathematics, and Science Initiatives

There are many notable programs to encourage young people to become interested in science and to learn to work in teams. One of the best known is the Science Olympiad, which operates in thirty states, including Illinois. The Science Olympiad runs tournaments that are challenging and motivational events covering biology, earth science, chemistry, physics, computers, and technology. In addition, during the day of the tournaments, there are open house activities that include science and mathematics demonstrations and career counseling sessions conducted by professors and scientists from the region. Many colleges and universities take note of the participants and try to recruit them. Useful websites for the program include <http://www.soinc.org> and <http://www.illinoisolympiad.org>.

Another example is the MESA (Mathematics, Engineering, Science Achievement) program, providing opportunities to help middle and high school students become eligible for college and prepared to complete degrees in mathematics-based fields, such as engineering and computer science, at any four-year institution. MESA programs can be found throughout California, sponsored by U.C. Berkeley, and through the University of Nebraska at Lincoln in its area high schools. Bradley University's promising Engineers for Tomorrow program is at <http://coe.berkeley.edu/cues/mesa/> and also at www.bradley.edu/eft.

A nationally recognized model program to tie Bradley and the Ag Lab with area high schools is the Meyerhoff Scholarship Program at the University of Maryland in Baltimore. This program provides a four-year comprehensive scholarship, cultural enrichment activities, professional mentoring, and summer internships for promising high school students who have demonstrated an interest in the sciences and who hope to ultimately obtain graduate degrees in mathematics, science, engineering, or computer science. More than 100 students have

graduated from this program, and most are in graduate programs in health and the sciences. <http://www.umbc.edu/Programs/Meyerhoff/>.

Bradley and the Ag Lab could also place scholarship recipients in challenging summer research internships to expose them to the world of biotechnology. Meyerhoff Scholars have had impressive research internships that allow them to gain valuable practical experience in scientific and technical environments.

Wellness and Health Science Initiatives

Many communities like Central Illinois are trying to make wellness and exemplary health care a central focus for their economies. Peoria is fortunate to have the Hult Health Education Center as one of the players in the biotechnology initiative. It would also be great to have more community efforts devoted to good health in Central Illinois.

A possible model is the Indian River Community College in Florida, which has just built a \$10 million Health Science Center that simulates "real world" health care environments, including a hospital emergency room, nursing ward, medical and dental laboratories, and working Dental Clinic. Learn more about it at <http://www.ircc.cc.fl.us/atircc/progrcs/health/>.

Florida Atlantic University's College of Nursing emphasizes Community Wellness Centers that are in place at school sites in a three-county area. These interdisciplinary centers are focal points for a comprehensive program of school and community health for children, adolescents, and families. They offer an array of interdisciplinary services, including outreach efforts directed by advanced practice nurses in collaboration with other health care providers, and quick access to other providers in the community. In addition, nurses in the local public schools receive expert clinical consultation for complex health problems of children they serve. Professional development needs of school nurses in each area are also addressed through these Centers. Their website is located at <http://www.fau.edu/divdept/nursing/>.

Endnotes

Chapter 1

¹ This consists of the four counties included in Workforce Investment Area 15 plus Tazewell County from Workforce Investment Area 16. The region is obviously much smaller than “Central Illinois” as defined in the draft report entitled *Central Illinois: Regional Development Strategy, Visions and Priorities*, Illinois Economic Development Board, September, 2000. That report includes the 38 counties of Adams, Brown, Cass, Champaign, Christian, De Witt, Douglas, Ford, Fulton, Greene, Hancock, Henderson, Iroquois, Knox, Livingston, Logan, Macon, Macoupin, Marshall, Mason, McDonough, McLean, Menard, Montgomery, Morgan, Moultrie, Peoria, Piatt, Pike, Sangamon, Schuyler, Scott, Shelby, Stark, Tazewell, Vermillion, Warren, and Woodford. “Central Illinois” as defined in the present study more closely approximates the “Northern Central Illinois” component area displayed in Table A of *The Five-Year Regional Development Strategy, Illinois Department of Commerce and Community Affairs*, February 1, 2000. That area includes our five counties plus those of Livingston, McLean, Mason, and Fulton.

² Census 2000, U.S. Census Bureau. “Gross Domestic Product” or “GDP” measures the monetary value of all goods and services produced in an area. The GRP is estimated based on data from the U.S. Bureau of Economic Analysis.

³ Comparison based on data from Table 1364 of the *Statistical Abstract of the United States*, 2000.

⁴ The ratio of Personal Income to GDP (PI/GDP) is historically a very stable relationship varying in the .82-.87 range for both the national (US) and state (IL) ratios over extended periods. We assume that same relationship holds true at the local level. Using the Personal Income data for the five Central Illinois counties since 1977 we added the data for the 5 countries and called it the “region”. We then used the PI/GDP ratio to compute a Regional GDP. Finally, we used the implicit price deflator (1992=100 re-based to 1998) to compute Real Regional GDP for all years 1997 to 1998. The resulting time series is closely fit ($R^2 = .89$) by a second-degree polynomial trend line, which we employed to estimate Real Regional GDP for 1999 and 2000.

⁵ Data for the United States and Central Illinois are from the Bureau of Economic Analysis. Data for Illinois are from Woods & Poole Economics, 1999 CD-ROM.

⁶ The exports of some commodities, such as oil or agricultural products, may produce handsome royalties or land rents that may greatly benefit the owners of the mineral resources or farmland. Typically, however, the workers in those commodity industries do not share well in proceeds of those exports.

⁷ Good references on Location Quotient Analysis are: Florida State University, Department of Urban and Regional Planning. *Planning Methods III: Forecasting*. Also, “Method of Interregional and Regional Analysis”, Isard, Walter et al., *Regional Science Studies Series*, Ashgate, 1998. The relevant formulas employed by Location Quotient Analysis are these:

$$\text{Location Quotient} = \left(\frac{\text{emp.} - \text{industry} - \text{in} - \text{region} / \text{emp.} - \text{industry} - \text{in} - \text{nation}}{\text{total} - \text{emp.} - \text{in} - \text{region} / \text{total} - \text{emp.} - \text{in} - \text{nation}} \right)$$

$$\text{Basic Sector Employment} = \left(\frac{\text{reg.} - \text{emp.} - \text{ind.} - i}{\text{nat.} - \text{emp.} - \text{ind.} - i} \frac{\text{total} - \text{reg} - \text{emp}}{\text{total} - \text{nat.} - \text{emp.}} \right) * \text{nat.} - \text{emp.} - \text{industry} - 1$$

⁸ That study found an LQ of 1.28 for the Health Care industries in the Peoria-Pekin MSA and an LQ of 1.19 for

the “Greater Peoria Region” which is a somewhat larger geographic area than the five-county “Central Illinois” as defined in this study. See Final Report: Economic Analysis, Peoria Regional Biomedical/Biotechnology Strategy, Battelle Memorial Institute, July 2001.

Chapter 2

¹ Much of the discussion of this section is based on data from the Bureau of Labor Statistics. See various articles in the *Monthly Labor Review*, November, 2001, and on-line at <http://www.bls.gov/emp/home.htm>.

² Some readers may note differences between the major occupational categories shown in Figure 2-1 and those employed later in this chapter, for example, in Table 2-4. These modest differences in the names of the categories are due to the changes made in 1999 by the Bureau of Labor Statistics in the way it collects and publishes occupational employment statistics. Figure 2-1, which pertains to projections for the decade 2000-2010 is based on the new system. Data for Central Illinois and IDES projections for the period 1998-2008 that appear later in the chapter were based on the old BLS occupational categories.

³ The reader will recall that the employment numbers anticipated by this scenario are based on IDES projections for the period 1998- to 2008.

⁴ See <http://www.act.org/workkeys/assess/index.html>

⁵ The average WorkKeys scores for growing and shrinking occupations were computed in the following ways. First, a database of projected occupational changes for Central Illinois was developed on the basis of IDES occupational projections for 1998-2008. This was done by adding the IDES projections for WIA 15 and Tazewell County for all occupations for which data exist. That database was divided into two subsets, one containing all occupations for which job expansions were projected by IDES (tomorrow’s jobs) and another containing all occupations for which job contractions were projected (yesterday’s jobs). Then, a matrix of projected 2008 WorkKeys occupational profiles was developed on the basis of ACT’s WorkKeys occupational profiles at <http://www.act.org/workkeys/profiles/occuprof/index.html>. The occupational profiles there represent information distilled from the analysis of several thousand jobs that were profiled using the WorkKeys skill scales. The table contains 1,385 occupational profiles developed from more than 6,148 job profiles in the ACT job profile database. The individual skill scales were adjusted by a trained WorkKeys job profiler to reflect estimated changes in skills requirements due to technological and other changes during the decade 1998 to 2008. Finally, each of the seven WorkKeys scores for each occupation was weighted by IDES’ projected change in employment for the decade to produce a set of weighted averages for all seven WorkKeys areas for the two categories of occupations, tomorrow’s and yesterday’s. Other than by providing the original WorkKeys database of skills profiles, ACT was not involved in these calculations and bears no responsibility for them. Neither does IDES bear any responsibility, which belongs only to Workforce Associates, Inc.

⁶ This list is adapted from the SCANS Report. See *What Work Requires of Schools: A SCANS Report for America 2000*. The Secretary’s Commission on Achieving Necessary Skills, US Department of Labor, June 1991.

Chapter 3

¹ According to projections of the World Bank. See *2000 World Development Indicators on CD-ROM*, The World Bank.

² Commonly known as Chicago and the collar counties, they included Boone, Cook, Dekalb, Dupage, Kane, Kendall, Lake, McHenry, Will and Winnebago counties.

³ The Illinois Department of Commerce and Community Affairs and the Census and Data Users Service of Illinois State University make population projections for the state of Illinois. See their websites at <http://www.commerce.state.il.us/doingbusiness/research/populati.htm> and <http://www.cadus.ilstu.edu/population.htm>.

⁴ The Department of Commerce and Community Affairs projects a 6% growth of Illinois’ population, ages 16 to 64, for the period 2000 to 2010. The U.S. Census Bureau’s projections for the same group and same period are for 5% growth. For the Census Bureau’s projections, see http://www.census.gov/population/www/projections/st_yrby5.html

⁵ According to the Illinois State Board/Department of Education, a school’s dropout rate is defined as the number

of dropouts divided by the fall enrollment less post-graduates, multiplied by 100. Dropouts include students in grades 9-12 whose names have been removed from the district-housed roster for any reason other than death, extended illness, graduation/completion of a program of studies, transfer to another public or private school, or expulsion.

⁶ This information may be accessed online at <http://www.usworks.com/peoria/>.

Chapter 4

¹ For example, the Tampa Bay Partnership (a public-private entity concerned with economic and workforce development) has actively trolled for information technology and other high-tech talent in California, Massachusetts, and New York,

among other places. Thought has been given also to participation in European job fairs. Other communities have assisted their employer to obtain H-1B visas for needed talent. And the efforts of universities and communities to recruit foreign students can be seen as partly serving the same end.

² According to the Illinois State Board of Education, the dropout rate is the number of dropouts divided by the fall enrollment, less post-graduates, multiplied by 100. Dropouts include students in grades 9-12 whose names have been removed from the district-housed roster for any reason other than death, extended illness, graduation/completion of a program of studies, transfer to another public/private school, or expulsion. The graduation rate is the number of 2000-01 high school graduates divided by the first-time ninth grade 1997 fall enrollment, less students transferred out, plus students transferred in, multiplied by 100. (Numerator = number of graduates; denominator = 9th grade enrollment-transfers out + transfers in). Transfers as used here refer to this specific graduation class and are accumulated over a four-year period.

³ Information about Illinois educational assessments on the ISTST, PSAT, and other programs may be found at <http://www.isbe.net/assessment/>.

⁴ The Central Illinois average dropout and graduation rates are the average of each area high school's rates weighted by that school's total enrollment.

⁵ In addition, graduation rate data are not available for 18 Illinois high schools, of which 14 are in Cook County.

⁶ The examination, to be given annually henceforth, combines the ACT, a nationally recognized college entrance exam, and two nationally recognized ACT WorkKeys tests of workplace-related math and reading skills. As such, the PSAE is designed to yield information that will help students make important decisions about life after high school. Because the ACT and WorkKeys tests measure decidedly different things, the results of these two tests for Central Illinois high schools are reported separately in this report.

⁷ Details about any school's or district's performance on PSAE, the ISTAT, and the Illinois School Improvement Program can be learned by visiting <http://206.166.105.128/ReportCard/rchome.asp> and then searching for the city, district, or school desired.

⁸ For example, some high schools score well though only a small percentage of their students actually take the exam.

⁹ Two examples will suffice. Cairo High School in Alexander County and J. S. Morton East High School in Cook County both have much higher minority and low income percentages than any school in Central Illinois, but their dropout rates are about half those of Manual and Woodruff high schools, while their graduation rates are 15% to 25% higher. Other examples could be cited as well.

¹⁰ The Illinois State Board of Education defines turnover (student mobility) as any enrollment change between the first school day in October and the last day of the school year. It is the sum of the students who transferred out and the students who transferred in, divided by the average daily enrollment, multiplied by 100. Students are counted each time they transfer out or in during the reporting year. Thus, individual students may be counted more than once.

¹¹ The empirical regression equation is $D = aT + qI + jM + m$ where D is "Dropout Rate," T is "Turnover Rate" I is "Percent Low Income," M is "Percent Minority" and m is a constant term. The estimated value of the coefficient a is 0.31, that of q is 0.68, and that of j is 0.03, while m is -1.75. R^2 is .71

¹² PERFECT's website is <http://peoria.k12.il.us/perfect/>.

¹³ Focus group conducted on November 14, 2001 at ICC with seven seniors with majors in nursing, engineering, manufacturing technology, and counseling; Jane M. Lommel, Ph.D., facilitator.

¹⁴ Central Illinois Higher Ed Consortium Community College Transfer Survey 2001

<http://www.cihec.org/research3.html>, in which 35% of students reported that their counselors were the "least helpful" people in helping them figure out where and how to transfer!

Chapter 5

¹ Interested readers will find the entire WIA text at <http://usworkforce.org/wialaw.pdf>. A “plain English” version of the Act is at <http://usworkforce.org/plaintext.pdf>.

² This list is adapted from *Performance Excellence in One-Stop Career Center Operations, A Guide for Workforce Boards*, Workforce Excellence Network, 2000. See the document at <http://www.workforce-excellence.net/pdf/onestop.pdf>.

³ Ibid.

⁴ Ibid.

⁵ These points are slightly modified from those developed in an exemplary report resulting from a project partnership between the Workforce Board of Northern Cook County; the Chicago Workforce Board; the Crossroads Workforce Investment Board; and the Central Illinois Workforce Development Board. It was prepared by the Corporation for a Skilled Workforce in partnership with Leaders for Excellence, and funded by a Technical Assistance grant from the Illinois Department of Employment Security, Workforce Development Division.

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Mr. John Garrett* – Peoria Public School District 150

Mr. Chris Glynn – Caterpillar Inc.

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Mr. Earl (Sandy) Moldovan* – Workforce Development Board Vice-Chair

Mr. Michael Quine* – Economic Development Council Vice-Chair

Mr. David Ransburg – Mayor, City of Peoria

Dr. Donald Rager – Univ. of Illinois College of Medicine

Mr. Dan Silverthorn* – West Central Building & Construction Trades Council

Mr. Pat Urich – Peoria County Board Administrator

Mr. David Vance – Caterpillar Inc.

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**Appendix Table A-1.
Partial Listing of Central Illinois Workforce Development Agencies and Programs.**

Agency	Area covered:	Program	Clients	Funding Source & Amount	Approximate Number of Participants in 2001	# Staff	Services:
Central Illinois Agency on Aging	Fulton, Marshall, Peoria, Stark, Tazewell, Woodford	Senior Employment Specialist Program	Adults 55+	IDOA (Title V) \$65,186	211	.4 FT	⇒ Referral to one stop system; ⇒ Job search and placement; ⇒ Development of individualized employment plans; ⇒ Pre-employment preparation.
		Senior Community Service Employment Program	Adults 55+	IDOA (Title V) \$17,791	10	.15 FT	⇒ Referral to one stop system; ⇒ Job search and placement; ⇒ Development of individualized employment plans; ⇒ Pre-employment preparation ⇒ Development of social service placements for 10 subsidized positions and payment of stipends at 20 hours/week. ⇒ Administration of 10 not-for-profit organization subgrants.
City of Peoria Workforce Development	Peoria, Marshall, Woodford, Stark	WIA Title I Adults Program	Adults 22+	US Dept of Labor; IDES \$606,826	Resource Room: 6,554 LMI Survey: 2,000 Job Fairs: 2,500 Employees: 200 Core: 250 Intensive: 119 Training: 119	1 FT	⇒ Core Services: Assessment, employment information, self-help, etc. ⇒ Intensive: Counseling, job search workshops. Training Services: Community college occupational skills training, customized employer training. ⇒ Business Services: Job postings, applicant recruitment, occupational assessment, pre-employment screening, customized training, outplacement services, labor market information, tax credit information
		WIA Title I Youth Program	Youth 14-21 years old	US Dept of Labor; IDES \$679,939	Registrants: 500 Job Fairs: 500 Year Round: 81 Resource Room: 6,554	1 FT	Services for young people who are seeking assistance in achieving their academic and employment goals. Includes options for improving educational and skill competencies and providing effective connections to employers.
		WIA Title I Dislocated Worker Program	Dislocated Workers	US Dept of Labor; IDES \$570,085	Resource Room: 6,554 LMI Survey: 2,000 Job Fairs: 500 Employees: 100 Core: 250 Intensive: 83 Training: 83	1 FT	⇒ Core Services: Assessment, employment information, self-help, etc. ⇒ Intensive: Counseling, job search workshops. Training Services: Community college occupational skills training, customized employer training. ⇒ Business Services: Job postings, applicant recruitment, occupational assessment, pre-employment screening, customized training, outplacement services, labor market information, tax credit information.

Appendix Table A-1. Partial Listing of Central Illinois Workforce Development Agencies and Programs. (continued)

Agency	Area covered:	Program	Clients	Funding Source & Amount	Approximate Number of Participants in 2001	# Staff	Services:
Illinois Department of Employment Security	Peoria, Woodford, and Marshall	Unemployment Insurance	Those applying for unemployment insurance	Unemployment Trust Fund collected through UI taxes.	5,000	16 FT	This program provides benefits to workers who are unemployed and able and available to re-enter the labor market.
		Wagner-Peyser (LMI, Hire the Future, MSFW, DOC, WOTC)	General population	Wagner-Peyser & 7B federal funding; funding 8 personnel equivalents	13,308 as of FY 2000	8 FT	<ul style="list-style-type: none"> ⇒ Employment Service operates a no fee public labor exchange. ⇒ Employers and job seekers are matched based on skills through the Illinois Skills Match system ⇒ Department of Corrections program, ⇒ Hire the Future program, ⇒ Migrant Seasonal Farm workers program. Specialized recruitment and processing of Work Opportunity Tax Credit applications. ⇒ The TAA/NAFTA program offers assistance to workers laid off due to adverse effects of foreign trade.
		Illinois Department of Employment Security Veterans program	Veterans	Federal Veterans Programs; funding 3 personnel equivalents	1,600	3 FT	IDES gives priority to qualified veterans by federal law in its services to disabled veterans. Case management services are provided to facilitate re-entry into the labor market along with all other employment service functions. Veterans Employment representatives promote the hiring of veterans with Federal Contractors and other employers.
Illinois Department of Human Service	Peoria, Woodford, and Marshall	Food Stamp Employment and Training Program (FSE&T)	Able bodied individuals between the ages of 17-49 who are receiving food stamps	State agency; funding not known	600	N/A	The FSE&T program is designed to help clients improve their work skills through short term training and work skills and to assist them in finding jobs. Services include GED, resume writing, and interviewing classes. Each client must meet with program staff, be assigned an activity, and cooperate with the program in order to receive full food stamps benefits and supportive services.
		Office of Rehabilitation Services	Persons with disabilities	Federal Vocational Rehabilitation Grant; \$245,302	600	5 FT	Vocational Rehabilitation offers evaluation and counseling, job training and placement, educational assistance, equipment, and referral and follow-up services. The agency also funds supported employment programs that enable people with severe disabilities to work in the private sector. The agency attempts to link employers with potential applicants with who have disabilities and to provide assistance in the areas of disability awareness and reasonable accommodations.

Appendix Table A-1. Partial Listing of Central Illinois Workforce Development Agencies and Programs. (continued)

Agency	Area covered:	Program	Clients	Funding Source & Amount	Approximate Number of Participants in 2001	# Staff	Services:
Illinois Department of Human Service (conc.)	Peoria	Temporary Assistance for needy Families (TANF)	Women who are pregnant or families with children under the age of 19	State agency; funding not known	500	N/A	TANF focuses on transitional services by providing individuals with cash assistance while they prepare or search for a job. The program also includes such services as subsidized employment, the ability to save up to \$3,000 to purchase a car, stipends to help cover expenses related to a new job or in the search for a job.
Del Jen, Inc.	26 counties surrounding Peoria	Job Corps	16-24 years old; economically disadvantaged and in need of educational and/or vocational training	US Dept of Labor; funding not known	300	1 FT	Job Corps is a residential training program for young people aged 16-24. The program mission is to help economically disadvantaged youth become responsible, employable, and productive citizens by providing them with opportunities to develop the vocational, educational, and social skills needed to succeed.
Illinois Central College Special Academic Services	ICC District	Applied Science or Certificates	Students pursuing Applied Science Degrees or Certificates	Carl Perkins \$340,033	300	1 FT	This program provides services for students in the Applied Science Degree or Certificate programs, including financial assistance, tutoring, study skills, schedule planning, and special support services for students in non-traditional careers.
Illinois Migrant Council	North central region (17 counties)	Migrant and Seasonal Farm workers Program	Adult and youth migrant and seasonal farm workers	US Department of Labor; funding not known	80 adults; 12 youth	5 FT	<p>This program's goal is to increase the economic self-sufficiency of migrant and seasonal farm workers and their families through education, training, and services. It provides the following services to eligible adults:</p> <ul style="list-style-type: none"> ⇒ Emergency supportive services; ⇒ English as a second language; ⇒ Job counseling and placement. Services to youth include: ⇒ Computer literacy and employability enhancement; ⇒ Job shadowing; ⇒ Mentoring; ⇒ Employment referral to training programs for out-of-school youth.
Peoria Citizens Committee for Economic Opportunity	Peoria	Head Start Program	Children from birth to age 5	Not known	Not known	18 FT	

Appendix Table A-1. Partial Listing of Central Illinois Workforce Development Agencies and Programs. (concluded)

Agency	Area covered:	Program	Clients	Funding Source & Amount	Approximate Number of Participants in 2001	# Staff	Services:
Peoria County Regional Office of Education #48	Peoria County Jail	Jail Education Program	Male and female inmates without a high school diploma	Illinois Community College Board Grants; \$40,000	170	1 FT; 3PT	This program consists of four components: GED for those reading above an 8th grade level. Literacy program for those reading below an 8th grade level. An educational and social service orientation program for all approved students. It is conducted upon incarceration and prior to release. There are parenting classes & job preparedness classes as well the <u>Food Handling certification</u> . This program provides instruction leading to the equivalent of a certificate of high school graduation, GED preparation, classes for high school credit, and preparation for citizenship.
Peoria Public Schools District 150	District 150 area	Adult Secondary Education (ASE)	Adults 16+	State, federal and public assistance; \$67 per participant	143	7 FT	This program provides instruction in basic skills to enable adults to function effectively in society, including the ability to speak, read, and write English.
		Adult Basic Education (ABE)	Adults 16+	Ditto; \$73.75 per participant	374	7 FT	This program provides instruction in the English language for adults with limited English proficiency; 2) instruction to prepare for the US citizenship test.
		English as a Second Language	Adults 16+	Ditto; \$73.75 per participant	142	2.5 FT	This program provides instruction in high school courses equivalent to secondary credits needed for a High School diploma.
		High School Credit	Adults 16+	Ditto; \$67 per participant	14	1 FT	This program provides instruction in vocational skills equivalent to secondary level vocational instruction and/or instruction in job seeking, job readiness, and team building skills.
		Vocational Skills/Employability Skills	Adults 16+	Ditto; \$92.19 per participant	214	6 FT	

Source: This table is based on one prepared by Hope Long, Management Analyst, City of Peoria Workforce Development Department on September 17, 2001.
 Note: The numbers in this table refer to Fiscal Year 2001 which extended from July 1st, 2001 to June 30, 2002. That means that the numbers for FY 2001 are actually projected numbers they were produced before the end of that fiscal year.