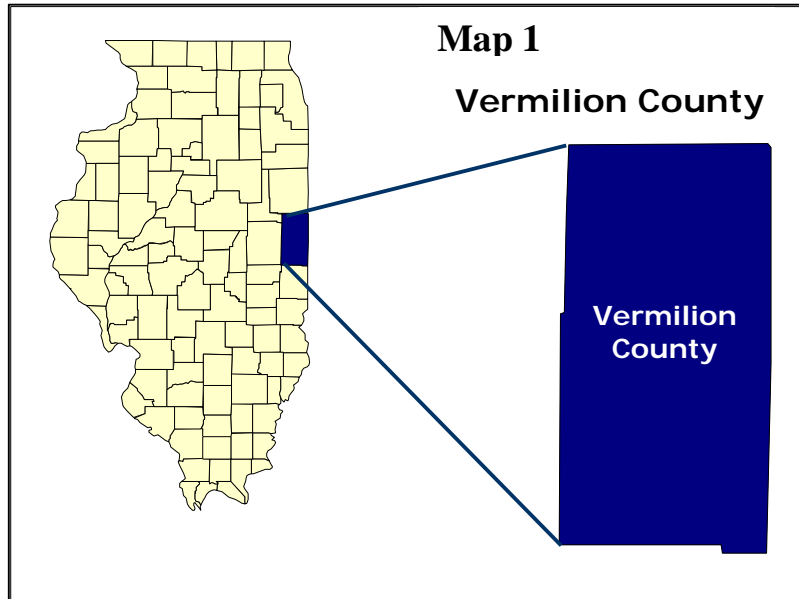


Chapter 1: Vermilion County' Economy

What Is Vermilion County?

For the purposes of this study, "Vermilion County" means just that, Vermilion County in east-central Illinois (see Map 1).



Vermilion County' Economy Today and How It Got There

This chapter takes a hard look at Vermilion County' economy and asks some basic questions about it. Where is the county's economy today? How did it get there? What developments and trends can we spot in the recent past that suggest where it may be tomorrow? What candidates can we spot that may lead the area's future economic development?

GDP and Per Capita GDP Have Grown in Vermilion County

The past quarter century was a bad-news/good-news story for Vermilion County' regional economy. The bad news was that from the mid-1970s well into 1980s, the county's GDP declined or stagnated (see Fig. I-1).¹ The good news was that, beginning in 1984, an economic expansion began that continued, with two brief pauses in the 1990s, until the dawn of the 21st century.

Despite some growth in the 1990s, Vermilion County has not fully participated in the economic expansion of the United States or Illinois (Fig. I-2). The nation's GDP grew by over 110% in the last three decades of the 20th century while Illinois' Gross State Product grew by more than 70%. Meanwhile, Vermilion County's GDP managed to eke out only a 3% over those thirty years. In other words, Vermilion County has been growing at a rate much below that of the larger areas of which it is a part.

An area's GDP growth is important. Even more important is how total economic output grows when measured on a per capita basis. That shows the changing ability of the area's economy to satisfy the needs of the people who actually live there. When you're interested in the people's welfare, it's important to measure economic change on a per capita basis.

After correcting for inflation, the GDP per person living in Vermilion County grew from about \$20,000 in 1977 to more than \$25,000 by 2000 (Fig. I-3). But it did so only after taking a major dip in the early 1980s. Per capita GDP growth for the region over the three decades was 21% compared to 56% for the state and 64% for the nation (Fig. I-4).

Personal Income Has Grown too, but Slower Than Elsewhere

Per capita personal income is another comprehensive measure of the material benefits that an area's residents derive from their economic activity. Its growth over time, particularly when compared to other areas, shows the degree to which the area's residents prosper.

When adjusted for the affects of inflation, per capita personal income in Vermilion County rose from about \$17,000 to \$21,500 (Fig. I-5). Despite that welcome growth, per capita personal income in Vermilion County is growing more slowly than the state of Illinois or the nation. In the mid-1970s, Vermilion County's average personal income pulled slightly ahead of the national average (Fig. I-6). From that height, however, it slid more or less continually to reach a level slightly above 74% of that average by 2000. That rise followed by a sustained fall relative to the national average per capita personal income very closely tracks the path followed by all of Illinois' non-metropolitan counties. For a few years in the late 1970s and early 1980s, Vermilion County's average per capita personal exceeded that of Champaign County.

Where Does Personal Income Come From in Vermilion County?

The vigor of an area's economy can be assessed by whether its residents derive their income from "active" sources (e.g., labor income and business profits) or from "passive" sources (e.g., Social Security, welfare payments, other entitlements, and investment income). Some mixture of the following three attributes usually characterizes areas in which a large share of personal income comes from passive sources:

1. The population is older; many depend on Social Security and other retirement income.
2. A high proportion of the population depends on public assistance and entitlements.
3. A significant proportion of the population possesses investment assets, i.e., stocks, bonds, or other income-producing property.

In 2000, the sources of personal income in Vermilion County differed substantially from those of the state of Illinois or the nation. More than 60% of personal income in the state, nation, and Chicago PMSA came from wages and salaries (Figures I-7 and I-9). In Vermilion County, only 50% of personal income comes from wages and salaries.

What truly sets the Vermilion County economy apart from all the other areas surveyed here is the much more prominent local role of transfer payments. In 2000, they accounted for 19% of total personal income in Vermilion County, compared to 10% in all Illinois and 11% in the United States as a whole. Transfer payments typically constitute a large share of total personal income in places where a large portion of the population is elderly with few other sources of retirement income, or is otherwise dependent on public assistance. This high and rising share of transfer payments does not indicate economic exuberance in Vermilion County.

Employment and Wage Growth Have Lagged Other Areas

Total employment in Vermilion County dropped by 3% between 1970 and 2000. Virtually that entire decline occurred during the 1980s. From 1990 to 2000, on the other hand, the County experienced a 2% job growth (Fig. I-9). Meanwhile, during the entire three-decade period, job growth in state of Illinois was over 40% and in the United States it was over 80%.

Employment decline in Vermilion County was accompanied by a serious decline in earnings. Average earnings per job in Vermilion fell from 95% of the national average in 1970 to 78% in 2000. That decline was not monotonic, however. It was interrupted by a rise in the 1970s which took Vermilion's average to 105% of the nation's in 1975.

Why have this area's gross output and personal income lagged regional, state, and national levels? Why is personal income in Vermilion County increasingly derived from transfer payments and other passive income, rather than from work earnings? Why has job growth been slower here than elsewhere? Why have earnings per job declined relatively and, in the cases of three counties, in absolute terms as well? What are the underlying trends that have caused these lags?

Much of Vermilion County's economic deceleration in recent decades has been in response to powerful economic forces originating outside the area. However, there have also been retarding factors within the

area. We now turn to examine these, looking at them first analytically and then through the prism of the region's economic history.

The Changing Structure of the U.S. Economy: Its impact on Vermilion County

The industrial composition of Vermilion County's employment underwent a dramatic shift during the last three decades of the 20th century. In 1970, Vermilion County's economy was already a service economy in that 58% of its nearly 44 thousand workers were engaged in providing services while the remaining 42% produced goods.² But, by 2000, that share of workers producing goods plummeted to 23% which represented a loss of nearly 8,300 jobs. Meanwhile, employment in the services-producing jobs rose by about 7,800. Briefly put, the area's economy shifted from one where two-fifths of its workers produced goods to one where nearly four-fifths produce mainly services (Fig. I-11). The shift was most savage in manufacturing and farming. In 1970, 13,812 Vermilion County workers held manufacturing jobs; by 2000, nearly half of those jobs had disappeared leaving fewer than 8,000 still employed in the county's factories. In 1970, according to the U.S. Department of Commerce's Bureau of Economic Research, there were 2,281 farmers in Vermilion County. By 2000, that number has shrunk to 1,228.

A skeptic reading those numbers might argue, "Of course, but what you describe is hardly unique to Vermilion County. The shift of employment from goods production to services production has been a nationwide phenomenon. There's nothing unique here."

That skeptic would be only half right. The shift has, indeed, been universal throughout the American economy. He or she would also be half wrong. The nature and extent of the shift in Vermilion County has been qualitatively and quantitatively different from the national one. In percentage terms, the employment declines in agriculture, manufacturing, mining, and construction were much sharper in Vermilion County than in either the state or nation (Fig. I-12). Meanwhile, the growth of Services and Retail sector jobs—the big gainers nationally—was anemic in Vermilion County compared to the state and nation.

Vermilion County's unique job history in the late 20th century is well illustrated with the aid of an analytical tool called *shift-share analysis*. Shift-share analysis breaks employment growth (or decline) in a region over a given time period into three components:

1. A *national growth effect*, which is that part of the change in total employment in a region ascribed to the rate of growth of employment in the nation as a whole.
2. An *industry mix effect*, which is the amount of change the region would have experienced had each of its industries grown at their national rates, less the national growth effect.
3. A *regional shift effect*, which is the gain or loss in local employment from an industry growing faster or slower than the same industry nationally. When employment in a local industry grows faster (or declines less) than its counterpart nationally, there occurs a *positive* "shift" in the net "share" of national employment captured by that industry locally. On the other hand, when local employment in an industry grows slower (or increases less) than its national counterpart, then the regional shift is *negative*.

The shift-share analysis results displayed in Tables I-1 and I-2 let us evaluate employment change in the Vermilion County economy over the period 1970-2000. They pinpoint important differences between the composition of industry employment growth locally and that of the nation as a whole.

The row entries in the columns under "Actual Growth" of Table I-1 show the employment change in Vermilion County for each of the main industrial sectors listed in the column marked "Industry." Total actual employment in Vermilion County during the period contracted by 1,180 jobs for a decrease of 2.7%.

If all of Vermilion County's industries had grown at the same rate as the nation's total employment, then they would have *added* 31,082 jobs in the county bring the total to 74,872 (Table I-2). Unfortunately, that did not happen. In 1970, as we have seen, this county had an exceptionally high concentration of its jobs in industries that, throughout the period 1970-2000, grew more slowly than the nation's rate of total job growth. Several of Vermilion County's most prominent major industries in 1970 actually declined nationally over the next thirty years. Manufacturing is one example of such an industry. If its jobs had grown locally at the same rate as all jobs in the U.S. economy, they would have added 11,500 workers to local payrolls. However, manufacturing actually contracted nationally. Considering that national decline,

we would have expected a drop of 407 in Vermilion County' manufacturing jobs ($11,500 - 11,907 = -1,593$). Given the area's peculiar industry mix, one could have expected a net growth of 34,034 jobs in Vermilion County ($41,433 - 7,399 = 34,034$).

Alas, Vermilion County did not get those 34,034 jobs. Instead, it lost 1,180. Between these two figures lies a yawning gap of new jobs that simply did not appear in this county. This means that the regional shift effect was an impressive *negative* 34,876 jobs. So the answer to our hypothetical skeptic's question is that *Vermilion County did much worse in terms of job growth between 1970 and 2000 than would have been expected even in a local economy that was greatly exposed to those goods-producing sectors (such as farming and manufacturing) that declined everywhere in the nation. In fact, something unique has happened here.*

Part of the reason for this negative regional shift, this lack of economic dynamism, lies undoubtedly in the specific mix of Vermilion County industries. Many of this county's large employers in the 1960s were not just in manufacturing but in *durable goods* manufacturing...automotive manufacturing and the like. Long-standing and powerful trends of globalization, technological change, and industry consolidation have staggered this particular sector. The upshot is that a large number of large, local employers shrank, relocated, or simply closed in the last three decades of the 20th century.

A Scenic Tour of Vermilion County' Economic History³

Vermilion County's modern economic history had a salty start. Indeed, as long ago 1706, French explorers and trappers were referring to the "Salines of the Vermilion." Salt making, which had drawn many of the earliest white settlers to Vermilion County, had essentially run its course by 1840. For most of the decades before the Civil War, farming, milling and trade dominated the county's gradually growing economy. Then, in the late 1850s, the arrival of the railroads and beginning of coal mining boosted Vermilion's economic and demographic growth.

Vermilion County's main "export" products in the middle of the 19th century were coal, bricks and farm products, mainly corn and other grain. The same railroads that shipped these products to buyers in Chicago, Indianapolis, St. Louis and beyond also brought in miners, mining equipment, farm equipment, and other manufactured goods. The County's real manufacturing heyday was yet to come.

Coal was king in Vermilion County by the end of World War I. The peak year for coal production came in 1918 when 3,971,330 tons of Vermilion County coal were produced. In 1924, more workers (4,200) were engaged in coal production than any other occupation in the 20th century. In the first quarter of the last century, King Coal still reigned in Vermilion County. Multiple rail lines (including the Peoria & Eastern, the New York Central, The Chicago & Eastern, the Illinois Terminal Railroad) served Danville and other Vermilion stations. Meanwhile, farming continued to earn more money for county residents than manufacturing although the latter was rapidly gaining.

World War II and the quarter century thereafter were the halcyon years for manufacturing in Vermilion County. Major U.S. manufacturing corporations, including such icons such as General Motors and General Electric, established plants in the county. By 1970, as we shall see, manufacturing accounted for nearly a third of all jobs in the county and manufacturing workers brought home nearly two-fifths of all paychecks earned in the county.

But then things began to sour. The thirty years from 1970 to 2000 brought the continuation—indeed, the acceleration—of trends nationally and regionally that had reared their heads already in the 1960s. Briefly summarized, the most important of those trends were these:

- ü Regional shifts: Southern "Right to Work" states capitalized on lower labor costs and union-free workplaces to lure industry from the North and Midwest and to attract a disproportionate share of new investment, especially in manufacturing.
- ü Globalization: the increasing integration of the American economy into the larger global economy. With globalization came hotter off-shore competition from lower-wage nations. First to feel the heat were the labor-intensive industries characterized by low-skill low-wage work. But, as the years progressed, foreign competition has "climbed the food chain" to challenge even the more capital intensive and technologically sophisticated manufacturers.

- ü Rising Asian and other tigers: First came Korea, Taiwan, and Hong Kong. Then, beginning in about 1980, came China. In 1993, the U.S. Congress passed NAFTA. Each of these brought new opportunities for some U.S. firms but also stiffer competition for traditional manufacturing companies and communities.
- ü Faster technological change: The pace of technological innovation accelerated, rendering obsolete those products, processes, plants, and people inflexibly wed to earlier technologies.
- ü Changing Industrial Structure: The U.S. saw an inexorable shift of jobs from goods-producing to services-producing activities.

Some parts of the East and the industrial Midwest adapted to these trends better than others did. In Vermilion County, the impacts of those trends in the last three decades of the 20th century are told in the numbers cited above on gross domestic output, personal income, employment growth, and average wages per job in Vermilion County.

Jobs in services and retail trade from 1970 to 2000 grew in Vermilion County (Fig. I-13). Meanwhile, major job losses occurred in manufacturing throughout the period, although they diminished in magnitude as time progressed. In terms of its percent of total employment in Vermilion County, manufacturing held first place in 1970. By 2000, it had slipped to third place behind services and retail trade.

Vermilion County's profile of earnings by major industrial sector presents quite a different picture than that of employment (Fig. I-14). In 1970, manufacturing was by far the most important source of earnings in Vermilion County, accounting for nearly 40% of the total. By 2000, it still accounted for about 25% of total earnings even though its share of total employment had shrunk to 17%. Even in 2000, therefore, manufacturing remained the number one source of earnings in the Vermilion County. That testifies eloquently to the enduring importance of manufacturing to Vermilion County's economy.

Which Are Vermilion County's 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:

- ü Nations that export a lot can afford to import a lot in return.
- ü 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.
- ü 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 develop 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 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.

A few examples of actual nations will suffice to illustrate the point. Singapore, 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 countries 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 that export heavily tend to be more prosperous than those that do not. 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.⁴ As Harvard Business School Guru Michael Porter has strongly emphasized, the key to producing and exporting high-margin products is high productivity.

In the past 180 years, Vermillion County has witnessed four overlapping eras of economic activity that dominated the county's exports to the world beyond.

1. The Salt-making Era: This was the short-lived era that ended in about 1840.
2. The Era of Agricultural Production: This era began in the first half of the 19th century and continues to the present day although the County's farms produce ever rising quantities of farm goods with ever fewer farmers.
3. The Reign of King Coal: As we have seen, this coal mining began in late 1850s, peaked in the 1920s, and lingers on as a mere shadow of its former self.
4. The Manufacturing Era: Starting with brick manufacturing in the 19th century, manufacturing gained momentum in the decades before World War II. It then achieved great growth in the first three decades after V-J Day, and suffered grievously during the 1980s as the various figures of this chapter as well as Shift-Share analysis demonstrate. Nevertheless, manufacturing remains a vital part of Vermillion County's economy, both as a source of earnings and producer of value-added output that is exported beyond the county. But the long-term trend is for manufacturing employment to gradual decline both absolutely and as a share of all jobs in the county.

What are Vermillion County' export industries today and what will they be tomorrow?⁵ Will they high-productivity, high value-added, high-margin industries? Or will they tend to be mainly commodity-producing industries offering relatively low wages and salaries?

Location Quotient Analysis to the Rescue

Our brief tour of Vermillion County's economic history hinted at some of the answers to those questions. Here we approach those questions analytically with a tool called *Location Quotient Analysis*.⁶

Nations, as everybody knows, employ a armies of 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, no one collects such data for areas like Vermillion County. 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.

Location Quotient Analysis (LQA) is one such "devious" tool. Its logic is quite simple: if a given industry in the region employs a higher percentage of the total regional workforce (i.e., it has a higher *Location Quotient* or "LQ") than that same industry does in a designated reference area (in this study, we use two reference areas: the entire United States and the State of Illinois), then we call that industry a *basic* industry in the region in question. Stretching a bit, we can take a basic industry to be the functional equivalent of an export industry.

Vermillion County had five major industrial sectors in which its concentration of jobs in 2000 impressively exceeded that of the United States.^α These were Farming, Agricultural Services, Manufacturing, Retail Trade and Services (Table I-4). Compared with the State of Illinois, only Agricultural Services falls away. Farming is highly dominant versus both the nation and the state.

^α To be "impressive," we require an industry's LQ to equal or exceed 1.2.

Manufacturing, with an LQ=3.381 versus the U.S. and 1.287 versus Illinois, also employs a disproportionately high proportion of the Vermilion County workforce.

Table I-5 displays some more specific manufacturing industries in which Vermilion County employment has been or remains impressively concentrated relative to the state and nation. Among those continuing to show very high LQs are Electronic and other electrical equipment; Chemicals and allied products; and Food and kindred products. Several other manufacturing sub-sectors that showed high LQs in 1990 (Primary metal industries, Fabricated metal products, Printing and publishing, and Electronic and other electrical equipment) no longer did by 2000.

In general, Vermilion County's Service Sector has grown more slowly than in the state or nation (Figures I-11 and I-12). Even so, that sector shows a high and rising LQ versus the U.S. although not versus the state of Illinois. The Service Sector industries include a heterogeneous mixture of sub-sectors. Some of these cater almost exclusively to local clients (e.g., personal services). Others may serve clients from beyond the county. Table I-6 shows several Service Sector industries (or sub-sectors) in which Vermilion County has or had relatively high concentrations of employment. None of these, with the possible exception of Health services, can be considered "export industries" since the vast bulk of their clients are local.

Table I-7 displays LQs for a variety of sub-sectors of the major industry groups.⁷ These do not embrace the entire Vermilion County economy, but they do include sub-sectors satisfying one or more of these three criteria:

1. They employ large numbers of workers.
2. They have added jobs rapidly in recent years.
3. They represent industries with large LQs relative to the state or nation.

In manufacturing, only Chemicals and allied products industry shows both a high LQ relative to the state and nation *and* also added jobs during the 1990s. All the other manufacturing sub-sectors in which Vermilion County showed high LQs experienced job losses in that decade.

The Health services industry, with 2,676 workers locally is a major Vermilion County employer. Its LQ is somewhat, although not impressively, above compared to the state and nation. Nevertheless, its employment grew by 9.2% in the 1990s. Business services, potentially a significant export industry, does not employ many workers in Vermilion County. In fact, it shed more than 46% of its jobs during the decade.

Of particular interest is the competitive strength (as measured by high LQs and rising employment levels) is the Logistics "cluster." This collection of industries includes Motor freight transportation and warehousing as well as Wholesale trade in non-durable goods. All of these showed impressive growth and rising LQs during the 1990s. The Logistics cluster is one which the Vermilion Advantage has targeted for special emphasis in county's economic development program.

This Location Quotient Analysis tells us, basically, that:

- ü Farming and manufacturing, among all of the major industries, remain much more important in Vermilion County than in the nation or state.
- ü Agriculture is certainly export-oriented, but it employs a shrinking share of the Vermilion County workforce.
- ü Only a modest part of the retail sector can be considered an export industry. Most of its clientele appears to lie within the area. Nevertheless, as the local retail industry develops, it appears likely that Vermilion County is suffering a smaller net leakage of dollars to retailers outside the area.
- ü Manufacturing is a major export industry and remains strong vis-à-vis the United States and Illinois. Unfortunately, all but one of the manufacturing sub-sectors in which Vermilion County shows high relative concentrations of employment have recently experienced significant job losses.

- ü The Logistics Cluster of industries shows considerable strength in comparison to both the United States and to Illinois.
- ü Overall, Vermilion County shows weakness compared to the other areas in FIRE (Finance, Insurance, and Real Estate).

Vermilion County Workers are Increasingly Mobile

Most (86%) of workers residing in Vermilion County also work in their home county. Over the years, however, Vermilion County has become a major net workforce supplier to Champaign County (Table I-8 and Table I-9). According to Census 2000, some 3,135 residents of Vermilion County regularly commute to work in Champaign County— that’s roughly 9% of the 34,943 workers residing in Vermilion County. On its daily westbound commute, this small army of Vermilion County workers passes only about 771 workers traveling eastward to Vermilion County. The net flow of workers from Vermilion County to Champaign County, therefore, is 2,364. The decennial U.S. censuses show the percent of all workers who reside in Vermilion County but work in Champaign County rising from 2.6% in 1980 to 6.9% in 1990 and, as indicated, to 9.0% in 2000.

Most (87%) of workers working in Vermilion County also live in Vermilion County. Still, a very substantial number of workers commute in from other counties to work in Vermilion County. Indeed, if Champaign County is excluded, Vermilion County is a net importer of workers...especially from neighboring counties to the north and south in Illinois, as well as from those that lie eastward in Indiana.

The movements of workers to and from Vermilion County obviously generates financial flows in the opposite directions (Fig I-15). During 2000, the outflow of payments from Vermilion County employers to workers residing out of the county exceeded by about \$14 million the inflow of earnings to workers residing in Vermilion from their work performed for employers outside the county. From these earnings flow data, we compute the “Commuter Earnings Index” for six counties in the region as the ratio of the inflow to the outflow of earnings (Fig. I-16). When the Commuter Earnings Index (CEI) is below one, it signals that the county pays out more than it receives from the exchange of workers. Thus, only Vermilion and Champaign counties showed CEIs below one in 2000. All four of the other counties (Iroquois Co., Edgar Co., Warren Co. IN and Fountain Co. IN) showed very high CEIs which indicates the importance of net receipts from worker exports in those counties.

The changing magnitudes of the Commuter Earning Index from 1981 to 2000 is shown in Fig. I-17. In 1981 (the first year for which these data are available), Vermilion County’s CEI was a mere 0.2. That number has risen steadily over the years and, as was seen in Fig. I-16, reached 0.9 in 2000. This spotlights the trend for Vermilion to become a net worker exporting county. Champaign County’s CEI was well above Vermilion County’s in 1981 but, over the years, has dropped well below it.

This analysis of intercounty worker flows provide these major conclusions:

- ü There is growing workforce mobility between the Vermilion County and neighboring counties, especially Champaign County.
- ü Vermilion County is increasingly a net workforce exporter to Champaign County while, at the same time, it is a net importer of workers from other neighboring counties.
- ü Workforce mobility increased greatly between 1980 and 1990. In 1980, nearly 94% of all workers residing in Vermilion County also worked within the county. By 2000, that percentage had declined to 86%.
- ü In short, Vermilion County is increasingly integrated into a multi-county workshed in east-central Illinois and west-central Indiana.

Looking Ahead: Powerful Forces To Shape the Future Vermilion County Economy

Vermilion County is an “open economy” in the midst of much larger state, national, and global economies. This means 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 the regional economy. These external forces combine with various forces inside the region to shape the region’s

economy. Thinking seriously about the economic future of Vermilion County requires that we understand the most important of these forces, both external and internal.

Among the key external forces are these four:

1. **Demographic Changes:** These reflect the aging of the Baby Boomer generation; the low fertility rates of native-born Americans (especially Caucasians); and a rise in international immigration, especially from Latin America and Asia. All of these are leading to a more diverse population, especially among the younger age groups.
2. **Technological Change:** We see an ever-quicken pace of technological innovation, driven by an accelerating rate of scientific discovery and the necessity of companies to remain competitive.
3. **Globalization:** The American economy and the economies of its various regions integrate increasingly into a worldwide economy. Trade barriers are falling. Capital and technology are increasingly mobile. Advanced telecommunications link far corners of the earth in a seamless web of communication.
4. **More Asian Tigers:** The emergence of very populous China and India onto the world's economic stage, following that of earlier Asian "tigers," is transforming the face of international competition, especially in manufacturing but also in certain kinds of services.

A Changing Industrial Structure

Earlier in this chapter, we noted a major trend in the national, state, and Vermilion County economies—that is, the shift in employment from the production of goods to the production of services. This shift has occurred gradually over a long period. Service-producing employment accounted for an astonishing 94% of total U.S. job growth from 1951 to 2001, and this trend seems almost certain to continue. Recent Bureau of Labor Statistics (BLS) projections see the share of service-producing jobs rising from 72.1% in 2000 to 74.7% in 2010. The national trend affects all states and regions of the country, including Vermilion County.

As the pace of technological innovation accelerates the U.S. economy moves 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:

- ü A high and rising share of GDP originating in 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. Furthermore, the goods-producing industries of manufacturing and agriculture are rapidly becoming more knowledge-intensive.
- ü The "knowledge content" of everyday goods and services is high and rising.
- ü High levels of R&D at all levels—governmental, university, and corporate.
- ü Rapid pace of technological innovation, accompanied by insistent pressures on companies to innovate or lose competitive position.
- ü Shortening life spans for both products and services; that is to say, a contraction of the time between design or conception and obsolescence and replacement.
- ü Intense competition in markets where both buyers and sellers are very well informed by the Internet and other telecommunications media.
- ü 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.
- ü Higher acceptance of risk among businesses and individuals, accompanied by a high incidence of entrepreneurial activity.

- ü 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.
- ü 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. Annual employment averages in the industry reached a post-war peak in 1979 at 19.4 million jobs and declined to 15.3 million by 2001 (Fig. I-18 and Fig. I-19). 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 1993 and 1998, U.S. manufacturing employment actually grew by nearly 750,000 jobs.

The economic slowdown of 2000-2003 saw a resumption—indeed, an acceleration—of the long-term downward slide in manufacturing employment. Between May 2000 and the same month in 2003, the manufacturing sector of the U.S. economy shed 2.5 million jobs, according to the BLS. Meanwhile, the service-producing sectors gained more than 750 thousand jobs over that same period.

U.S. manufacturing employment in May 2003 was the lowest for the month since the 1960s. The latest BLS projections envision a recovery of manufacturing employment to 1990 levels by 2010. However, the BLS prepared these projections before September 11, 2001, and, indeed, before the full extent of the current economic slowdown was manifest.⁸

While manufacturing *employment* has declined over the years, the *value* of manufacturing output has increased impressively. From 1987 to 2001, a period in which manufacturing employment declined 7%, the value of manufacturing output in real terms (i.e., corrected for price changes) increased 42%. This was possible thanks to a remarkable increase in productivity per worker.

A few manufacturing industries have resisted the general downward trend in employment that has characterized the broader manufacturing sector. For example, the electronic and other electrical equipment and the industrial machinery and equipment industries have added jobs and increased output by substantial percentages in recent years. As Table I-3 shows, Vermilion County is home to 200 companies in these industries. Most of them are small but in total, they employ more than 2,500 workers in the area. They carry the seeds of tomorrow’s high growth manufacturing in Vermilion County.

We have devoted so much attention here to the manufacturing sector because it is such a favorite of economic development agencies and others concerned with regional economic growth. Indeed, with some people, manufacturing jobs have achieved a kind of mystic quality.

Nobody can deny that many manufacturing jobs in the past have provided well-paying jobs to persons with relatively modest skills. Alas, many of those jobs have already vanished and global competition threatens far more. All in all, it is understandable that people should look back nostalgically at the heyday of American manufacturing employment.

Most regional economic development strategies built around recruiting large-scale, old-economy, manufacturing employers seem bound for frustration and disappointment. The old days of large scale, commodity-type manufacturing are going fast from America, and once gone, they very probably will not return. Fortunately for Vermilion County, the area’s Economic Development Corporation is seeking to develop manufacturing in another, more promising direction.

American and Vermilion County manufacturing companies that prosper in the early 21st century will most likely produce goods that display one or more of the following characteristics:

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

- ü They are knowledge-intensive in the sense that a large portion of their value stems from their intellectual property component.
- ü They target niche markets that are less vulnerable to off-shore competition.
- ü They are produced at a total cost that enables the producer to compete successfully in national and international markets;
- ü Recently developed intellectual property is especially important in their design and/or production.
- ü They are produced in close proximity to customers or suppliers.
- ü Their production requires intimate customer knowledge on the part of the producer.
- ü The companies that develop them are near to and interact with a major university or other research center.
- ü They are subject to rapid innovation, i.e., the time cycle from product conception, through design and manufacture, to replacement is short.
- ü 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).
- ü It is uneconomical to import them because international transportation costs are too high.
- ü Strong brand loyalty exists among consumers or other users.
- ü 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.

We believe that Vermilion County has assets that can give it a competitive advantage in innovation and entrepreneurship. If nurtured and encouraged, we believe that Vermilion County has an exciting potential to develop smaller scale, highly innovative, and very entrepreneurial, engineering-based manufacturing businesses that satisfy one or several of the characteristics just listed—but they must be identified and nurtured first.

Scenarios of Future Economic Development in Vermilion County

We cannot foresee the future. An infinite number of possible roads stretch before us, and though we will take only one out of the many and achieve only one destination, we do not yet 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 confuse and defeat our purpose, which is to stimulate thought about how to create a desirable future. Therefore, to visualize future economic development in Vermilion County, we create three different scenarios for the year 2010. We sketch all three here only in very broad strokes; more detail will come in later chapters, where we also explore the scenarios' workforce implications.

Scenario Number One: No Surprises—Things Go On About as Expected

This scenario rests on the assumption that the trends identified in the recent past continue to operate pretty much the same way in the future. Plans and projects already underway or well advanced on the drawing board continue their unfolding. In Vermilion County, some specific elements of this scenario would include:

- ü Food processing retains its position as a major Vermilion County manufacturing industry. Vertical integration between agricultural production and food processing accelerates. Employment continues to decline, but at a somewhat slower rate than in the 1990s.
- ü Agriculture continues its decades-long trend toward larger farm size, greater capitalization, and corporate ownership (even when the corporations are family-owned). Fewer farmers are needed to produce a growing volume of output, but since the number of farm workers has already declined so greatly, they no longer represent a large workforce reservoir.

- ü The metal processing and fabrication industries face intensifying global competition. Firms respond by reaching for higher productivity and lower unit costs via increased automation and other technological innovations. Employment continues to decline even as the value produced per worker grows.
- ü The retail trade sector continues to grow and, perhaps as importantly, to offer a broader array of options to Vermilion County buyers, mainly in the Danville area. Smaller towns in the county see continued erosion of their retail base.
- ü Vermilion County exports workers daily in growing numbers westward to Champaign County. That westward flow meets a growing but very much smaller daily trek of commuters eastbound to jobs in Vermilion County. This eastward flow is comprised increasingly of managers and professionals who chose to live in Champaign County and commute to work in Vermilion County.

Scenario Number Two: Vermilion County' Economic Development Plans Are Realized

Vermilion suffers no shortage of economic development plans. They exist at the state, county and municipal levels.⁹ Taken together, these plans and aspirations reflect a determination to align Vermilion County' economy more fully with the knowledge-based direction in which the entire American economy finds itself moving in the early 21st century.

Vermilion Advantage is one of Vermilion County's most valuable assets. Few, if any, local economic development corporations anywhere have clearer vision, more creative ideas or effective execution of those ideas than Vermilion Advantage.

Vermilion Advantage focuses its economic and workforce development efforts on four main industry clusters:

- Ø The Manufacturing Cluster
- Ø The Logistics Cluster
- Ø The Information Technology and Customer Service Cluster
- Ø The Health Care Cluster

Scenario Number Two envisions development dreams coming true for all four of these clusters throughout the rest of this decade. Site Selection magazine's selection of Danville among the top ten small towns in America sparks greatly increased interest in Vermilion County as a place for businesses to locate and relocate. The most notable fulfillments of economic dreams take the following forms:

- ü Manufacturing in Vermilion continues to diversify impressively as it exploits higher-technology, non-labor intensive "niche" opportunities (think ThyssenKrupp Gerlach, Danville Metal Stamping, MT Systems and many others). By doing this, it sidesteps many of the hazards stemming from global competition and accelerating technological innovation that continue to plague Midwestern "commodity" manufacturing. The Southgate 74 industrial site and other development sites fill up with expanding local firms and new firms that attracted by the Danville location. The food processing industry builds on already imposing presence in Hoopeston and Danville.
- ü The "logistics complex" embracing all modes of transportation, warehousing and distribution accelerates its growth (think McLane Midwest Company, the Sygma Network, and others . This development is most obvious near Danville along I-74 where it leverages Vermilion County's historical locational advantages.
- ü Vermilion County's back-office and customer service companies (think Walgreens) hold their own and even manage modest expansion in the face of growing outsourcing of this type of work to India and other very low-wage locations. Financial customer services grow both with the expansion as local (think Cannon Cochran Management Services) and newly arrived companies expand their operations.
- ü An aging population in Vermilion County and surrounding counties boosts the demand for health care. The County's Health Care Cluster booms in the face of that growing demand. The Veterans

Affairs Illiana Health Care System survives the Veteran's Administration consolidation pressures and actually increases capacity to better serve the region's growing and aging population of veterans.

The greater prosperity brought by the growth of these targeted clusters and other parts of Vermilion County's increasingly diversified economy reverse the "brain drain" and other loss of human capital that characterized the 1980s and 1990s.

Scenario Number Three: "Too many things go wrong"

Under this scenario, a collection of unfortunate external circumstances conspire with local inability or unwillingness to meet the challenges facing the community.

Among the events adversely impacting Vermilion County's economy are these:

- ü Public and private leadership sags both in quality and quantity. Major initiatives conceived in the early years of this decade wilt for lack of energy to see them through.
- ü The pace of technological change in the American economy leaves Vermilion County businesses behind as they fail to modernize their products, processes and managerial procedures.
- ü Vermilion County's workforce fails to adapt to the needs of the nation's growing knowledge-based economy and its workplace. Major employers in the county, unable to recruit and retain the quantity and quality of workforce that they need, depart for places where they can.
- ü Fierce global competition from low-wage countries forces Vermilion County's more labor-intensive local employers to shutter their doors.
- ü Vermilion County's public schools fail to educate the younger generation to the level required by the region's employers. The Finish First initiative fails due to employer indifference or opposition. The result is that dropout rates in several county high schools return to the high levels of previous decades.
- ü A series of labor-management conflicts in Vermilion County culminate in several bitter and highly publicized strikes/lockouts. The image of the county as a place unfriendly to business discourages new business attraction and encourages several major employers to depart the county for what they hope will be more agreeable places.

The result of this confluence of external and internal developments is a sharp deterioration of economic and social life in Vermilion County. The "brain drain" accelerates as both young people and experience workers leave the county never to return. What remains of the county's population of well educated workers, managers and professionals tend increasingly to reside in Champaign County commuting when they must to their jobs in Danville and elsewhere in Vermilion County.

Scenario Number Three is one of rapid decline for Vermilion County. Every effort should be made to avoid it.

Chapter 2: Workforce Needs for Vermillion County' 21st Century Economy

Having examined the main influential forces in 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 for Vermillion County' future economic development that were sketched in Chapter 1 of this study. Finally, we investigate the educational and training implications of these various projections and scenarios.

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. 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 and the changing levels of education, skills, and knowledge that the most rapidly growing occupations require.

Fig. II-1 summarizes the changing occupational composition of the economy. According to this data, nearly a third (31%) of job growth in this decade will come in the "Professional and Related" 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.

A closer look at the specific occupations in which jobs are expected to grow and those in which jobs should contract is quite instructive. Table II-1 shows the twenty occupations projected to grow most rapidly in the U.S. economy over the next decade. Strikingly, virtually all of these occupations fall into either the information technology or health care fields of work. Even more interestingly, 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, well-paying jobs requiring education and training beyond a high school diploma practically fill this list of the very fastest growing occupations in the U.S. economy.*

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 skills and knowledge will emerge by 2010.*

The Increasing Importance of Education and Training

The demand for higher levels of skills and knowledge does not exist only in the most rapidly growing occupations. In November 2001, the BLS projected employment change during the decade 2000-2010 for 695 specific occupations, of which Table II-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, on-the-job training (OJT).

The education and training levels typical of those occupations expected to grow (*tomorrow's jobs*) differ dramatically from the levels typical of the occupations in which job losses are expected (*yesterday's jobs*), as shown in Fig. II-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 strong 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 draw from Fig. II-2 is that tomorrow's jobs in the U.S. economy will typically 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.

Fig. II-2 makes a second important point: *far from all of tomorrow's jobs will typically 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 should 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. Because they will bear the brunt of both job losses and job gains, workers holding jobs in such fields will find both the necessity and the opportunity to retrain and retool themselves for new jobs in order to remain employed. This inevitably will raise the importance of job training in order to facilitate the flexibility and adaptability that workers must have in order to remain productive and employable.

The final conclusion emerging from Fig. II-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 qualifications.* Job training, therefore, is inestimably important for the proper development of America's workforce.

Replacement of the 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 need to replace workers who exit some occupations to enter others. 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.

Table II-2 lists the top twenty occupations in terms of replacement needs. Unlike the top twenty growth occupations (Table II-1), the majority of the top twenty 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, only to 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. There are, however, several very significant exceptions to that roseate picture. Consider these occupations:

- ü Registered nurses
- ü Postsecondary teachers
- ü Elementary school teachers
- ü 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 newly trained registered nurses required will reach nearly half (46%) of the total number of nurses employed in 2000. For elementary school teachers, need is nearly as bad (36%), and for secondary school teachers it is worse (49%). For postsecondary teachers, the numbers are 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 Vermilion County

Three scenarios were sketched in Chapter 1. The first was a “what you might expect” or “surprise-free” scenario. The second was a “winner” scenario wherein the aspirations of the Vermilion County economic development aspirations are realized. The third was a “dismal” scenario in which several of a large number of possible (although, we dare to hope, not probable) local or national economic reverses occur. All three of these scenarios were essentially scripts for *economic* development, but each obviously carries many *workforce implications*. To these we now turn.

Scenario 1: No Surprises—Things Go On About as Expected

To reiterate: This scenario rests on the assumption that the trends identified in the recent past continue to operate pretty much the same way in the future. Plans and projects already underway or well advanced on the drawing board continue unfolding as they are. For the purposes of this scenario, we accept the employment projections prepared by the Illinois Department of Employment Security for the period 2000-2010.¹⁰

Total Vermilion County employment in all occupations under Scenario 1 is projected to increase by 2,394 in the ten years from 2001 to 2010, which amounts to a growth of 6.1% (Table II-2).

Total job growth in the Service sector is projected in this scenario to be 1,427 or 10%.

- ü Health Services is the big growth sector. It will offer more than 519 new jobs by 2010—about 13% more than in 2000. Clearly, it will be important to see which health-service-specific occupations are likely to experience this boom.
- ü Eating and Drinking Places also will add many new jobs, growing more than 16%. Taken together with the many more jobs that will open up in this sector to replace workers moving up or out, the numbers here foresee Vermilion County’ restaurants and bars playing increasingly important roles as entry-level employers.
- ü Educational Services are projected to add 335 new jobs. Along with several other sectors, replacements will boost the total number of educational jobs that will need filling.
- ü Trucking and Warehousing along with Wholesale Trade, the two main industries embraced by the Logistics Cluster, are slated to add jobs by respectable percentages although in absolute numbers, that growth is less impressive, amounting to only 132 new jobs. Given the rate of expansion of the Logistics Cluster since 2000, it seems likely that the IDES projections seriously underestimate job growth in these two industries during this decade.
- ü In total, Manufacturing is projected to lose 28 jobs throughout the decade with all of that loss expected come in Nondurable Goods Manufacturing.. By mid-2003, much if not all of that projected job loss may already have occurred. Even if that is so, manufacturing, at least of the type that historically has provided so many good jobs in Vermilion County, faces an uninspiring employment outlook from now to 2010 under this scenario and the IDES projections for this decade.

Continuation of recent trends (Tables II-3 and II-4) leads us to expect that the two most rapidly growing major occupational groups will be Computer and Mathematical occupations (33.3%) and Healthcare Support occupations (21.3%). However, these are not the occupational groups that will offer the greatest number of job openings in the region. That distinction goes to Sales and Related occupations (159 job openings annually) and Food Preparation and Serving occupations (151 jobs annually).

Computer, health-care, and educational occupations are well represented among those offering the greatest number of job openings in Vermilion County in the year ahead (Table II-5). That impression is reinforced when looking at the list of 30 occupations with the greatest number of job openings due to *growth*. These are the occupations of tomorrow, and they turn up, in very substantial proportions, in the health and educational services occupations.

There are few skilled blue-collar occupations in this list. Most of the goods-producing jobs on the list are in the construction trades. What sets this group of skilled blue-collar occupations apart from the health other white collar occupations is the relatively large share of the blue-collar jobs that are due to replacement rather than growth. These jobs will be there, but their total numbers are not growing rapidly.

Inspection of anticipated growth in the most rapidly expanding Vermilion County occupations reveals patterns similar to those at the national level (compare Table II-4 with Table II-1). Both lists of rapidly growing occupations are heavily populated with entries from the health services and educational services. In Vermilion County, six of the top twenty most rapidly growing occupations are health services. Teachers, particularly at the K-12 levels, are also very prominent on this list of rapidly growing occupations in Vermilion County.

In this scenario, the region will see a large number of entry-level jobs open up in retail and food service (Table II-5). The bulk of these openings will occur to replace other workers who have departed for other, desirably greener, pastures.

In addition, there will be a brisk demand for other health diagnosing and treating practitioners. The urgent need for nurses and other health care professionals, shouted loudly by these numbers, found echoes in many Vermilion County interviews and focus groups conducted as part of this project.

The education, recruitment, and retention of this small army of healthcare workers will seriously challenge the ability of the Vermilion County workforce development and educational systems. Teachers at the primary and secondary levels will also be in heavy demand during this decade.

This list of occupations with relatively large numbers of growth-created job openings shown in Table II-5 includes a substantial number of blue-collar occupations. What sets this group of blue-collar occupations apart from the health services and other white collar occupations is their relatively large share of blue-collar jobs opening due to replacement rather than growth. These jobs will certainly exist, but their total numbers are not growing rapidly.

It is useful to explore the workforce implications of the IDES projections to 2010 (Scenario #1) for of Vermilion County's growth clusters as best as they can be determined.

- ü The Health Cluster lends itself best to this analysis (Table I-7). Total employment in the cluster is projected to increase by 519 workers (13%) during the decade.
 - Considerable job growth is projected in many individual health occupations. Most notably among nurses of various types.
 - § Total job *growth* for nurses:
 - Registered nurses, 124
 - Practical nurses, 18
 - Nursing aides, etc., 49
 - Total job *openings* (growth plus net replacement) are much larger. About 48% of job openings will be due to growth.
 - Job openings for nurses:280
 - Practical nurses, 60
 - Nursing aides, 100
- ü Logistics Cluster:
 - Total employment in the cluster is projected to increase by 85 workers (or 2.3%) during the decade.
 - The greatest job growth is projected for truck drivers for whom employment is expected to increase by a total of 61 (both heavy and light trucks). A total of 16 jobs are expected to open annually for truck drivers.
- ü Information Technology Cluster:

- Total cluster employment is projected to increase by 178 workers during the decade or by more than one-quarter in comparison to the 2000 level.
 - Annual job openings are projected to be 36 of which over half are expected to be from growth.
 - The most rapid growth, as well as the greatest number of job openings, is projected for the computer complex of occupations.
- ü Customer Service Cluster:
- We are uncertain about which occupations to include here.
- ü Manufacturing Cluster:
- Total cluster employment is projected to decrease slightly
 - Few individual occupations are expected to increase significantly and several are expected to contract.
 - due to separations. Only 26 job openings annually are expected due to growth.

For entrant workers, educators, and trainers, it's as important to know where the jobs *won't be* as it is to know where they *will be* (Table II-6). Entrant workers need to know which occupations provide no future. The fact that these occupations may still offer a considerable number of jobs may disguise the fact that they are, in fact, yesterday's jobs. Educators and trainers need to know that they won't be preparing students and trainees for jobs that are disappearing.

That an occupation is shrinking does not necessarily mean it will offer absolutely *no* job openings in the years ahead. Consider, for example, the occupational category called "Metal Workers and Plastic Workers." Some 1,345 Vermilion County workers held such jobs in 2000, a number projected to shrink to 1,188 by 2010. Even though the total number is expected to shrink, there will still be an average of 34 such jobs opening up each year during the decade.

Most of the occupations destined to shed workers will fall victim to technological change and the changing structure of the American economy. The majority of them are in the goods-producing sectors—agriculture and manufacturing.¹¹

An important point is here to be made: Being impressively degreed or highly skilled does not render a worker immune from the redundancy in the 21st century workplace. *The economy's dynamic pace of change with its attendant volatility of occupations means that virtually every worker is potentially vulnerable to occupational displacement.* That point reinforces an even more fundamental one: *To remain employable and well paid, every worker (just as every company and every community) must be prepared to adapt to new circumstances by acquiring new knowledge and new skills.*

What these numbers tell us is that the jobs of many members of the incumbent workforce will likely continue to erode in the years ahead. One duty of workforce development is to anticipate these occupational losses, to shy from encouraging entrant workers into these fields, and to be prepared to assist incumbent workers to retrain and reskill themselves for employment in the jobs of tomorrow.

What kind of workforce preparation (i.e., education and training) do the kinds of Vermilion County jobs that will open up in this decade imply? What level of pay do the various kinds of jobs and their corresponding education levels require in Vermilion County?

The 2000-2010 IDES projections for Vermilion County show 438 growing occupations and 141 shrinking ones. 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 (Fig. II-5).

As Fig. II-5 shows, 31% 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 15% of all job gains. Another 5% will require the associate's degree. In contrast to that, among yesterday's occupations, those requiring only OJT (On the Job Training) or work experience will account for more than 74% of job losses.

The projections for Vermilion County are generally similar to those for the United States. Tomorrow's occupations, both nationally and regionally, will require much more education and training than yesterday's occupations. However, the the outlook for Vermilion County shown in Fig. II-5 differs from that for the United States shown in Fig. II-2 in two respects. These differences, summarized in Fig. II-6, are as follows:

1. First, the share of tomorrow's occupations typically requiring at least a bachelor's degree in Vermilion County is less than in the United States (25% vs. 28%). In other words, based on IDES projections Scenario 1 foresees a qualitatively growth of employment locally that is slightly less favorable than nationally.
2. Second, the share of yesterday's occupations requiring only short-term OJT is less in Vermilion County than in the nation (25% vs. 35%). At the same time, the share of Vermilion County workers requiring long-term or moderate-term OJT is substantially greater than at the national level (33% vs. 21%). That implies that the need for incumbent worker training, very significant at the national level, will be even more significant at the local level in Vermilion County.

The most important conclusion to emerge from these data is this: *In order to be able to fill good jobs and/or to grow into them as their careers progress, young people in Vermilion County will need the proper K-12 preparation and ample opportunities for incumbent worker training during their years as working adults.*

Important conclusions that emerge from this study of Scenario 1 (which coincides with the official state projections of Vermilion County employment for the period 2000 to 2010) are these:

- ü The Vermilion County now has an insufficient number of high-skill, high-wage jobs.
- ü The most rapidly growing jobs throughout the decade will require more formal education and training.
- ü Even in this surprise-free scenario, Vermilion County will be challenged to fill all the needed jobs in the health care occupations during the balance of this decade.
- ü This scenario does not foresee a dramatic improvement of the Vermilion County workforce quality, whether measured by education, skill levels, or pay scales..

Scenario 1 finds Vermilion County challenged to upgrade the education, skill, and pay levels of its workforce.

Scenario 2: Vermilion County's Economic Development Plans Are Realized

Scenario 2 presumes the fulfillment of the area's main economic development plans. What would the realization of these plans imply in terms of the quantity and quality of the Vermilion County workforce? Elements of the Vermilion Advantage's plans were discussed in Chapter 1 and lay stress on these economic clusters:¹²

- ü The Health Care Cluster
- ü The Logistics Cluster
- ü The Information and Customer Service Cluster
- ü The Manufacturing Cluster

In addition to the accelerated growth of these targeted clusters, Scenario #2 envisions the following points:

- ü Continued stress on improving the skills and knowledge base of Vermilion County's Workforce Associates, Inc.
- ü A continuing and successful effort to reduce dropout rates, raise graduation rates in Vermilion County high schools.
- ü A sustained and successful effort to improve the performance of Vermilion high school graduates both in terms of their academic preparation (measured by and PSAE) as well as "soft skills" such as customer service and teamwork skills.

- ü Some commercialization of academic research from the University of Illinois and Rose Hulman Institute occurs in Vermilion County.
- ü Encouraging local entrepreneurship, including small and medium-sized businesses.

Scenario 2 posits an increase in Vermilion County employment of 2,937 jobs from 2000 to 2010 (Table II-9). That compares with 2,394 in Scenario 1 (Table II-8). .

The average annual change in employment for the major industrial groups take account of that overall increase as well as a redistribution of jobs reflecting the implications of developing the area's target clusters.

- ü Specialized, high-technology, niche-oriented, manufacturing.
- ü The Logistics Cluster.
- ü High value-added services, including:
 - Information technology.
 - Management & public relations.
 - Selective employment and business services.
 - Healthcare.
 - Professional and technical services.

Among the occupational groups growing much more rapidly under Scenario #2 are these (Compare Table II-10 with Table II-3):

- ü Managerial occupations increase by 150 in Scenario #2 versus 91 in Scenario #1.
- ü Computer and mathematical occupations by 287 versus 174.
- ü Health care cluster by 623 versus 536.

The only major occupational group not to grow under Scenario #2 are Office and Administrative Support occupations and Farming Fishing and Forestry.

The accelerated employment that Scenario #2 envisions in these major occupational groups will pose a very significant challenge to the Vermilion County's workforce development system including, most importantly, its educational and training systems.

Summary of This Chapter

The main findings and points developed in this chapter are:

- ü The U.S. economy is moving beyond a service economy and toward becoming a knowledge-based economy.”
- ü Tomorrow’s jobs will typically require much more education and training than yesterday’s jobs.
- ü Far from all of tomorrow’s jobs will require *higher* education.
- ü Nevertheless, individuals lacking a solid high school education will find themselves increasingly disadvantaged as the 21st century progresses.
 - o They will have greater difficulty finding employment.
 - o They will tend to be the first fired and last hired in times of economic slowdown.
 - o Even when they do find jobs, their pay will tend to be too low to support a decent lifestyle.
- ü Many new occupations whose names we do not yet know will appear as the 21st century unfolds. Most will require advanced education and skills.
- ü Job growth and the need to replace aging Baby Boomers will create many job openings throughout the rest of this decade and beyond. Notable among fields with such openings are health care professionals (especially nurses) and teachers.
- ü 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 both nationally and in Vermilion County in the years ahead.

Vermilion County Scenario 1, the surprise-free scenario, coincides with the official state projections of Vermilion County employment for the period 2000-2010. Although it is modest and reflects mainly a continuation of existing trends, it poses some significant challenges and consequences. These include:

- ü The most rapidly growing jobs will require more formal education and training.
- ü Vermilion County will be challenged to fill all the jobs that will be needed in the health care occupations during the balance of this decade.
- ü Scenario 1 does not foresee a dramatic improvement of the Vermilion County workforce quality whether measured by education, skill levels, or pay scales.
- ü Scenario 1 finds Vermilion County seriously challenged to upgrade the education, skill, and pay of its workforce.

Vermilion County Scenario 2, the “Vermilion County’ Economic Development Plans are Realized” scenario, envisions a much more ambitious transition toward a knowledge-based economy.

Total Vermilion County employment increases about 23% more rapidly under Scenario 2 than under Scenario 1. Most major industrial sectors and most major occupational groups grow more rapidly too.

The area’s development plans envision the accelerated development of certain key clusters of economic activity that share these qualities:

- ü They capitalize on Vermilion County’ geographical location near the center of the United States, and they build on the area’s historic role as a transportation nexus.
- ü They are high value-added and competitive in markets from the local to the global.
- ü They have the potential to profitably export goods and services beyond the boundaries of Vermilion County.
- ü They are knowledge-based and they require a correspondingly well-trained and highly skilled workforce.

Scenario 2 poses even more serious challenges for the Vermilion County workforce development and educational systems than did Scenario 1. Among the most important of those challenges are these:

- ü Significant improvement of the county's educational and training systems.
- ü Development of the capacity to attract and produce qualified healthcare professionals, especially nurses.
- ü Development of a sufficient supply of skilled technical and professional workers in architecture, engineering, and highly innovative manufacturing.
- ü Equipping the entire workforce with the ability to adapt quickly to change and to learn things that they do not already know.

Chapter 3: Vermilion County's Workforce in the 21st Century

This chapter examines the quantitative side of Vermilion County's workforce as it is now and may be in the future. It poses one main question: Will there be the *right numbers* of workers in the seven-county area to sustain its economic development?

We begin the chapter by exploring the demographic trends that are currently 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 Vermilion County receive special emphasis. We conclude with a review and a list of some challenges for the quantitative side of workforce development.

Another important question is more qualitative: Will the area's workers be the *right kinds* of workers with the skills and knowledge required for the 21st century economy? We will address these qualitative aspects of the area's workforce in Chapter 4.

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 Vermilion County, 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 will increase by more than one billion people.¹³ 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.

The most remarkable thing 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 Vermilion County? Its significance comes primarily from 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 rivals the *entire size* of the U.S. workforce in 2002 (roughly 140 million persons). We discussed the specific implications of this for manufacturing in the United States and Vermilion County in the section in Chapter 1 on globalization.

Suffice it to say here that the predominance 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, whose 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 process will continue throughout the entire century (Fig. III-1). Of course, as the population ages, so must the workforce (Fig. III-2). In 1990, the age group 30-34 was the largest five-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 (Fig. III-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 net new entrants into the U.S. workforce between 2000 and 2010 (Fig. III-4). White, non-Hispanics 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 (Fig. III-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:

1. Employers accustomed to recruiting and employing young, white, non-Hispanic males will confront a shrinking pool of potential workers. Diversity will move beyond a moral and legal obligation to become a requisite for business survival.
2. The average educational and skill levels 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 Vermillion County. If the nation and this region are to have a workforce qualified for a high-tech 21st century economy, the educational and skills levels of its minority workers must 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. Fig. III-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.

Recent Population and Workforce Change in Illinois and Vermillion County

The populations of the nation, state, and Vermillion County increased steadily for the first two decades of the 20th century (Figure . During the remaining eight decades, the U.S. population continued to climb by roughly equal increments every ten years. Illinois' population growth began to slow in the 1930s and then again from 1970 to 1990, but it accelerated slightly in the last decade of the century. Population growth in Vermillion County was more problematic. Until 1920, population growth in the county kept pace almost exactly with national population growth. From 1920 to 1950, however, population numbers actually declined slightly. There was modest growth from 1950 to 1970 after which a period of renewed decline began that lasted through the remaining years of the century.

Figures III-7 is the demographic counterpart of the economic Figures I-1 and I-6 in Chapter 1. The basic point they underscore is that Vermillion County did not share in the nation's or even the state's population growth during the last eighty years of the 20th century. In 2000, the U.S. population was about

275% of its level in 1900. Illinois' population was just under 150% of its 1900 level in 2000. Meanwhile, during the 20th century, Vermilion County's population grew by about 28%, all in the first seven decades of the century.

Among the eight counties including Vermilion County and seven neighboring counties in Illinois and Indiana, population growth during the 20th century was very uneven (Fig. III-8). Vermilion County outpaced Champaign County until mid-century after which it fell far behind. All of the counties except Champaign ended the century close to where they began it. Indeed, most of them ended the century with smaller populations than at the beginning.

Demographic Change in the 1990's. Illinois' **total population growth** in the 1990s was spread unevenly across the state (Fig. III-9 and Fig. III-10).¹⁴

Most of the state's population growth occurred in the northeastern corner of the state, in Cook and the "collar" counties. Many of the central and southern counties saw modest population increases while a sizeable number, including Vermilion County, actually lost people (Table III-1).

Ethnically speaking, Illinois is a remarkably diverse state (Fig. III-11). From Cook county, where White, non-Hispanics (a.k.a. Caucasians) make up barely 50% of the population to counties where it is nearly 100%, the state is an ethnic mosaic. Vermilion County, with Caucasians comprising 85.8% of its population, is considerably less diverse. The big difference between this area and the state lies in the very small share of Hispanics in the region (3% locally versus 12% in the state).

Whites comprise 85.8% of Vermilion County's population and non-Hispanic whites (Caucasians) comprise about 84.7%. African-American's accounted for 10.6% of the county's population in 2000

Is There a "Workforce Drain" and/or a "Brain Drain" From Vermilion County? The importance of this question from a workforce point of view can hardly be exaggerated. To answer it, at least in part, we must analyze changes in age-specific and cohort-specific groups, especially those that comprise the main working-age population (ages 15-64).

Consider, first, changes in the eighteen different chronological age groups displayed in Fig. III-12. Here we see some quite astonishing differences in the way that the numbers of people in the various age groups changed between 1990 and 2000. Most important, from a workforce point of view, was the sharp decline in age groups aged 15-44, which was accompanied by an sharp increase in age groups 45-64. These shifts reflect two seismic demographic changes in Vermilion County:

1. The aging of the Baby Boomer generation. People who, in 1990, were in their late twenties, thirties and forties, were mainly in their forties and fifties by 2000.
2. Exceptionally heavy losses of both younger and older members of the working age population. About this, more presently.

The net result of the changes in the chronological structure of Vermilion County's population is a definite aging of the working age population. A much larger portion of the area's workforce is now in its forties and fifties than was the case a decade or so ago. Before discussing that fact and its implications, however, we must explore what is happening to specific cohorts of the area's population.

The term *brain drain* is conventionally taken to mean the loss of young people in their twenties. By *workforce drain*, we mean the loss of people in the prime of their working lives. Simply looking at percentage changes in age groups between two census years doesn't adequately address these issues because the numbers combine the effects of generational shifts (e.g., the large Baby Boomer generation being replaced by the smaller Generation X) and the effects that we seek to isolate. To properly isolate these, we need to examine changes in cohorts.

First we need to develop the idea of *cohorts*. Table III-3 identifies and numbers ten cohorts relevant to Vermilion County's present working age population. Each of these includes people born within specific five-years time frames. Cohort 1, for example, includes people born between 1936 and 1940, who would have been aged 50 to 54 in 1990 and, obviously, 60 to 64 in the year 2000. Cohort 10, the youngest, includes people born between 1981 and 1985, who would have been children ages 5 to 9 in 1990 and adolescents ages 15 to 19 either still in school or just entering the workforce in 2000. The other eight cohorts find their places between these two bookends.

From the perspective of brain drain, what we find most striking about cohort changes in Vermillion County (Fig III-13) are the very substantial losses in Cohorts 9 (-26%) and 8 (-16%). These are people who would have been ages 20 to 29 in 2000 and, obviously, 23 to 32 in 2003. They represent the workforce's new blood. Very likely, they are the best educated portion of the workforce, those with the latest and most up-to-date educations and skills. They are the brains that no area can afford to lose. These numbers tell us that, for example, there were 26% fewer persons aged 20 to 24 in Vermillion County in 2000 than there were persons aged 10 to 14 in 1990. One might have expected that Vermillion County with Danville Area Community College (DACC) would actually have gained population in the college-age groups (i.e., Cohort 9). However, that did not happen. Where did all these young folks go?

The one piece of potentially good news to emerge from this cohort analysis is that cohort #7, young adults who were in the 30-34 age group in 2000, increased by 2% in the county. But that increase may be chimeral since it could simply reflect larger numbers of out-of-county persons incarcerated within the county.¹⁵

Then size of Vermillion County's workforce has been in decline since 1978 (Fig III-14). The devastating blows of the early 1980s to the "Rust Belt" took their toll on the county's employment and, eventually, its workforce too as the out-migration of workers gathered force. Since 2000, workforce numbers in both Vermillion County workforce areas and in the state have declined, although the nation's workforce has continued to grow through 2002.

The impacts of all the demographic changes described in the preceding pages are summarized by the population "pyramids" shown in Figures III-15 and III-16. These two charts establish the following points:

- ü Vermillion County's working age population in 2000 was markedly more aged in 2000 than it was in 1990 (Fig. III-15). In 1990, the most numerous age groups were in their late twenties to late thirties. By 2000, the highest population peak had moved into the late thirties, the forties, and the early fifties. These shifts are mainly the result of the aging of the large Baby Boomer generation, which has been replaced by the smaller Generation X.
- ü By 2000, the "Echo Generation," i.e., the children of the Baby Boomer generation was much in evidence. In Fig. III-18, the Echo Generation manifests in the mini-peaks in age groups 5 to 19.
- ü There is a serious sag of persons aged 20 to 34, which is explained both by the aging of the Baby Boomers and the "brain drain" discussed previously.
- ü A substantially larger share of the Southwestern Illinois population is now older than 65 years of age than was the case in 1990.
- ü All in all, Vermillion County population is older than that of the entire State of Illinois (Fig. III-19). The share of the total population in every five-year age group younger than 45 is larger for the state than for Vermillion County. Except for the very old (85 and older), the share of every age group 45 and older is larger for Vermillion County than for the state.

Looking Ahead: Demographic and Workforce Projections for the Early 21st Century

During this first decade of the 21st century, the total Illinois population is projected to grow from about 12.1 million to about 12.5 million people.¹⁶

The U.S. Census Bureau anticipates these three components of that change (Fig. III-17):

1. *Natural increase* (the excess of births over deaths) will add over 689,000 to the state's population;
2. *Net international immigration* will add another 382,000.
3. *Net domestic out-migration*, the outflow of persons from Illinois to other parts of the United States, will subtract 635,000.

The Illinois Department of Commerce and Economic Opportunity projects that Illinois' working-age population (ages 16-64 for our present purposes) will grow from 7.8 million in 2000 to 8.3 million in 2010 (Table III-4). The U.S. Census Bureau projects that the bulk of that growth, an amazing 60% of it, will come from the state's Hispanic population (Fig. III-18). Caucasians will contribute only 8% of that growth,

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3% of it white males and 5% of it white females. Asians are expected to account for 17% of the growth, exceeding the 15% anticipated from African-Americans.

The salient points about Illinois' demographic outlook for this decade are these:

- ü A huge population outflow, mainly of Caucasians, from Illinois to other states will nearly offset the entire natural increase stemming from the excess of births over deaths.
- ü Birth rates among Illinois' Hispanics and African-Americans are much higher than among its Caucasians.
- ü Total death rates among Illinois Caucasians are significantly higher than among its Hispanics.
- ü International immigration, mainly of non-Caucasians, will spell the difference between almost no population growth for Illinois and one of over 400,000.
- ü Illinois' working age population will become more Hispanic and Asian at an increasing rate in the early 21st century.

The Illinois Department of Commerce and Economic Opportunity predicts that the working age population of Vermilion County will grow by about 820 persons in this decade (Fig. 19). For the same period, the Illinois Department of Employment Security projects Vermilion County employment to grow by 2,394 jobs. In 2000, the workforce was about 75% of the working age population defined to include age groups 16-64. If that same percentage should apply to the projected growth of the working age population in this decade, then we could expect the workforce to grow by about 626.

These calculations suggest that Vermilion County could face a very significant workforce shortfall of about 1,768 workers by 2010. If that were to happen, it would seriously jeopardize the county's economic development during the balance of the decade.

Summary of This Chapter

The following points summarize the main findings and conclusions of this chapter:

- ü The U.S. population, unlike much of the rest of the developed world, will continue to grow in the early 21st century. Most of that growth will occur among "minority" ethnic groups and much of it will come from international immigration. The nation's workforce will continue to diversify ethnically.
- ü 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.
- ü The average educational and skill levels 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 Vermilion County. If the nation and this region are to have a workforce qualified for a high-tech 21st century economy, the educational and skills levels of its minority workers must 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.
- ü Population growth in Vermilion County has not kept pace with that of the nation or the state since about 1920. The only nearby county to have grown significantly during the 20th century was Champaign County.
- ü Vermilion County is considerably less diverse ethnically than the state of Illinois. The big difference between this area and the state lies in the very small share of Hispanics, which is 3% locally versus 12% in the state.
- ü Seismic demographic shifts are now in progress in Vermilion County:
 - The aging of the Baby Boomer generation.
 - Heavy losses of both younger and mature members of the working age population.

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- Loss of younger population represents brain drain.
 - Loss of the older, more mature members of the working age population represents loss of experience.
 - Both kinds of drain represent loss of human capital that Vermilion County can ill afford.
- ü Vermilion County's working age population in 2000 was markedly more aged in 2000 than it was in 1990, and it continues to age more rapidly than that of the state and the nation.
- ü In the State of Illinois, we find the following important demographic trends:
 - A huge population outflow, mainly of Caucasians, from Illinois to other states will nearly offset the entire natural increase stemming from the excess of births over deaths.
 - Birth rates among Illinois' Hispanics and African-Americans are much higher than among its Caucasians.
 - Total death rates among Illinois' Caucasians are significantly higher than among its Hispanics.
 - International immigration, mainly of non-Caucasians, will spell the difference between almost no population growth for Illinois and one of over 400,000.
 - Illinois' working age population will become more Hispanic and Asian at an increasing rate in the early 21st century.
- ü Job growth in Vermilion County threatens to outpace workforce growth by a significant number. This projected gap could jeopardize the county's aspirations for economic growth.

Chapter 4: Workforce Development in Vermilion County with Special Reference to Public Education

This chapter first examines important parts of Vermilion County’s workforce devopment system and then evaluates the efficacy of each of those parts in order to identify areas of improvement.

The chapter begins with a discussion of the targets and tools of workforce development. Workforce development includes three interrelated processes: (1) augmenting the workforce pool; (2) improving workforce quality; and (3) improving the way workers and jobs are matched.

The K-12 schools are the single most important piece of a strong workforce development system. As a result, the bulk of this chapter evaluate the performance of public high school students in Vermilion County.

The Targets of Workforce Development

The targets of workforce development in Vermilion County are the area’s workers and potential workers. It is useful to think in terms of four workforce sub-populations:

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			

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

The Tools of Workforce Development

Workforce development occurs by using a combination of three generic tools:

- *augmenting the size* of the workforce pool (for example by increasing the number of workers in the area and/or raising labor force participation rates)
- *improving the quality* of the workforce
- *improving the match* between workers and jobs

Workforce development occurs when one or more of these tools are integrated with one or more of the target sub-populations. The matrix on the preceding page illustrates the intersection of these three workforce development tools and the four work populations. We will refer to this matrix throughout the chapter in discussing workforce development in Vermilion County area.

Augmenting the Quantity of the Vermilion County Workforce

Recruiting and retaining a sufficient pool of properly qualified workers was a daunting task for many Vermilion County employers during the latter half of the 1990s. Unemployment rates, which averaged 11.1% in 1996, sank to under 5.9% in 1999.

The 2001-03 recession and its weaker labor market resulted in a rise in unemployment back to 8.1% for 2002. By all indications, however, this respite for hard-pressed employers will be brief. The demographic projections provided in preceding chapters predict slow growth rates of both the working age population and the workforce as a whole through the present decade and beyond. “Worker dearth” promises to be a permanent feature of the Vermilion County labor market, especially with regard to those workers who are best skilled and qualified for the twenty-first century knowledge-based economy.

Increasing the size of the workforce pool is part of a company’s or community’s response to worker dearth. This is what recruitment and retention is all about. When a company sends recruiters outside the area to locate workers of any skill level, it augments the area’s workforce. When that same company retains valued employees, it maintains 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 population 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 large-scale recruitment has long been a standard feature of the private employment sector, public or semi-public workforce development bodies have not embraced this human resource management strategy. Until recently, managing the size of the working population has not been considered a proper activity for workforce developers. As the worker dearth of the late 1990s intensified, however, economic and workforce development agencies actively began engaging in recruitment efforts in order to augment local workforce size.

When such efforts are made, the stress is usually on highly qualified professionals, that is, on members of the elite workforce.¹⁷ There are exceptions, however, such as community efforts to recruit migrant, temporary and even hourly workers for hospitality work and other industries. Workforce development efforts directed at the marginal workforce (those on welfare, the unemployed, disadvantaged, hard to employ, etc.) have increased the labor force participation rate to some degree.

But with the exception of the above, we found no signs that Vermilion County workforce development organizations have explicitly attempted to augment the size of the area’s workforce. This lack must be

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

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addressed as labor markets tighten again in the next few years. Most importantly, Vermilion County needs to understand and develop factors that attract executives, professionals and other members of the elite workforce. Such factors include community attributes as safety and public order, esthetic attractiveness, educational variety and quality, leisure time possibilities and other quality-of-life factors.

Improving the Quality of the Vermilion County Workforce

If increasing the rate of workforce growth proves untenable, the sole remaining way to maintain economic growth in the Vermilion County region is to increase worker productivity. Increased worker productivity can be accomplished in various ways, including improving the use of technology, increasing capital equipment for workers and ensuring efficient use of all factors of production, including labor. Additionally, improving the quality of “human capital” is a vital part of any effort to raise worker productivity and must be a central focus of an effective workforce development program.

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

A primary way to raise the prosperity of the Vermilion County area is by transforming low-skilled, poorly-paid jobs into high-skilled, highly-paid occupations. What is needed is a self-perpetuating cycle:

- The jobs that grow most rapidly in Vermilion County area must be those that require higher skills (and therefore pay better), and
- Vermilion County workforce must constantly raise its level of skills, knowledge and other workforce competencies in order to fill such jobs.

Developing the Entrant Workforce

Traditional workforce development focuses on marginal work populations and is therefore remedial because it rectifies problems of individuals who find themselves ill-equipped to cope successfully in the workplace. Although such work is important, it is essentially social work.

Many members of the incumbent workforce experience unemployment at some point during their working lives and may need unemployment insurance to sustain them through short periods of joblessness. Nevertheless, only a small percentage makes use of traditional workforce development services. The most important form of workforce development is education. While it is impossible to overemphasize the importance of early childhood education, we focus here on the secondary and post-secondary levels.

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

Public High School Education in Vermilion County

For many adults, formal workforce preparation ends with their high school education. For others, a high school diploma is a springboard to college or a professional education. Vermilion County Illinois high schools therefore are one of the most important workforce development institutions. There are 10 public high schools in Vermilion County. The remarks and analyses in this section pertain to them.

How well are the region’s high schools preparing youth for the adult world of work and continued study? The Illinois State Board of Education provides information that directly addresses this question.

Eleven Key Performance Indicators

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This study convincingly illustrates that yesterday's skills and knowledge are inadequate for the jobs of tomorrow. Today's jobs demand better cognitive, communication and people skills than did previous ones. Tomorrow's jobs will demand still higher levels of skills, knowledge, and—most critical of all—the willingness and ability to continue learning throughout life.

In today's competitive environment, a good basic education is any worker's single most important asset and the bar of what constitutes a good basic education continues to rise. A generation ago, when the Vermilion County Illinois economy consisted primarily of farms, factories and mines, a "good basic education" may have been completed by the eighth grade. Furthermore, most women did not participate in the formal workforce. Even as recently as 1970, only 43% of American women worked formally and a large proportion of these workers held jobs requiring little more than an eighth grade education. By the year 2000, however, over 60% of the nation's women participated in the workforce, holding professional and other knowledge-based jobs requiring high levels of skills and education.

The first charts and tables focus on the education levels of adults ages twenty-five years and older. Adults of all ages must continually pursue education and training in order to ensure their own success and improve productivity. High education levels help economic development efforts in attracting companies that require workers with university degrees, licenses and certificates.

The percentage of adults 25 years old and older and their levels of educational attainment in comparison to state and national averages (Fig. IV-1).

Our first educational performance measure describes the education levels of Vermilion County Illinois' adult population.

The level of education attained indicates whether or not a workforce is equipped to meet the demands of the twenty-first century economy, an economy that demands not only increasing levels of skills, but also basic reading, math and problem solving abilities. It also indirectly indicates the importance residents place on continuing education.

Residents of Vermilion County generally achieve a relatively low level of education when compared to state and national levels. Many people do not reach the ninth grade; others enter high school but do not attain a high school diploma. Vermilion County has a significantly higher percentage of high school graduates as equivalent rates of adults with some college and associates degrees when compared to Illinois and U.S. percentages.

However, Vermilion County seriously lacks workers holding Bachelor's or professional degrees. As compared to 27% statewide and 25% nationally, only 12% of the area's workforce has completed university.

2. Comparison of the percentage of Vermilion County residents aged 25 and older by county between 1990 and 2000 who have high school diplomas (Table IV-1).

Our second measure notes the percentage of adults who have completed high school. Completing high school is essential to workforce development. Without basic reading skills, computing skills and critical thinking abilities, Vermilion County adults have few opportunities to secure quality jobs.

The County must compete not only with counties throughout Illinois but throughout the country in attracting companies to its area. Such companies select communities that demonstrate a high (or rising) level of education among its working adults. Table IV-1 shows a not very promising picture when Vermilion County is rated among all the 102 Illinois counties. It ranks in the lower 50th percentile, well below neighboring Champaign County's impressive first place finish of 93% of residents having high school degrees.

The one bright spot in this Table is that Vermilion County has raised its high school graduation rates from 73% in 1990 to 81% by the 2000 Census. We would hope that the Finish First initiative and other major efforts by the community will lift the graduation rate substantially higher in the next five years.

3. Percent of Employers Rating the Danville Area Workforce (Table IV-2).

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Vermilion Advantage kindly made available the results of the PFResources analysis of the Danville area workforce in 2000. Table IV-2 presents a breakdown of employers' perceptions of the Reading/Writing competency and the Calculations competency of workers.

The results of PFResources analysis of Danville in comparison to 143 other geographic areas that PFResources has been involved with are a mixed picture for Vermilion County. For example, 13% of employers in 143 areas around the country felt that the Reading/Writing competency was excellent. Unfortunately, NONE of Danville's employers perceived that local employees had excellent Reading/Writing competency. Danville area employers were more complimentary about workers having good Reading/Writing competency. 50% of them were satisfied that workers had good competency, only slightly less than the 53% of employers in 143 other areas. Thirty-nine percent of Danville employers rated their workers as having fair Reading/Writing competency compared to 31% of employers elsewhere. Employers in all areas, including Danville, thought that 10-11% of their workers were poor with regard to having adequate reading and writing skills.

The results of employers' perceptions were somewhat better with regard to Calculations competency. In this case, 22% of Danville employers compared to 24% in 143 areas felt that their workers had excellent mathematics skills. An additional 62% of employers rated their workers' having good Calculations competency. Only 16% rated their workers as being fair and no employers felt that their workers had poor competency. In comparison, 28% of employers in the other areas rated their workers as having fair or poor calculations competency.

4. High School Performance as measured by Dropout rates, Graduation rates, and ACT results. (Fig. IV-2)

Most twenty-first century jobs, whether in the service or goods-producing sectors, and whether held by men or women, require the equivalent of at least a full high school education. For that reason, our next indicators apply to the major indicators of the value that young people and their community place on high school education.

The Illinois State Board of Education defines the dropout rate as the following: the number of dropouts, divided by the fall enrollment, minus postgraduates, 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 program studies, transfer to another public/private school or expulsion.

As officially reported, Vermilion County Illinois schools have a significantly higher high school dropout rate (7.3%) than the statewide average of 5.1%. Vermilion County also performs inadequately with regard to its high school graduation rate, 78.7% vs. 85.2% across the state.

Vermilion County's overall percentage of students taking the ACT test also falls below State of Illinois averages. In the school year 2001-2002, 84.9% of students at the 10 high schools took the test while 92.5% of students throughout the State took the ACT. And what is most disappointing is that although the numbers of Vermilion County juniors were fewer than the state average, these juniors performed below their peers in other Illinois high schools. The average composite ACT score for Vermilion County students was 19.4 compared to 19.9 for juniors around Illinois.

5. Dropout rates in Vermilion County High Schools (Fig.IV-3)

There is quite a bit of variation among high schools when one looks at reported dropout rates during the 2001-02 school year (Fig. IV-3). Bismarck-Henning High School had an impressively low rate of 1.1%. Five more high schools reported rates below the state average of 5.1%. Unfortunately, the remaining five high schools in the County exceeded the average, from 6.0% at Georgetown-Ridge High School up to a very discouraging 11.3% at Danville High. Fig. IV-3 shows the wide range of results in each school. These numbers translate into hundreds of young people annually not having a solid foundation or ability to compete well in the increasingly skill based 21st century workplace.

6. Graduation rates in Vermilion County High Schools (Fig.IV-4)

Figure IV-4 focuses on Graduation Rates. The graduation rate reported here is defined as the number of 2001-02 high school graduates divided by the first-time ninth grade 1998 enrollment, minus the number of students transferred out, plus students transferred in, multiplied by 100. Thus the numerator equals the number of graduates; the denominator equals 9th grade enrollment minus transfers out plus transfers in. Transfers as defined by the ISBE refer to this specific graduation class and are accumulated over a four-year period.

Just as a high dropout rate indicates a lack of preparation in a community's future workforce, a high graduation rate indicates success in laying the foundation for a well-equipped one.

Within the County, each public high school had differing graduation rates. Jamaica and Armstrong high schools had 100% graduation rates during the 2001-2002 school year. At the opposite end of the list, Danville and Morris high schools had graduation rates ranging from only 68 – 71%.

Overall, half of public schools in Vermilion County Illinois registered graduation rates higher than the Illinois state average of 83.2%. These schools also had concurrent low dropout rates. The exception to this is Rossville-Alvin High School, which posted a less than impressive 80.6% graduation rate but also had a fairly low dropout rate of 3.4%.

In summary, Vermilion County high schools have graduation rates below the state average. Is a 78.7% average graduation rate for this area's high schools good enough? This rate means that nearly 22% of Vermilion County Illinois 1998 high school freshmen failed to receive a diploma by the spring of 2002. This translates into hundreds of young people facing an uncertain economic future. We hope, of course, that most will complete their high school education or obtain a GED. But what about those who do not? What kinds of jobs will be available to them?

Performance of Vermilion County and Illinois high schools as measured by the 2002 PSAE Results (Fig. IV-5)

The Prairie State Achievement Examination (PSAE) was administered for the first time to all students in the spring of 2001. All Illinois 11th graders were required to take it except special education students or those with limited English proficiency. This test measures mastery of core material in reading, math, writing, science, and social science. Students are placed into one of four categories according to their score:

1. Academic Warning
2. Below Standards
3. Meets Standards
4. Exceeds Standards

Fig. IV-5 shows that in Reading, 55% of Vermilion County Illinois students met or exceeded PSAE standards, as compared to 58% for the state. In Mathematics, 43% met or exceeded standards, compared to 53% statewide. In Writing, however, there was a greater variation between Vermilion County students and the state average. Only 50% met or exceeded standards, compared to 60% around the state. In Science, the results were roughly the same discouraging numbers. Vermilion County students performed at 44%, as compared to 53% statewide. In Social Science, 49% of students met or exceeded standards, as compared to 57% statewide.

8. Percent of Vermilion County 11th Graders meeting or exceeding Standards on the Spring 2002 PSAE Test (Table IV-2)

There was significant difference in student performance within the ten public high schools in the County. Table IV-2 reveals these differences. Oakwood High School had an average overall performance of 64.7% Rossville-Alvin high school came in second with 60.8% of their students performing above average. Bismarck-Henning and Danville high schools performed between 58.7%-59.1%. Westville, Catlin, Jamaica, and Armstrong high school students performed adequately or above average. And finally, there were two high schools where only a minority of students performed at adequate levels. These are

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Georgetown-ridge Farm high school at 49.2% and Hoopston Area high school at 48.0%. These schools require special help and attention in order to improve student performance.

9. Average ACT scores of Vermilion County Illinois 11th Graders, Spring 2002 (Fig. IV-6).

The minimum ACT score for admission to an Illinois public university is 22. This is considerably higher than the 19.4 average composite score for Vermilion County high schools students. This next measure breaks down that composite score. For an increasing number of jobs in the knowledge-based economy, some form of post-secondary education has become necessary. This trend will only increase in the years ahead. For the twenty-first century workforce, the willingness of young people to pursue education beyond high school is essential.

ACT measures students' abilities in English, mathematics, reading, and science. Students in the County see to have more difficulty in mathematics (19.1 in the County versus 20.1 statewide) than in the other subjects where their scores were closer to the Illinois average. For example, Vermilion County students scored at 18.9 in English compared to the state average of 19.1. In Reading, they scored at 19.7, just a bit lower than 2.0 around the state. And their scores in Science were also close to the state average (19.6 versus 19.8), indicating that while there is room for improvement, Vermilion County students are approaching the state averages in every subject with the exception of Mathematics.

10. Average ACT Composite Scores of Students in Vermilion County high schools, Spring 2002 (Fig. IV-7).

Vermilion County high schools registered quite a range of results by students taking the ACT. Catlin High School topped all the schools with an impressive overall score of 20.4. Danville and Oakwood high schools had scores of 20.0. All three schools topped the state average of 19.9. Three more high schools, Bismarck-Henning, Jamaica, and Rossville-Alvin high schools exceeded the County average of 19.4. Their respective scores were 19.5, 19.6, and 19.7. The remaining four high schools registered less than impressive results. Georgetown-Ridge Farm had the lowest rate of 18.2 while Westville, Armstrong and Hoopston Area High School had rates that ranged from 18.2 up to 18.9, leaving lots of room for improvement in test results in future years.

11. The percentage of high school students who take the ACT test (Fig IV-8).

In evaluating a high school's ACT scores, it is important to consider not only the score itself but also the percentage of the class that actually takes this examination. A school's average composite score on the ACT may vary inversely with the percentage of the class taking the test.

As stated above, beginning in 2001-02, all Illinois 11th graders were required to take the ACT test as part of their PSAE examination. Some high schools, however, report fewer than 100% of 11th graders taking the ACT. The reason why poses a mystery, one reported but not solved here.

The percentage of Vermilion County Illinois students that actually took the ACT varied considerably among schools. This table notes the variation among the 39 public high schools in the spring of 2002.

One hundred percent of the students at Catlin high school took the ACT. As already noted, the results for this school were 20.4, which is a very respective score.

Ninety-one to ninety-seven percent of students at the next five high schools took the ACT. Three of these high schools, Rossville-Alvin, Jamaica, and Oakwood high schools also reported better than average ACT scores. The remaining four schools posted 76.4%-89.6% participation rates, for reasons that remain unclear.

Summary:

We summarize the eleven educational performance measures for public high schools in Vermilion County in the following list:

Educational attainment by most Vermilion County Illinois residents needs improvement. Close to 40% of adults have only high school degrees. Far too many (21%) have not completed this basic education. Although the area has an abundance of educational institutions and the fact that there has been an increase in the numbers of high school graduates in the County, far too many residents do not enroll in classes in order to improve their skill levels or obtain higher degrees.

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Students at only one of the County's high schools perform adequately according to most performance measures (low dropout rates, high graduation rates, and good scores on standardized tests).

No area high school is among Illinois' better ones as measured by these indicators.

Considerable variation exists in student performance among the area's 10 public high schools. This variation warrants further examination.

Two area high schools perform very low on every educational indicator. These schools need to decrease their dropout rates, increase their graduation rates, and improve their educational performance markedly.

Far too many young people in the area do not complete high school. Those that do graduate are not learning what they need to fulfill the demanding requirements of twenty-first century jobs, judging by disappointing scores in the PSAE and ACT tests.

Commending positive initiatives

Danville Area Community College is a gem in Vermilion County. It has received major awards for superior teaching by its faculty; its programs with the Vermilion County businesses, its nationally recognized counseling certificates, and extensive use of WorkKeys profiling with companies, its nearly one hundred online courses, the fact that Lakeview nursing school is under its strong organizational wing, and the specialized programs with corrections officers make it stand out nationally. In addition to these many programs, DACC sets a high standard for excellence for its undergraduates. It is one of very few community colleges that gives an exit writing exam that 17% of students don't pass the first time. The College is often under pressure to eliminate this exam but contends that writing is one of the requirements of being an educated person. DACC students do very well in four year institutions, probably as a result of this exam.

DACC offers regular mentoring and internships with their students in all the occupational programs. They called this program the "Continuous Quality Initiative," of which they are very proud. To help improve the math and science programs for its students, DACC just received a \$400,000 National Science Foundation grant to help budding new science and math majors. Thus far, twenty students have taken advantage of this program. In our interview with College administrators, they expressed slight chagrin that more students did not take advantage of this generous program but apparently many parents were unwilling to fill out all the forms to indicate financial need. We would strongly urge that there be a community wide effort to explain to parents about the benefits of this program and to help parents complete the application.

Georgetown Schools can be very proud of their involvement in "Destination Imagination" (used to be Odyssey of the Mind). Of their 14 teams in elementary schools, middle schools, and high school, 9 go to state tournaments. Destination ImagiNation is one of the world's largest creativity and problem solving programs for youth of all ages, with thousands of participants in 47 US states, 15 countries and Canadian provinces participating annually. Destination ImagiNation® helps kids develop a unique and critical skill set by emphasizing:

Creativity	Problem Solving	Teamwork
Brainstorming	Project Management	Time Management
Creative & Critical Thinking Skills	Knowledge Application	Collaboration
Presentation Skills	Confidence	Research Skills

The Destination ImagiNation® program helps kids build important, lifelong skills, such as problem solving, teamwork and divergent thinking. Our teams solve two types of Challenges within the program year. The Central Team Challenge involves structural, technical or theatrical oriented Challenges and takes several months to solve. Throughout that time the teams also practice improvisational Instant Challenges, which stimulate the team's ability to think quickly and creatively with only minutes to prepare solutions. When tournament time rolls around, each team's score reflects its Central Team Challenge performance plus its response to an Instant Challenge. See www.DestinationImagination.org for more information.

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We would like to recommend that DACC and the area schools implement a summer camp and after school activities around the Destination Imagination concept throughout the County. Creativity isn't just a school year activity. Many state, local and international affiliates elsewhere offer creativity activities for kids year-round, including summer camps that incorporate all of the fun and thoughtful activities that make learning interesting. The business community may consider funding and volunteering in the exercises to help students prepare for the competitions.

Improving Educational Performance in Vermilion County Schools

The preparedness of Vermilion County K-12 students to step into high-skills positions offered by the twenty-first century economy is determined by school and community leadership. As the figures and tables of this chapter's Statistical Appendix demonstrate, many students leaving Vermilion County Illinois high schools enter the workforce with less-than-satisfactory acquisition of basic cognitive skills. This diminishes their performance in the workplace, their ability to pursue paths of lifelong learning, and consequently, the economic performance of the Vermilion County Illinois area.

In addition to the extensive statistical information presented in the Appendix, more than 55 leaders in manufacturing, logistics, warehousing, distribution, finance and banking, human resources, retail, hospitality, city and county government, economic development and health care shared their views about the quality of entry-level workers. These focus groups, group discussions, and individual interviews were conducted between October 2002 and July 2003. Below is a summary of the content of these interviews:

Workforce savvy of Vermilion County entry-level workers

Employers expressed general disappointment in the quality of oral and written communication skills as well as the reading and math abilities of the entry-level workforce. They also mentioned lack of teamwork skills, customer service skills and a lack of a positive workforce attitude.

Vermilion County employers widely believe that there are few or no experienced/ skilled workers flowing from the schools. A high percentage of applicants fail interviews because they lack communications skills. High percentages of applicants also fail drug tests, and physical and criminal screening.

Restructuring County high schools to offer Career and Technical education:

CTE is one strategy to help young people connect their learning with the real world, increase their attachment to school, and transition to postsecondary

education. Given the considerable dropout rates in some urban high schools, getting young people to stay in school is a major accomplishment. Given the focus on standards-based reform, some have suggested that the current federal funding for CTE be transformed to support high school reform efforts and focus on helping high school students improve academic performance to master standardized tests. While federal funding must align with the No Child Left Behind Act and broader attempts to raise student achievement and improve high schools, the sole purpose of federal funding for CTE should not be to reform high schools. There is not nearly enough funding allocated

to CTE programs to address the kinds of large-scale changes needed at the secondary level to close the achievement gap. Also, preparing students for careers and lifelong learning remains a worthy goal of high schools, and federal support for career-oriented learning is still needed.

Reformed CTE programs have actually been leading efforts in many communities to change their high schools and should be supported to continue these efforts. CTE can and is being used to restructure high schools into smaller, career themed learning programs. This results in students having strong academic foundations, career awareness and exposure, with motivation and commitment to stay in school, graduate, and to continue their education in a post secondary institution. Common strategies to improve learning for high school-aged learners rely on the following:

- more personalized and student-focused learning opportunities,
- a rigorous, integrated curriculum,
- supporting all students, including guidance and college and career exploration,
- making learning relevant by linking it to careers or other themes (like the arts),

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- providing various learning methodologies to meet multiple learning styles,
- offering choices and options for teens based on their interests and future plans,
- using the community (employers) for learning and in helping students plan for and advance from secondary to postsecondary education in a more thoughtful and planned manner.

Buttressing career preparation through career ladders in Vermilion County schools

In many schools across the country, career and guidance counseling are not taken seriously. The results are serious and sad. Young people make some of the most important decisions of their lives without adequate information, resources, mentoring, job shadowing and internship experiences, or sound advice. Most are directed into college preparatory courses that do not reward “soft skills” such as teamwork and customer service. The result is a cadre of young people who possess few workforce readiness skills and lack a realistic understanding of what will be required of them once they enter the workforce.

Career and guidance counselors often lack fresh and accurate information about the real world of work and emerging occupations in Vermilion County. Recent studies have focused on this important issue by asking the following question: “How can we heighten and increase knowledge among students, parents, teachers and counselors about fast-growing technical occupations and the new economy workplace?” Some of their recommendations include the following:

- Teachers and guidance counselors tend to be biased toward college preparatory programs. Instead, they need to promote vocational and technical occupations to students who are not immediately interested in pursuing a post secondary degree.
- Well-defined career ladders must be made available to students as early as middle school so they might take appropriate courses and internships. Career ladders include high school, community college, and university courses that lead to recognizable twenty-first century careers.
- Internships for students, teachers and guidance counselors during the summer and during breaks should be stressed throughout the year. Adequate funding needs to be set aside for ample numbers of participants to take advantage of these programs.
- Math and science courses should be promoted to all students. Mrs. Mary is an excellent program the needs to be expanded to younger and higher grades. Girls and minorities especially need to be given early messages that they are incapable of pursuing these rigorous courses, which lead to better paying careers in the new economy.
- Educators need to teach according to different learning styles. In interviews with dropouts, we learned that the traditional chalk-and-lecture method contributed greatly to their decisions to drop out.
- Dropout recovery programs must be promoted in every Vermilion County community. Collaborative efforts by the business, educational and workforce system are necessary to “recover” young people who leave school before graduating.
- Students who want to take advanced courses or take advanced technical/vocational classes should be encouraged to participate in the existing dual enrollment programs at DACC.
- The senior year of high school needs to be filled with career preparedness courses and externships in businesses throughout the region. Too many employers noted that their own children find the senior year to be wasteful after acceptance by college. More coop opportunities, internships, etc. need to be made available.
- Counselors and teachers need to be aware that customer service, critical thinking, teamwork skills, proper work ethic, and willingness to take responsibility for continuously upgrading their skills are increasingly important in the twenty-first century Vermilion County workplace. The business community and schools can meaningfully partner to incorporate these people skills in with the academic curricula.
- Employers are very willing to function as active partners in career awareness programs. Such programs could begin in the second grade and continue throughout high school, exposing students to businesses, careers, mentors, internship experiences and career fairs. Although the present emphasis in Vermilion County high schools on service learning and volunteer work is excellent, it does not help students acquire civic knowledge, workplace understanding and career-related skills.

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- Vermilion County parents often resist the idea of their children acquiring technical skills for vocational occupations because vocational courses are seen as leading to “dead end” jobs. Parents need to be taught that vocational and technical skills include computer skills, rigorous math and science courses, opportunities to visit workplaces and work preparedness training, all of which employers value.

Offering a culinary arts program at Danville Area Community College.

Vermilion County offers cultural, historic, and outdoors recreational attractions that can attract many more visitors. We would suggest the following additions to its curriculum to improve its hospitality and retail attractiveness.

For example, there is a tremendous demand for chefs around the country. They can make very good salaries and often have their choice of at least three job offers upon completion. Culinary programs are often the choice for people who have had earlier careers. Enrollments have jumped throughout the country with waiting lists in many areas. There are no culinary programs for many miles in Illinois or Indiana so DACC would be an attractive central place for folks to learn culinary skills, baking and pastry, and restaurant management. These programs are revenue generators that operate year-round so they recoup the costs for installation of equipment to the College in a short time. Examples of culinary programs in community colleges around the country include: South Western Illinois College with its world-famous chef and Orange Coast community college in Orange County, California www.occ.cccd.edu/ that complement their offerings with the needs of the Ritz Carlton, Disney, and the extensive tourism business out there. In addition, the culinary programs can be made available to local “foodies” who want to learn how to make specialty dishes. They are often willing to pay \$50/person for a 2 hour class, which is an added benefit to DACC. A good example of noncredit culinary offerings is the Napa Community College at www.napacommunityed.org

Offering customer service, retail management, and supervisory training

Vermilion County employers over and over stressed the need for young people to have customer service savvy. And there is a growing demand to bolster the local economy with more retail establishments that have friendly, knowledgeable sales people. The SUNY Rockland College offers an extensive array of classes in all three areas mentioned above. See www.sunyrockland.edu/

SUNY Rockland also works closely with their local Workforce Investment Board to provide certificate training to displaced workers so that they can demonstrate to potential employers that they have successfully mastered customer service skills. They also offer short courses for first time supervisors and advanced classes in retail management for people who want to make retail their career.

Promoting entrepreneurship

Entrepreneurial activity is present in Vermilion County but it must be raised to a new level to become an important ingredient of the area’s future economic development. Many interviewees felt that the public schools do not encourage entrepreneurial education or promote entrepreneurial opportunities. Junior Achievement, for example, is found throughout Illinois but does not appear to be active locally.

Entrepreneurs in the Vermilion County Illinois area are numerous but they have tiny numbers of employees and often lack time to develop recruiting and retention strategies. The **Workforce 2020 Roundtable** concept thus fills an important niche in training these entrepreneurial employers. Piloted by Hudson Institute and the Orlando Chamber of Commerce, these workshops provide training programs to what are affectionately known as “HR-challenged” firms. Small firms often encounter difficulty in recruiting and retaining young professional talent. They also may need customized training for their non-English speaking employees. Additionally, they sometimes require help in devising flexible work schedules that attract baby boomers. Many of these HR-challenged companies have been able to profit by utilizing best practices and successfully manage a multigenerational workforce.

Other Business/Education Collaborations

We would recommend coordinated efforts by County businesses and middle schools in team building and problem solving that expose students to robotics and creative programming, both of which are critical skills in most high paying jobs in the area.. First Lego Leagues (FLL), for example, encourages students to

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program Lego blocks with the MIT-created Logo programming language. Each year in September, FLL teams internationally accept the Challenge, which engages them in hands-on robotics design and authentic scientific research. After 8 intense weeks, the FLL season culminates at high-energy, sports-like tournaments. See <http://www.firstlegoleague.org/> for more details. Twenty teams around Illinois are forming as we write!

Another way in which businesses and schools can work together in order to strengthen student communication skills is by developing junior Toastmasters groups. Although there are two Toastmasters groups in Vermilion County, there are no Youth Leadership programs that we could determine. These programs successfully help young people overcome fear of public speaking and attain poise and confidence in a variety of settings.

Links between business and education can always be improved. In our interviews, employers revealed willingness to help teachers practically apply mathematics and science education to the world of work. They also suggested promoting math, science, healthcare, and technical education careers, illustrated with well-defined career ladders, through a media blitz. Exceptional graduates of vocational programs and/or Danville Area Community College might be held up as “poster children” for young people to emulate. Local businesses are also willing to educate students about corporate culture, hiring expectations, assessment testing and educational requirements.

Employers thought that collaborating with schools to confront the extensive dropout problem would benefit the entire region. They also suggested initiating major efforts to stop the area’s problematic brain drain. Finish First, the creative and comprehensive dropout prevention program that originated in St. Joseph, Missouri public schools, is endorsed by many businesses in Vermilion County. Although nearly 60 companies have committed to asking for high school transcripts from new workers and helping their current workforce obtain their GED, it would be stellar for all companies to be fully engaged in this program. Finish First that is endorsed by all businesses and marketed widely would brand the County as a place where all adult members are committed to having a solid foundation in education.

Make healthcare training a high priority in the County

The healthcare industry is a major Vermilion County Illinois employer and will continue to be so in the foreseeable future. Beginning with high school, all educational institutions need to coordinate to provide top-quality healthcare jobs training.

Merely meeting the employment projections of Scenario 1 (also the projections of Illinois Department of Employment Security) seriously challenges the ability of Vermilion County Illinois to produce, recruit and retain skilled healthcare workers. Meeting the economic development targets of the region’s economic development plans is even more challenging (Scenario 2).

There are currently paraprofessional health programs at DACC, as well as a BS nursing program at Lakeview College of Nursing. According to healthcare business leaders, however, the number of graduates falls far short of the number of positions that will need to be filled in the years ahead. According to our industry summits and interviews, the healthcare professional bottleneck derives from a serious shortage of qualified healthcare instructors. This seems particularly acute in the field of nursing education.

In addition to a lack of nursing instructors, there is no Nurse Refresher program in the County although several healthcare providers thought that it would have great value. Such programs help former nurses return to the profession by preparing them for the license exam. Other efforts, such as augmenting online learning classes, offering scholarships and stipends for students and increasing salaries for nursing instructors could substantially increase and improve the pool of applicants and help abate the looming shortage. Vermilion County could become the recognized leader in retraining nurses whose licenses have lapsed to become active in nursing. This could be a new offering at Danville Area Community College that would be staffed by nurses from the local hospitals and clinics year round. An excellent example of a Nurse Refresher program is the one that has been operating for 10+ years in Sarasota County, Florida at their Technical Institute.

Guidance counselors must understand the importance of healthcare to the area. According to interviews, counselors steer students into technology fields rather than the vast array of healthcare

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opportunities. Health professionals should be provided with opportunities to visit schools to talk about careers. Active school and business participation in healthcare career fairs are vital and should begin as early as elementary school. Girls and minorities should be encouraged to excel in math and science to prepare for careers in these professions. More opportunities for science camp participation through DACC would also be useful.

Building well-constructed career ladders

Vermilion County has a long-standing reputation as a manufacturing center. Young people, however, do not see manufacturing as an attractive or promising career. With the advent of globalization and relentless technological innovation, the field of manufacturing is changing rapidly. Contrary to popular wisdom, however, the U.S. will continue as a global manufacturer. But the nature of goods and the way they are produced is changing dramatically. Labor-intensive commodity products have disappeared. The new manufacturing environment produces customized, one-of-a kind products; these products are particularized for each customer and involve highly skilled workers.

There are many opportunities for counselors, teachers and professors to point out the solid careers available in advanced manufacturing. The skills and educational requirements necessary for these careers must be outlined, along with expected starting salary ranges, information about available targeted training and ways to advance.

Vermilion Advantage was done a remarkable job in formulating career ladders in the economic clusters that they and the business community have identified. Students can explore opportunities in healthcare, logistics, entrepreneurship and the other industry clusters targeted for economic development. Exposing students to careers through “Miss Mary”, career and job fairs throughout the year, a career bus that travels around the county, filled with information about 21st century careers, are exceptional examples of building career ladders and marketing them to the community. Regardless of the career ladder they follow, Vermilion County graduates can and should be well informed and qualified to contribute to the economic growth of the area.

Improving Educational Performance in all Vermilion County high schools

The Vermilion County school systems are currently attempting to increase student excellence in reading and mathematics. Such efforts deserve commendation. New national educational research shows that students who have successfully passed Algebra II in high school will probably complete post-secondary education in a timely manner. Additionally, students who read at a 12th grade level have high critical thinking and analytical skills, both of which are crucial in today’s workplace. Low-income and minority students in Vermilion County high schools must be encouraged to take advanced courses in mathematics and those that demand critical reading skills. Such opportunities are critical for providing all students with access to post-secondary educational institutions.

Focused school efforts on the dropout problem would benefit the region. We also recommend that the Vermilion County business community become an active partner in addressing the dropout problem. First, a **thorough analysis of the dropout problem** is required. Sarasota, Florida offers an excellent model. SCOPE, a community based organization, intensively studied this problem for seven months. Their publication, “School Dropout Study Group Report,” details the specific dimensions of the dropout problem, along with community efforts to reduce it.

Select high school students should be given every opportunity to take advanced courses at Danville Area Community College during their junior and senior years. Such programs, called **dual enrollment programs**, should be encouraged since many students languish during these last years of high school. We found in our interviews that some schools are actively involved in encouraging their students to take classes at DACC while others are unaware or indifferent to this alternative.

Summary of this chapter:

This chapter has focused on the importance of a solid education to all residents of Vermilion County Illinois. After examining the 10 public high schools in Vermilion County, we have concluded:

- Every student can and should learn.

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- Improvement is possible for each Vermilion County high school. School records across the state and nation demonstrate that determined school and community leadership can improve student performance even in difficult circumstances.
- Some schools have made no progress in improving their dropout and graduation rates. More than 1,000 young people do not graduate. This leaves them with few future opportunities and the region with a lack of skilled talent.
- The region can and should address exceptionally high mobility rates, which directly contribute to the dropout problem.
- Teachers and guidance counselors should play a proactive role in preparing students for the complex, demanding world of work. From the earliest grades, students should be encouraged not only to attain high levels of education and master all academic subjects, but also seek teamwork, self-directed learning and customer service skills.
- Collaborations between business and education can help raise graduation rates and PSAE performance as well as increase the percentage of students who take the ACT exam.
- Improving school performance is a community challenge and responsibility. To ignore this challenge is to compromise the future of the area's workforce and economic development, imperiling the area's future social stability and economic prosperity.
- Incumbent and elite workforces in the region need skills upgrades. Employers either want to hire workers who already have skills or train workers in those skills. Due to increasing competition, the time available for on-the-job training, however, has diminished. Many companies have concluded that they cannot afford the time, risk, and uncertainty associated with "making" the employees they need through training or retraining.
- DACC and the One-Stop center need to continually market their training services to all working age residents in the County so that employers will have skilled and experienced workers who can "hit the ground running." They should offer targeted training that helps improve their technical and business skills. They also need to include "people skills" training in the curricula. This customized training will be invaluable to recruitment and retention efforts.
- Increasing entrepreneurial education through DACC and Vermilion County will help workers achieve salary independence.

Chapter 5: Ideas, Recommendations and Promising Practices for Building a Twenty-First Century Workforce in Vermilion County

This study maps the territory that Vermilion County must travel in order to develop its economic workforce in the early twenty-first century. The people of this County must decide where they want to go and build the appropriate roads to reach their desired destinations.

This chapter identifies ten key challenges confronting Vermilion County. These challenges are followed by a mixture of ideas, recommendations and promising practices, along with references to potentially useful Internet websites. Our aim is not to prescribe specific actions, but rather point out promising paths and ideas that may be of interest to workforce boards and other leaders in the seven counties.

First we need to review the SWOT analysis that lies behind the Challenges:

1. Strengths of Vermilion County:

- Highway and rail transportation infrastructure (I-74)
- Vermilion Advantage's leadership
- Workforce with manufacturing experience
- Exceptional community spirit
- DACC's innovative programs
- Proximity to the University of Illinois with its impressive talent pools and research capabilities. Also to Eastern Illinois University and to Rose-Hulman Institute of Technology with its top-flight engineering school.

2. Weaknesses of Vermilion County:

- Relatively low educational attainment of the population and workforce.
- Relatively elevated high school dropout rates and low graduation rates
- Relatively low performance of high school students at least as measured by standardized tests such as PSAT and ACT.
- Experience of the workforce, especially in low skilled manufacturing, poorly matches the more rapidly growing services-producing segments of the Illinois and U.S. economies.
- A relatively weak ability, thus far, to attract newcomers to settle and work in Vermilion County.

3. Opportunities for Vermilion County:

- To lower high school dropout rates and raise graduation rates.
- To strongly encourage adults lacking high school diplomas (or equivalent) to pursue a GED.
- To leverage Danville Area Community College to an even greater degree to educate and train the local workforce.
- To take advantage of the proximity of the University of Illinois
- To encourage workers to complete bachelors' or advanced degrees, and
- To stimulate commercialization of U of I research results within Vermilion County because of lower labor and other costs.
- To attract entrepreneurs to Vermilion County by touting lower costs of living and relatively abundant and inexpensive labor, as well as proximity to the University of Illinois and Rose-Hulman Institute talent pools and training opportunities.

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- To attract and encourage small but highly innovative manufacturing and other companies.
- To attract talented domestic and international newcomers to Vermilion County.
- To attract persons raised in Vermilion County (but who now live and work elsewhere) to return home to raise their families in a familiar and small town environment.

4. Threats to Vermilion County:

- The lure of regional metros (e.g., Chicago, Indianapolis) and especially of Champaign County.
 - § for Vermilion County retail shoppers because of I-74 and consumer access to Champaign shopping;
 - § for Vermilion County youth who see these larger metro areas as more exciting places to live and work; and
 - § for Vermilion County workers, especially the most educated and skilled, because they perceive superior job opportunities elsewhere.
- Globalization, rapid technological innovation, and the changing structure of the American economy pose serious challenges to traditional manufacturing (especially commodity producers).
- An aging, mainly white, workforce. Many of the boomer generation will be retiring soon. Some may leave the community.
- Continued population decline.
- A continuing “brain drain,” particularly of young people, that is not compensated by “brain gain.”

From this SWOT analysis and the material of the preceding chapters, the following ten challenges emerge..

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DEVELOPING A 21ST CENTURY WORKFORCE FOR VERMILION COUNTY: TEN KEY CHALLENGES.

1. **Support the existing manufacturing base.** Aggressively seek to understand what workforce improvements or change would make Vermilion County’s existing manufacturing employers more competitive in their markets.
2. **Align education, training, and career preparation with Vermilion County’s major economic clusters.** Focus on education, training, and career preparation for Vermilion County’s major economic clusters in healthcare, logistics, information technology & customer service, manufacturing, and retail.
3. **Increase and improve direct interaction between educators and the business community.** Foster active mentoring, internships, advisory committees, job shadowing, brain gain programs, career awareness programs, and easy access to up-to-date career resources.
4. **Reduce dropout rates and raise graduation rates in Vermilion County high schools.** Undertake a broad and focused business and community-wide efforts to achieve these goals.
5. **Improve the educational performance of Vermilion County K-12 students.** Put special emphasis on teamwork and customer service skills as well as basic cognitive skills.
6. **Enhance the quality of career and guidance counseling** especially within the county’s high schools but also in the One Stop Career Center. Ensure that top quality career and guidance counseling is available and accessible to all students and residents of Vermilion County area.
7. **Upgrade the educational level of the adult population and the skills level of the incumbent workforce.** Strongly encourage adults lacking high school diplomas (or equivalents) to obtain a GED. Launch a recovery program aimed at recent high-school dropouts. Encourage adults with only high school education to obtain post-secondary education including associates, bachelors, or professional certification.
8. **Promote and support Vermilion County entrepreneurship.** Develop and enhance centers that provide counseling, technical assistance, and training to nurture startups and other businesses that are already in the area.
9. **Retard “brain drain” from Vermilion County and encourage a return flow of native sons and daughters.** Understand why young people leave the area or do not return after achieving higher education. Track down and entice former Vermilion high school graduates to return. Work with local employers to identify employment opportunities for these folks.
10. **Exploit the opportunities of regionalism.** Understand the role of Vermilion County’s economy and workshed within the context of a broader area stretching from Champaign County in the west to Vermillion County, Indiana in the east and from Iroquois County in the north to Edgar County in the south and perhaps even beyond these boundaries.

We now proceed to examine how these ten Challenges relate to and correspond to the Strengths, Weaknesses, Opportunities, and Threats of the SWOT analysis.

SWOT: STRENGTHS

Here is how the Challenges correspond to the Strengths identified in the SWOT analysis.

Strengths	Challenge
Ø Highway and rail transportation infrastructure (I-74)	10. Exploit the opportunities of regionalism.
Ø Vermilion Advantage’s leadership and vision.	2. Align education, training, and career preparation with Vermilion County’s major economic clusters. 1. Support the existing manufacturing base. 8. Promote and support Vermilion County

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	entrepreneurism.
Ø Workforce with manufacturing experience	<ol style="list-style-type: none"> 1. Support the existing manufacturing base. 2. Align education, training, and career preparation with Vermilion County’s major economic clusters.
Ø Exceptional community spirit	<ol style="list-style-type: none"> 9. Retard “brain drain” from Vermilion County and encourage a return flow of native sons and daughters. 4. Reduce dropout rates and raise graduation rates in Vermilion County high schools. 5. Improve the educational performance of Vermilion County K-12 students
Ø DACC’s innovative programs.	<ol style="list-style-type: none"> 7. Upgrade the educational level of the adult population and the skills level of the incumbent workforce. 2. Align education, training, and career preparation with Vermilion County’s major economic clusters. 6. Enhance the quality of career and guidance counseling
Ø Proximity to the University of Illinois with its impressive talent pools and research capabilities; also to Eastern Illinois University and Rose-Hulman Institute with its top-flight engineering school.	<ol style="list-style-type: none"> 10. Confront regionalism. 8. Promote and support Vermilion County entrepreneurship. 6. Enhance the quality of career and guidance counseling

SWOT: WEAKNESSES

Here is how the “Challenges” correspond to the “Weaknesses” identified in the SWOT analysis.

Weaknesses	Challenge
Ø Relatively low educational attainment of the population and workforce.	<ol style="list-style-type: none"> 5. Improve the educational performance of Vermilion County K-12 students. 7. Upgrade the educational level of the adult population and the skills level of the incumbent workforce. 3. Increase and improve direct interaction between educators and the business community.
Ø Relatively elevated high school dropout rates and low graduation rates	<ol style="list-style-type: none"> 4. Reduce dropout rates and raise graduation rates in Vermilion County high schools. 3. Increase and improve direct interaction between educators and the business community. 6. Enhance the quality of career and guidance counseling
Ø Relatively low performance of high school students at least as measured by standardized tests such as PSAT and AT.	<ol style="list-style-type: none"> 5. Improve the educational performance of Vermilion County K-12 students 6. Enhance the quality of career and guidance counseling
Ø Experience of the workforce (especially in manufacturing) poorly matches the more rapidly growing segments of the Illinois and U.S.	<ol style="list-style-type: none"> 1. Support the existing manufacturing base. 2. Align education, training, and career preparation with Vermilion County’s major economic clusters.

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economies.	
Ø A relatively weak ability, so far, to attract newcomers to settle and work in Vermilion County.	<ol style="list-style-type: none">9. Retard “brain drain” from Vermilion County and encourage a return flow of native sons and daughters.10. Exploit the opportunities of regionalism.5. Improve the educational performance of Vermilion County K-12 students.

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SWOT: OPPORTUNITIES

Here is how the “Challenges” correspond to the “Opportunities” identified in the SWOT analysis.

Opportunity	Challenge
<p>Ø To lower high school dropout rates and raise graduation rates.</p>	<p>4. Reduce dropout rates and raise graduation rates in Vermilion County high schools. 3. Increase and improve direct interaction between educators and the business community. 6. Enhance the quality of career and guidance counseling</p>
<p>Ø To raise educational levels and upgrade the quality of the local workforce in order to attract & retain high-skill, high-wage jobs in the County’s growth clusters.</p>	<p>7. Upgrade the educational level of the adult population and the skills level of the incumbent workforce. 5. Improve the educational performance of Vermilion County K-12 students. 2. Align education, training, and career preparation with Vermilion County’s major economic clusters. 3. Increase and improve direct interaction between educators and the business community.</p>
<p>Ø To strongly encourage adults lacking high school diplomas (or equivalent) to pursue a GED.</p>	<p>7. Upgrade the educational level of the adult population and the skills level of the incumbent workforce. 10. Exploit the opportunities of regionalism.</p>
<p>Ø To leverage Danville Area Community College to an even greater degree to educate and train the local workforce.</p>	<p>2. Align education, training, and career preparation with Vermilion County’s major economic clusters.</p>
<p>Ø To tout and take advantage of the proximity of Champaign and the University of Illinois as well as Eastern Illinois University and Rose-Hulman Institute of Technology.</p>	<p>10. Exploit the opportunities of regionalism.</p>
<ul style="list-style-type: none"> • To encourage workers to complete bachelors’ or advanced degrees, and 	<p>7. Upgrade the educational level of the adult population and the skills level of the incumbent workforce. 6. Enhance the quality of career and guidance counseling</p>
<ul style="list-style-type: none"> • to stimulate commercialization of nearby academic research results within Vermilion County because of lower labor and other costs. 	<p>8. Promote and support Vermilion County entrepreneurship.</p>
<p>Ø To attract entrepreneurs to Vermilion County by touting lower costs of living and (relatively) labor, as well as proximity to four higher educational institutions in and nearby the county for talent and training.</p>	<p>8. Promote and support Vermilion County entrepreneurship.</p>
<p>Ø To attract and encourage small but highly innovative manufacturing and other producers.</p>	<p>2. Align education, training, and career preparation with Vermilion County’s major economic clusters. 5. Improve the educational performance of Vermilion County K-12 students.</p>
<p>Ø To attract talented domestic and international newcomers to Vermilion County.</p>	<p>9. Retard “brain drain” from Vermilion County and encourage a return flow of native sons and daughters. 10. Exploit the opportunities of regionalism.</p>

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	5. Improve the educational performance of Vermilion County K-12 students.
Ø To attract persons raised in Vermilion County (but who now live and work elsewhere) to return home to raise their families in a familiar and wholesome environment.	9. Retard “brain drain” from Vermilion County and encourage a return flow of native sons and daughters. 10. Exploit the opportunities of regionalism. 5. Improve the educational performance of Vermilion County K-12 students.

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SWOT: THREATS

Here is how the “Challenges” correspond to the “Threats” identified in the SWOT analysis.

Threat	Challenge
<p>Ø The lure of regional metros (e.g., Chicago, Indianapolis) and especially of Champaign County for Vermilion County workers, especially the most educated and skilled, because of superior job opportunities.</p>	<p>10. Exploit the opportunities of regionalism. 8. Promote and support Vermilion County entrepreneurship.</p>
<p>Ø Globalization, rapid technological innovation, and the changing structure of the American economy pose serious challenges to traditional manufacturing (especially commodity producers).</p>	<p>2. Align education, training, and career preparation with Vermilion County’s major economic clusters. 7. Upgrade the educational level of the adult population and the skills level of the incumbent workforce. 3. Increase and improve direct interaction between educators and the business community. 5. Improve the educational performance of Vermilion County K-12 students.</p>
<p>Ø An aging, mainly white, workforce. Many of the boomer generation will be retiring soon. Some may leave the community.</p>	<p>7. Upgrade the educational level of the adult population and the skills level of the incumbent workforce.</p>
<p>Ø Continued population decline.</p>	<p>9. Retard “brain drain” from Vermilion County and encourage a return flow of native sons and daughters. 10. Exploit the opportunities of regionalism.</p>
<p>Ø A continuing “brain drain,” particularly of young people, that is not compensated by “brain gain.”</p>	<p>9. Retard “brain drain” from Vermilion County and encourage a return flow of native sons and daughters. 5. Improve the educational performance of Vermilion County K-12 students.</p>

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Ideas, Recommendations and Promising Practices

What follows here is a mixture of ideas, recommendations and promising practices that are keyed to the ten challenges outlined above. These are accompanied by a sprinkling of references to potentially useful Web sites. Our aim is not to prescribe specific actions but to point out promising paths and ideas that may be of interest to leaders in Vermilion County.

Challenge 1. Support the existing manufacturing base. Aggressively seek to understand what workforce improvements or change would make Vermilion County's existing manufacturing employers more competitive in their markets.

Vermilion Advantage and DACC have already teamed with area manufacturing companies to provide NIMS (National Institute Metalworking Skills) certification training to VOTEC students and students in the magnet program called MERIT (Manufacturing Engineering Robotics Industry Technology) at Danville High School.

They have also collaborated in providing summer internships for MERIT students to learn more about advanced manufacturing.

It is our understanding that there is room for many more students throughout the County to participate in this program. Their reluctance to focus on a career in manufacturing stems from the continuing negative headlines of the last thirty years about layoffs in this industry, especially in Vermilion County. A sustained marketing campaign is needed to show that the County will continue to be a manufacturing powerhouse, but that it needs highly skilled workers, not the unskilled help that used to be the norm in factories. Those jobs have permanently gone to countries that have an abundance of unskilled workers who demand much lower salaries and benefits.

We would suggest that the NIMS curriculum at Danville High School and DACC be expanded for Basic Manufacturing and Machining and that WorkKeys be given to students who are taking the NIMS certification to demonstrate to employers that they have not only academic and technical skills and knowledge but also demonstrated skills in teamwork, listening, writing, and locating information.

The NIMS certification should also be made available to all workers in Vermilion County manufacturing firms. This would be a powerful tool in recruiting new businesses that are looking for workers who have industry-led certifications.

Another program where Vermilion Advantage and DACC have teamed up is in offering extensive leadership training for employees who are being groomed for promotion as first line supervisors in manufacturing and logistics companies. This program is being expanded to all area companies, which will be enormously helpful in reducing turnover rates and costs. In national studies, it has been shown that workers leave "Bad Bosses" not companies. Often these Bad Bosses are thrust into supervisory positions without proper training in people management.

The County VOTEC Center offers a wide variety of programs but is currently languishing because of declining funds. It also suffers from the common misconception by parents that vocational technical classes are inferior to college preparatory ones. Although it is admirable that parents want their children to attend four-year university right after high school, many students need time and maturity to take advantage of a rigorous academic curriculum in a large setting. They will be better prepared for university in many cases having taken courses which open their eyes to other honorable professions that do not require a four year degree. They will also have the skills to earn a living while attending community college or university, which greatly enhances the likelihood that they will graduate in five years. At present, fewer than 50% of students graduate from university after high school, mostly because they are not well informed about what career options are available to them and nor do they know how to pursue their goals. This is especially the case for students who are the first generation in their families to further their education beyond high school.

While numbers of vocational programs have declined overall, there have been some high schools that have maintained and even increased their vocational offerings. One notable example is "High Schools That Work" (HSTW), the nation's first large-scale effort to combine challenging academic courses and modern vocational/technical studies to raise the achievement of high school students. High Schools That Work is the largest and oldest of the Southern Regional Education Board's (SREB) seven school improvement

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initiatives for high school leaders and teachers. More than 1,100 HSTW sites in 27 states are using the HSTW framework of goals and key practices to raise student achievement through career and technical programs.

These initiatives are joined in their goal to prepare students for careers and further education by improving curriculum and instruction in high schools and middle grades. SREB and an initial group of state partners launched High Schools That Work in 1987. Through the years, the work has taken on new dimensions as needs have arisen in the areas of middle grades education, transition from middle grades to high school, raising performance in low-performing and urban high schools, and raising standards in career/technical education. There are many examples of high schools in Ohio, Delaware, Georgia, West Virginia, and Kentucky which have raised academic standards, increased their graduation rates, and collaborated with community colleges to produce workers who are ready for the 21st century New Economy. See www.sreb.org/programs/hstw/ for more information.

2. Align education, training, and career preparation with Vermilion County's major economic clusters. Focus on education, training, and career preparation for Vermilion County's major economic clusters in healthcare, logistics, information technology & customer service, manufacturing, and retail.

In studies for other workforce investment boards across the nation, we often cite Vermilion Advantage as being a leader in developing **career ladders** for each of its clusters. A Career Ladder is a planned progression from one level of training to another through well defined series of courses at the high school, community college, and university levels. Businesses and educational institutions often have well defined career ladders for their students and employees. For the average resident or student, however, finding out about new careers and the steps to take to enter them is often daunting.

We would recommend that all Vermilion County businesses, educational institutions and the Workforce Investment Board include career ladders on their own websites with links between them. Doing so will help students, current workers, those looking at the area as a place to relocate, and others wanting to make a change in their employment situation to make better-informed decisions about career choices.

Career ladder portion of the website would include information about starting salaries at each level and training providers and courses available in the County, whether on campus or via the Internet. In addition, each ladder would include the names of businesses in Vermilion County where employment and internship opportunities can be found, the certificates that necessary to keep up in each field, local chapters of professional associations to become active in, WorkKeys® profiles for each occupation, and assessment tests that will help determine one's aptitude for a specific field.

There are many examples of career ladders in education and healthcare that can be found on the Internet. One of the more unusual ones is called GlideTech, and is run by the Glide Foundation in San Francisco. This program uses career ladders and counselors to guide low-income students into high tech fields in the area. See <http://www.glide.org> for details.

3. Increase and improve direct interaction between educators and the business community. Foster active mentoring, internships, advisory committees, job shadowing, brain gain programs, career awareness programs, and easy access to up-to-date career resources.

Interviews with businesses and educators indicated that there is already close collaboration between them. This collaboration includes summer internships for teachers and guidance counselors, career fairs that provide students with exposure and career ladders to high skilled and high paying jobs in the area. These are very commendable efforts that need to be expanded.

Mentoring is an effective way for businesses to "adopt" students. Exemplary programs abound around the nation. The National Mentoring Partnership notes programs for low-income, high-risk youth in Vermilion County. There are also plenty of opportunities for regular students to receive guidance from an older, experienced businessperson. Visit the Web site <http://www.mentoring.org> for more details. See also the Public/Private Ventures Web site, which lists publications, including a valuable one about mentoring. The URL for Public/Private Ventures is: <http://www.ppv.org>.

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In visits to Vermilion County high schools, we were surprised at how outdated the resource material was in the career resource centers. Material that is more than two years old suggests that the guidance counseling function is held in low regard.

The array of **career education electronic materials** is massive. Businesses and the Workforce Investment Board can be very helpful in funding efforts to place adequate career resource and assessment CD-ROM materials with Internet capability in all career centers to complement the one-on-one counseling that students need as well. Businesses can also provide volunteers to handle the drudgery of scheduling that burdens guidance counselors.

An example of the close collaboration that can occur between businesses and educators is the Rotary Futures Program at Venice High School in Venice, Florida. <http://www.rotaryfutures.org/> This program has provided thirteen Internet computers, numerous printed materials, and volunteers to assist students, parents, and community members in discovering education, career, and life opportunities. Since opening its doors in January 2002, more than 5,600 people have visited the center. The program implemented a local scholarship database that now describes more than 470 scholarships.

A vital way for job seekers, employers, the One-Stop, counselors, students and parents to communicate is through up-to-date local labor market information that is available online. Here are the components of a labor market information system that could operate in Vermilion County and its neighboring counties in Illinois and Indiana and be available to all residents free online:

- a. **Employer training needs and practices:** Information on training needs for current employees (incumbent workers).
- b. **Hiring difficulty:** Indicators of the difficulty of identifying and hiring new workers with required qualifications. Examples include data on length of time a vacancy is unfilled, and the number of applications per hire.
- c. **Employer recruitment, assessment and hiring practices:** Information on the recruitment methods used, the types of assessment used to screen applicants, and hiring practices such as use of incentives.
- d. **Employer hiring requirements:** Information on employer's specific skill and qualification requirements for hiring new workers, including basic or "soft" skills as well as occupational or technical skills.
- e. **Skill requirements:** This information indicates skill requirements generally, rather than an individual employer's specific requirements.
- f. **Current job vacancies by occupation** (summary information): Information about the number of job vacancies by occupation, summarized for the geographic area. This information is distinguished from lists of specific job openings by individual employer.
- g. **Projected job openings by occupation:** Information on future job openings, including information from employer surveys of job vacancies and expected hiring activity by occupation.
- h. **Occupational employment trends** (past trends to current date): Time series information on employment by occupation.
- i. **Benefits Information:** Information on employer-provided benefits such as health insurance and retirement programs, by industry or occupation.

This information is currently available to residents in the 21 counties in the Florida High Tech Corridor as well as the five counties within the Central Illinois Workforce Investment Board and the 5 counties encompassing the Southern Illinois Workforce Investment Board. See how interactive and useful this information is presented online at www.usworks.com/peoria and <http://flhightech.lmisurvey.com/>

4. **Reduce dropout rates and raise graduation rates in Vermilion County high schools.** Undertake a broad and focused business and community-wide efforts to achieve these goals.

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One major indicator of a student's vulnerability to dropping out is their having to change schools during the school year. In particular, if students have to move *during their high school years*, their chances of dropping out greatly increase. The National Center for Educational Statistics has funded several major studies that confirm this fact. For examples, see: <http://www.nces.ed.gov/nationsreportcard/>.

There have been major efforts in the Chicago Public Schools during the last seven years to **reduce student mobility**. The mission of the "Staying Put" program that was developed by the non-profit organization, Chicago Panel on School Policy, is to improve the educational quality for all children and to reduce the adverse effects of student mobility. To accomplish this, "Staying Put" was specifically designed to:

- ü Make educators, students, parents, and community members aware of the academic and social consequences of student mobility;
- ü Promote the establishment of school-based programs and the dissemination of information about the school boards' enrollment policies as an alternative to student transfers to other schools;
- ü Ensure that the transfer process, when necessary, reduces the disruptions to student learning and achievement to a minimum.

For more information visit <http://www.chicagopanel.org>.

Successful dropout prevention and recovery programs actively involve the business community. In 1993 Saint Joseph, Missouri had a dismally high dropout rate of 26.5%. Within ten years they have lowered it to nearly 10% through a consortium of the United Way, local businesses and the Chamber of Commerce, the schools, social service agencies, workforce organizations, unions, and the media. This unique program, entitled Profit in Education (PIE), has two aims:

- ü Reduce the dropout rate in all St. Joseph schools;
- ü Motivate those who have dropped out to get their GED.

The PIE program encourages successful partnerships between schools and businesses in which the businesses agree not to hire dropouts unless the employee signs a covenant to pursue a high school equivalency diploma and obtain a GED.

In St. Joseph, a decade after Profit in Education began with 19 participating businesses, the school dropout rate had dropped significantly and 200 businesses were participating. Hundreds of dropouts are completing their GED requirements each year.

Profit in Education (PIE) is being replicated in communities around the country that value the coordinated efforts by business and schools to keep young people in school and to help those who dropped out get another chance by attaining their GED. One offshoot of PIE is "Finish First" in Vermilion county where businesses and educators have teamed together to provide transcripts to employers while employers devote extra time to help their current employees pass the GED. Hundreds of high school students look at posters of successful people in their community who passed their GED. Although there is not 100% support for this program, it stands on its merits and makes the County stand out among its neighbors as caring about education and the need for a solid foundation through a high school degree or GED. We wish Finish First continued and expanded success. We would also encourage participation by someone in Vermilion County at the annual National Dropout Prevention Conference to learn about even better refinements to Finish First and from other promising practices in dropout prevention. www.dropoutprevention.org

5. **Improve the educational performance of Vermilion County K-12 students.** Put special emphasis on teamwork and customer service skills as well as basic cognitive skills.

Mrs Mary's Great Math and Science Adventure is a wonderful example of a Vermilion Advantage initiative to improve students' awareness and love for science and mathematics. It is directed to third and fourth graders throughout the County for the last four years. More than 2,000 students have participated in the Adventure. We trust that the Mrs. Mary project will be continued for years to come.

Dual enrollment can be a valuable way for high school students to take courses at DACC that they might not be able to find at their local high school. It also serves as a way for students to be exposed to

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high education and to receive instruction that suits their particular learning style. In our interviews with educators, we found that some highly endorsed their students' taking advantage of DACC's program while others were either not aware of it or found the extra scheduling involved in having their students away for part of the day bothersome. We would strongly urge all students and parents to become knowledgeable about the dual enrollment program and to work with their schools to make it happen.

We would also recommend that students take at least one online course from DACC during their high school years. This self-directed approach to education is a valuable skill to have. For most students, online learning will be the primary way that they improve their skills and knowledge, obtain advanced degrees, and earn certificates and licenses throughout their working lives. DACC offers a lengthy list of online classes for students and residents to take advantage of. Two high schools which have higher than expected educational performance in Illinois are located in low income neighborhoods in Chicago. What makes Sullivan High School and Lindblom College Preparatory High School stand out is their active participation in the **Coalition of Essential Schools** for the last ten years. The Coalition is dedicated to helping participating schools around the country meet rigorous educational goals through strong guiding principles for teachers, administrators, parents, and students. Graduates from Coalition schools enter college in much higher rates than those from traditional high schools, whether they are white, African-American, or Hispanic because of their better preparation, smaller class sizes, and continuous professional development for their teachers. See www.essentialschools.org for more information.

Exposure to online learning at the high school level has the added benefit of letting students experience self-directed learning through the **Illinois Virtual Campus** and also increasing their comfort level to upgrade their skills throughout their lives through e-learning courses. www.ivc.illinois.edu/

It has come to our attention through the media that schools in Houston and New York City, in their zeal to demonstrate that their students are performing well, have deliberately kicked out students who were regarded as troublemakers and whose grades and academic performance would hurt rather than help the schools' educational performance. We would suggest that parents, educators themselves, and the business community in Vermilion County be alert to this practice elsewhere and not let it occur in any of the public high schools. Students who are having difficulty working in a regular classroom should have as many options as possible to keep them from dropping out and becoming an even bigger social burden in their communities.

There is a remarkable foundation that operates only in Tulsa schools to foster professional development for teachers and improved educational performance in every classroom. For example, for the last 12 years, more than 15,000 Tulsa County educators have structured their vision of educational excellence and gained practical skills for making learning fun by attending Foundation for Tulsa Schools (FTS) **Learning Institutes**. These annuals forums provide teachers and administrators with the new techniques and inspiration essential to maintaining a high level of excellence in today's demanding educational environment. Speakers are nationally acclaimed in the field of education. They include prominent educator, Dr. Rubie K. Payne whose book, *Understanding the Framework of Poverty*, is used in many alternative education programs. For more information, see www.foundationfortulaschools.org/ about the extensive programs that the Foundation offers in addition to the Learning Institutes. Its Board is made up of leading businessmen and school administrators who collaborate on many cutting edge education reforms.

6. **Enhance the quality of career and guidance counseling** especially within the county's high schools but also in the One Stop Career Center. Ensure that top quality career and guidance counseling is available and accessible to all students and residents of Vermilion County area.

This project's interviews with students, educators, and business leaders revealed that career counseling is too often an accidental occurrence throughout a student's K-12 experience in Vermilion County. Guidance counselors are often too burdened with **clerical scheduling** duties, leaving them precious little time for the vital one-on-one counseling that students need and that guidance counselors are trained to handle. We commend the efforts of DACC to provide a national recognized counseling certificate program that many guidance counselors, career coaches, and One-Stop Center counselors have taken advantage of.

There are not enough opportunities for students to learn about local **mentoring programs and internships** that could help them make informed decisions about their futures. Mentoring and internships are also valuable ways for incumbent workers to learn about new career opportunities. An Internet based

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website that gives labor market information as well as mentoring and internship opportunities would give a boost to the area.

It is essential that **counselors and teachers have opportunities during the summer to spend time with County businesses** to learn for themselves about the changing world of work and the demand for higher academic and “people” skills that employers in the area increasingly require. The programs through Vermilion Advantage are excellent but funding has been problematic. Every effort should be made to expand this program to more teachers and guidance counselors with reasonable reimbursement and opportunities to present their lesson plans to their colleagues during professional development sessions.

One excellent example of a summer internship program for teachers and counselors is the Christa McAuliffe Academy in Fox Valley, Wisconsin. Now in its eighth year under the auspices of the Fox Valley Chamber of Commerce, area schools, businesses, and universities, the Academy continues to offer high-quality, cost-effective science and math enrichment opportunities with business leaders to educators. Teachers are also given paid development time to modify their curricula on the basis of their experiences. See www.wasdi.org/christa.html for details.

Vermilion County is an area where healthcare is a major employer and it will continue to be for the foreseeable future. All educational institutions, beginning with high school, need to coordinate in providing top quality health care jobs training. At present, there are many programs through DACC and Lakeview but the numbers of graduates do not come close to the numbers of jobs that will be necessary in the next ten years, according to health care business leaders.

Guidance counselors need a greater understanding of the growing importance of health care as an industry in the area. According to healthcare employers that we interviewed, counselors tend to steer young people into technology fields and ignore the vast array of health care opportunities. Opportunities for health professionals to visit schools to talk about careers and active school and business participation in healthcare career fairs are vital and should begin as early as elementary school. Girls and minorities should be encouraged in every way to excel in math and science. Programs such as the Academy in Medical Sciences (AIMS) in Danville High School need to be expanded and encouraged by guidance counselors in the other high schools.

The latest National Education study about the **quality of guidance counseling and the preparation of professional development for guidance counselors** is very sobering. Most counselors stated that their chief function was to guide students through the maze of courses during their four years of high school. Time spent in preparing students for life after their high school years was minimal. What was further distressing were the few hours of organized professional development that guidance counselors were given or the commitment that they themselves made to learn about the changing nature of work, emerging occupations, and the demands of the modern workplace through internships and job shadowing experiences. See <http://nces.ed.gov/pubs2003/2003015.pdf> for more details about areas for improvement in career and guidance counseling.

- 7. Upgrade the educational level of the adult population and the skills level of the incumbent workforce.** Strongly encourage adults lacking high school diplomas (or equivalents) to obtain a GED. Launch a recovery program aimed at recent high-school dropouts. Encourage adults with only high school education to obtain post-secondary education including associates, bachelors, or professional certification.

WorkKeys[®] is a validated assessment tool that is familiar to some educators, DACC, and manufacturing businesses in the County. These eight tests assess workforce readiness skills such as Applied Mathematics, Reading for Information, Listening, Locating Information, Observation, Teamwork, Applied Technology, and Writing.

DACC, which offers certified WorkKeys[®] Centers, could become a valuable partner to Vermilion County workforce development by testing all Vermilion County ninth graders, with follow-up testing in twelfth grade, to demonstrate to employers how well students perform in skills that are necessary to successfully enter the work world or to pursue further formal education.

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There are many examples around the country of the successful use of WorkKeys in schools and workforce settings. One notable case study is WorkKeys® testing of high school students that has been carried out for the last four years in Omaha Public Schools in conjunction with the Omaha Chamber of Commerce and the Omaha Herald. This project, known as the **X Files Project**, is dedicated to “building a better workforce through education.” It has won several regional and national awards from business groups. For details, see <http://www.omahachamber.org/xfiles>.

Since Vermilion County has a disproportionate number of older residents and those vulnerable to layoffs in manufacturing, there needs to be special emphasis on the needs of older workers who need skills upgrades. **Operation ABLE** (Ability based on Long Experience) has been an innovative leader in the field of employment and training of older workers (aged 50+) in Metropolitan Chicago since 1977. For example, there are annual awards luncheons for exceptional “Experience Workers who work wonders,” its own staffing agency of pre-qualified seniors who are trained in customer service and high tech office skills, and its Career Connections Centers where laid off workers are groomed for new positions. This Center has been the model for One-Stop Center services to laid-off professionals. www.operationablechicago.org/

John A Logan College (JALC) in Cartersville, Illinois has a very effective dropout recovery program called JEEP – **Jobs and Education Enhancement Program**. This two year old year round program works with young people who have dropped out. By offering courses conducted by teachers who are trained in individualized learning styles, expecting high academic standards and providing paid work experiences, JEEP has moved nearly 50 students to pass the GED tests, get regular employment, and has retain a substantial portion of them as students at JALC. Contact <http://www.jal.cc.il.us/> for more information.

8. **Promote and support Vermilion County entrepreneurship.** Develop and enhance centers that provide counseling, technical assistance, and training to nurture startups and other businesses that are already in the area. Help potential entrepreneurs network and find financial assistance. Make economics education a regular part of the curriculum in every Vermilion County elementary school so that students learn about careers in running a small business.

The latest Milken Institute Best Performing Cities index about desirable places to live and work stresses the importance of the local entrepreneurial climate. 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 by professional talent who like to be with like-minded folks.

Sources of entrepreneurial materials and ideas include the **Kauffman Center for Entrepreneurial Leadership** (KCEL), which provides extensive training resources. The KCEL Web site is online at <http://www.entreworld.org>. Among the services KCEL provides are the FastTrac New Venture business development classes, which are designed to train potential entrepreneurs about the basics of starting their own businesses. FastTrac classes are held around the country. See <http://www.fasttrac.org> for more information.

Another resource is **The National Foundation for Teaching Entrepreneurship** www.nfte.com whose mission is to teach entrepreneurship to low-income young people, ages 11 through 18, so they can become economically productive members of society by improving their academic, business, technology, and life skills.

SCORE "Counselors to America's Small Business" is a nonprofit association dedicated to providing entrepreneurs with free, confidential face-to-face and email business counseling. Business counseling and workshops are offered at hundreds of chapter offices across the country. SCORE could have an office at Danville Area Community College or Vermilion Advantage that takes advantage of the experience of retired professionals and executives that offers services to entrepreneurial wannabees. It would be advisable to ensure that its marketing reach to counsel entrepreneurs is extensive and sustained. www.score.org

Retention of small companies in the area should be another big priority. Most companies are small and their employers perform many diverse functions during the business day. We call these companies, for whom HR is only a part time function, “HR challenged.” What we mean by this is that employers in small firms are not aware of the most effective recruiting and retention strategies. So they suffer high rates and costs of Turnover, which can be deleterious to their business’ health. The US Chamber of Commerce

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recognized this problem several years ago and instituted a series of **Workforce 2020 Roundtables** or informal workshops for business owners about these topics. Many Chambers around the country are now currently offering these workshops. Most notable are the Orlando and Broward County, Florida Chambers which have teamed up with their respective Workforce Investment Boards to provide this free service. More than 25 Chambers around the country are now actively involved in this program. Read about Montana's success with the Workforce 2020 roundtables at <http://dli.state.mt.us/Publications/mainstreetsum02/wf2020.htm>

Several employers whom we interviewed commented about how much they personally had benefited from **Junior Achievement (JA)** when they were growing up. Unfortunately, JA does not have an active presence in the County. The closest chapter is in Terre Haute, Indiana. JA provides a vital link between businesses and young people. Throughout its sequential and integrated kindergarten through grade 12 programs, students use information, apply basic skills, think critically, and solve complex problems. JA also has a free email newsletter for teachers to help them incorporate economic principles and games into the classroom. For more information, see www.ja.org

9. **Retard “brain drain” from Vermilion County and encourage a return flow of native sons and daughters.** Understand why young people leave the area or do not return after achieving higher education. Track down and entice former Vermilion high school graduates to return. Work with local employers to identify employment opportunities for these folks.

One way that businesses and the Workforce Investment Board can help the community attract its departed residents is by monitoring the whereabouts of County high school graduates. Too many graduates leave the area and do not return—in part because they assume that there are no high paying jobs to return to.

The state of Iowa has an excellent website for Vermilion County to consider as a model and complement to 442jobs.com to market the high-skill and high-paying jobs in their area. It is called www.SmartCareerMove.com. It is run by a consortium of Human Resource professionals who represent nearly one hundred firms in Iowa, all of which seek highly skilled talent, and offer starting salaries of at least \$30,000 as well as many internship opportunities for young Iowans. The website also features information for prospective professional talent about living and playing in Iowa. SmartCareerMove.com is marketed widely and is credited with helping to stem the flow of Iowans out of state, as well as easing their return.

Collaborative efforts by Vermilion Advantage, guidance counselors, and informal alumni “angels” in Vermilion County who arrange reunions can also be very useful in telling former residents about new career opportunities in the area. The **Danville Commercial-News** offers an online chat room where former residents reminisce about the area. It would be very helpful for someone to monitor this site and contact former residents about the innovative workforce and economic initiatives in the area and invite them to revisit their hometown. See <http://www2.dancomnews.com/guestbook/> for the running commentary by mostly former residents.

The Springfield-Clark County Chamber of Commerce in Ohio has had an initiative for the last few years to recruit and retain college graduates through a multi-pronged approach as a result of extensive focus groups with young people in the area. Among the action steps they have taken include paid internships, job fairs, a regional lifestyles magazine about opportunities for young singles, and a web-based calendar of events. It has produced a report about its results thus far entitled “**The Brain Trust**”, which is available through the Chamber. www.springfieldnet.com

Yet another valuable resource for strategies to regain young talent is *Plugging the Brain Drain*, a report from Carnegie Mellon University's Center for Economic Development. The report is available at: <http://www.smartpolicy.org/publications.shtml>

10. **Exploit the opportunities of regionalism.** Understand the role of Vermilion County's economy and workshed within the context of a broader area stretching from Champaign County in the west to Vermilion County, Indiana in the east and from Iroquois County in the north to Edgar County in the south and perhaps even beyond these boundaries.

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Milken Institute released its report about **Best Performing Small Cities** recently. Unlike past years when technology-oriented metros dominated the top of the ranking, this year's leaders have all earned their high marks the old-fashioned way – with traditional businesses like retail, a growing population, and reliable growth industries such as government and health care. Among the top 96 small metros, Iowa City/Cedar Rapids, Iowa, was number one, followed by Tyler, Texas, Las Cruces, New Mexico, Billings, Montana, and Santa Fe, New Mexico. Other strong contenders include Fargo ND -Moorhead MN which spans two states and ranks 20th among small metros and Greenville, NC that ranks #24. Kenosha, WI, an area that is successfully making the transition from manufacturing to high skilled services, also had improving growth in 2003 despite the national economic slowdown. Each one of these metros cites strong business/education partnerships and a regional outlook that has made them successful in attracting new business and increasing their populations.

For example, The **Entrepreneurial Development Center**, Inc. (EDC), the first of its kind in the area, officially opened its doors recently at the Cedar Rapids Area Chamber of Commerce. The goal of the EDC is to improve overall economic growth in the Cedar Rapids/Iowa City Technology Corridor through the development and expansion of entrepreneurial enterprise. The Entrepreneurial Development Center provides a centralized resource to guide entrepreneurs in the creation, operation and/or expansion of their business. Services include professional mentoring by successful community leaders, guidance in locating appropriate community resources, educational and monthly networking programs, and assistance in locating financial assistance. See www.CedarRapids.org for more information.

Kirkwood Community College is located in Cedar Rapids. Like DACC, it is known for its quality academic programs for young people and its strong Corporate Education program which provides 15-20% of the College's annual income. It has an Advanced Manufacturing Center and a Quality Center, both of which address the needs of small and medium sized businesses in the area. It also has strong ties to the University of Iowa which is nearby, providing highly qualified graduates who go on to obtain four year degrees. Both Cedar Rapids and Iowa City benefit from the easy 30 miles of highway access between them, which has become a thriving retail strip. They also have a collaborative online job board that lists hundreds of job openings in a wide variety of professional fields. For more information, see <http://www.kirkwood.cc.ia.us/> and www.corridorcareers.com/ for more information.

Fargo-Moorhead's joint Chamber of Commerce homepage is exemplary in defining its mission as "**Unifying and advancing business and community interests in our region.**" The website details all the awards that the communities have garnered and promotes its quality of life with lots of facts and figures and attractive visuals. For example, The Wall Street Journal lauded Fargo as an oasis of prosperity, stating "as most of the nation struggles to shake off the recession, Fargo's economy has stayed strong and steady, attracting investment, adding jobs and extending a decade of prosperity." (November 2002) Business Week magazine included Fargo-Moorhead in its "Dazzling Dozen" list of small cities nationwide in which local economies are humming along despite a national slowdown. (October 2002) Zero Population Growth ranked the Fargo-Moorhead community fifth among 140 comparable-sized communities as a great place to raise kids, based on community life, economics, education, environment, health, population change and public safety. (August 2001) Inc. magazine and Fortune magazine, based on research by Cognetics, Inc., reported the Fargo-Moorhead community is the second best small metro area in the country in which to start and grow a business. (December 2000) FBI 2000 crime statistics rate Fargo-Moorhead the seventh safest major metropolitan area in the United States. *Ladies Home Journal* ranked Fargo eighth in the top ten listing of "The Best Cities for Women - 2000." Rankings were based on crime rates, lifestyle, education and jobs. See www.fmchamber.com for more information.

Greenville, North Carolina has an **impressive and integrated city website** that links you everywhere – from each one of its schools to its Chamber, its libraries, and all the city services. One can see why Greenville was chosen by Money magazine as being one of the 50 best metros to live in. Like Danville and Vermilion County, Greenville touts its highway and population access. However, this integrated website makes it much easier for someone who is thinking about relocating their business and/or family to find all the resources and information that they need with ease. See <http://ci.greenville.nc.us/> for more information.

Endnotes

¹ The ratio of Personal Income to GDP (PI/GDP) is historically a very stable one, 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 Vermilion County since 1977, we use the county's PI/GDP ratio to compute its GDP. Finally, we used the implicit price deflator (1992=100 rebased to 1998) to compute Real GDP for all years 1977 to 2000.

² Among the main industrial sectors, the "goods producing" industries are conventionally defined to include farming, mining, construction and manufacturing. The "service-producing" sectors include all the rest.

³ Sources for this section include Hiram Beckwith's *The History of Vermilion County*, 1879. Jack M. Williams' *The History of Vermilion County*, 1930 and *Danville: A Pictorial History* by Bob Wright, 1988.

⁴ 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.

⁵ Some economists use different terms for what we here term export industries. Some, for example, call them "basic" industries

⁶ For an explanation of the methodologies of both Shift-Share Analysis and Location Quotient Analysis, the interested reader could do worse than examine the on-line notes of Professor Barbara McDade of the University of Florida, See <http://www.clas.ufl.edu/users/bmcdade/G4554Fall2002EconBaseLQ.htm>

⁷ In BLS statistical jargon, these sub-sectors are called "two-digit" industries.

⁸ The next set of BLS industry and occupational employment projections are due to appear in November, 2003. It will very interesting to see what impact the events since early 2001 have on the new projections.

⁹ Among the documents consulted for this section are these: *Vermilion Advantage 2002-2003 Annual Report*, <http://www.vermilionadvantage.com/advantage/>

2006 Strategic Plan, City of Danville, Illinois, August, 2001, http://www.cityofdanville.org/DDS_files/DDS.htm

Five Year State and Regional Development Strategy, Illinois Department of Commerce and Community Affairs, Illinois Economic Development Board, February 1, 2001 http://www.commerce.state.il.us/bus/research/strategic_planning/pdfs/2001Plan-final.pdf

Draft Central Illinois Regional Development Strategy Visions and Priorities Illinois, Economic Development Board, Illinois Department of Commerce and Community Affairs, September, 2000 http://www.commerce.state.il.us/bus/research/strategic_planning/pdfs/CIFinalRept.pdf

¹⁰ See <http://lmi.ides.state.il.us/projections/employproj.htm>.

¹¹ These IDES projections are based employment in the year 2000. Many of the listed occupations projected to lose numbers in this decade have probably sustained much of that loss in the decade's first three years. This means that the adjustments required in the years ahead may be less severe than would be indicated by these numbers.

¹² These points are amalgamated from the study of materials provided by Vermilion Advantage together with materials cited in the bibliography of this study. Additional insights were gleaned from the many interviews and focus groups conducted as part of this study.

¹³ *World Development Indicators on CD ROM, 2000*, The World Bank.

¹⁴ The source for all data reported here, whether or not it is replicated in the Statistical Appendix to this chapter, is the U.S. Census Bureau and, in particular, Census 1990 and Census 2000.

¹⁵ The U.S. Census Bureau counts incarcerated persons as members of the population of the county in which the correctional institution is located.

¹⁶ U.S. Census Bureau projections.

¹⁷ 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.