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# **Economic and Demographic Trends Relevant to the West Lake Corridor Expansion**

**A Report to the Northern Indiana Commuter  
Transportation District**



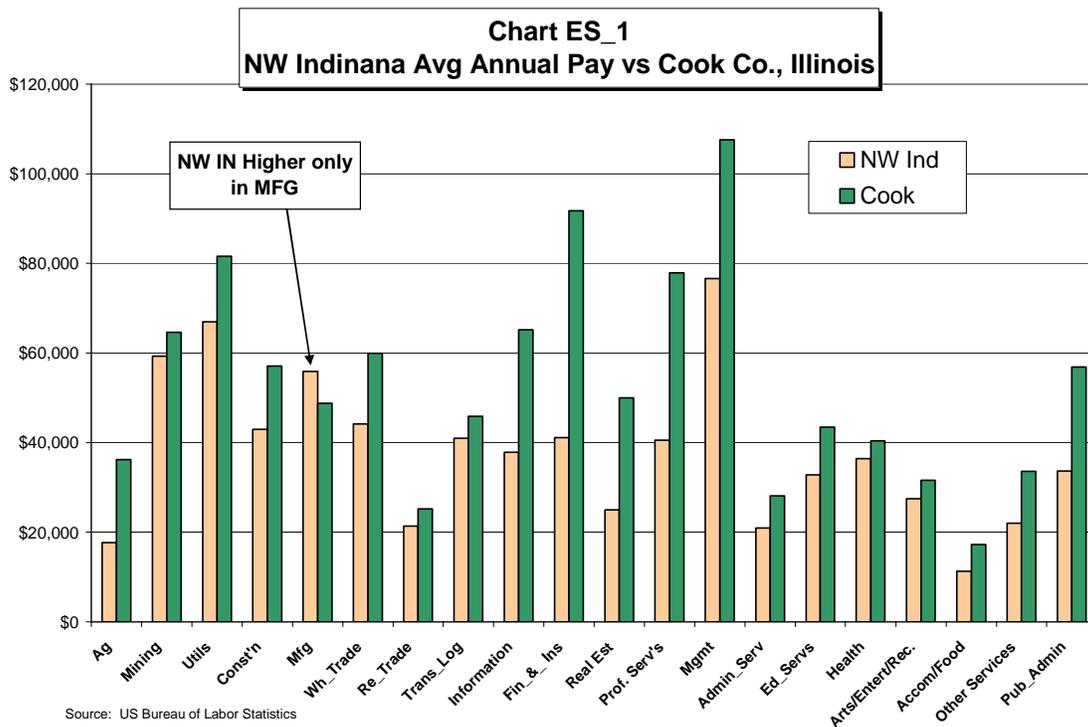
**Prepared by Policy Analytics, LLC**

**May 30, 2006**

## Executive Summary

The Northern Indiana Commuter Transportation District [NICTD] asked Policy Analytics, LLC to examine a series of questions relevant to the planning and expansion of the South Shore line to serve the southern portions of Lake and Porter counties, hereafter referred to as the West Lake Corridor project. These grew out of a concern that inadequate attention had been paid to a basic issue that is at the heart of transportation planning, namely, what will the economy of the future look like? More specifically, will the sprawling \$394 billion greater Chicago economy of tomorrow continue to orbit a thriving, vibrant urban core?

Since the time horizon for planning and constructing major rail transportation improvements is decades, key investment decisions must rely on projections of the future. As a consequence, policymakers and taxpayers want to know how the economic environment within the Chicago MSA will change during that period. Additionally, citizens ought to know what returns can be expected from investments in an improved transportation system.



The stakes in this transportation debate for the NW Indiana counties served by NICTD are huge. Employment and population in the region are finally beginning to rebound – after a long period of relative stagnation. But a comparison of NW Indiana’s economic

performance with the remainder of the tri-state Chicago metropolitan statistical area (MSA), and in particular, its urbanized core in Cook County, reveals striking differences in average annual pay, economic mix, and overall growth. The fundamental conclusion of this study is that the existence of this well paying, highly specialized, and well diversified economic engine just 25 miles to the northwest argues more strongly for improving transportation access along the West Lake Corridor than anything else. To put it simply, without improved access to high-paying Chicago jobs, the hurdle we need to clear to reverse the 20-year slide in NW Indiana's economic prosperity gets much, much higher.

The core of the Chicago MSA's economy is the locus of jobs within Cook County, Illinois and the central business district (CBD). In 2004, the average job in Cook County paid 39.3% more than the average pay of workers in NW Indiana, (Chart ES 1). For Professional Services, Management of Companies and Finance and Insurance industry jobs, the pay premium enjoyed by Cook County jobs reaches 100% of the NW Indiana wage. And while the population and employment are growing rapidly in the Illinois "Collar Counties," it is still access to the Cook County and the CBD that provides the magnet for employment and population growth within the balance of the MSA.

The forecasts of population and economic activity in the greater Chicago region presented and reviewed in this study paint a picture of continued vitality. Although the suburban Illinois and Wisconsin counties are projected to grow faster than the region's most populous county, the sheer size of Cook County provides a large number of new jobs in the coming years even with slower rates of growth. Moreover, those jobs remain significantly higher-paying than those elsewhere, particularly on the Indiana side of the state border.

This report presents the following findings pertinent to NICTD's planning and the West Lake Corridor project:

1. Providing access to the high paying jobs within Cook County for NW Indiana residents through improvements to the South Shore is a top priority for the economic growth and continued development of NW Indiana.
2. Employment growth within Cook County will dominate employment changes elsewhere, fueling greater demand for access to these job locations.
3. Population in NW Indiana is growing much faster than anticipated by forecasters and will continue to outstrip previous trends, providing further demand for transportation improvements.
4. Congestion within the Chicago MSA is increasing and more rapidly than it is in other major urban areas.

5. A reduction in congestion through improvements to the NW Indiana regional transportation infrastructure will provide a significant stimulus to the regional economy in terms of 7,800 net new jobs, a sustained 3.5 percent increase in new investment, lowered production costs, a higher standard of living, and increased quality of life.

A Policy Analytics analysis of improvements to transportation in NW Indiana looked at the benefits of the West Lake Corridor Project, and other related transportation improvements for Lake and Porter counties. The impacts were estimated using a transportation specific I/O model, which measured impacts of both the construction and the implementation phases of the project, (along with associated feeder system improvements). The analysis estimated the long term effects on vehicle miles traveled, hours in transit, emissions, fuel demand, and the effect of lower transportation costs on industry productivity. A 5% reduction in congestion for the transportation systems within the two counties produces a net benefit of 7,800 additional jobs in Lake and Porter Counties. Economic output would increase by \$1.3 billion and disposable personal income would increase by \$600 million. The transportation improvements would also lead to an in-migration of approximately 10,000 persons into the two counties over the same time period.

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## Introduction

The potential for a region's transportation system to provide a boost to its economy is not often discussed, but the outcome is well documented.<sup>1</sup> Public sector investments in roads, rail systems, airports and seaports provide the foundation upon which our 21<sup>st</sup> Century economy moves. The South Shore Line, operated by the Northern Indiana Commuter Transportation District [NICTD], and providing transportation between South Bend and downtown Chicago is currently considering a major investment and expansion of its capacity. This analysis provides answers to two relevant questions to the South Shore's planning process.

1. How will the economy of the Chicago MSA change over the ten years or so of planning and construction necessary for the planned expansion?
2. What is the likely return on the investment being planned by the South Shore in its West Lake Corridor Project?

### The South Shore Line

The South Shore's ridership currently tops 12,000 on weekdays. Peak ridership is up 4.4% in the past year to 8,954 and off-peak ridership is up 9.1% in the past year to 4,005.<sup>2</sup> 2005 was a 44-year record high for the South Shore, and projections suggest that boardings will grow by 30% over the next year. Ridership swelled to 16,890 during the first week of April when half of the lanes on the Dan Ryan Expressway were closed and some trains have been standing room only during the commuter periods.

The South Shore Line began operation in 1903 as a streetcar between Indiana Harbor and East Chicago with the name "The Chicago and Indiana Air Line Railway." In 1977 the Indiana General Assembly created the Northern Indiana Commuter Transportation District (NICTD) to help rescue the then ailing South Shore Line. The railroad remained privately owned until 1989 when NICTD purchased the passenger assets and began direct operation of the line. In 1990, with assistance from the State and Federal Government, NICTD purchased the track and right-of-way for the South Shore Line.

The mission of the South Shore is to provide commuter transportation between urban areas in Northern Indiana and Chicago. The role the South Shore plays in the economy of northwestern Indiana is to provide access to the high paying jobs located within Cook County, Illinois – jobs that are substantially different from those generally found on the Indiana side of the border. These jobs are higher paying and are more frequently service and professional jobs than those available in NW Indiana. The South Shore provides the

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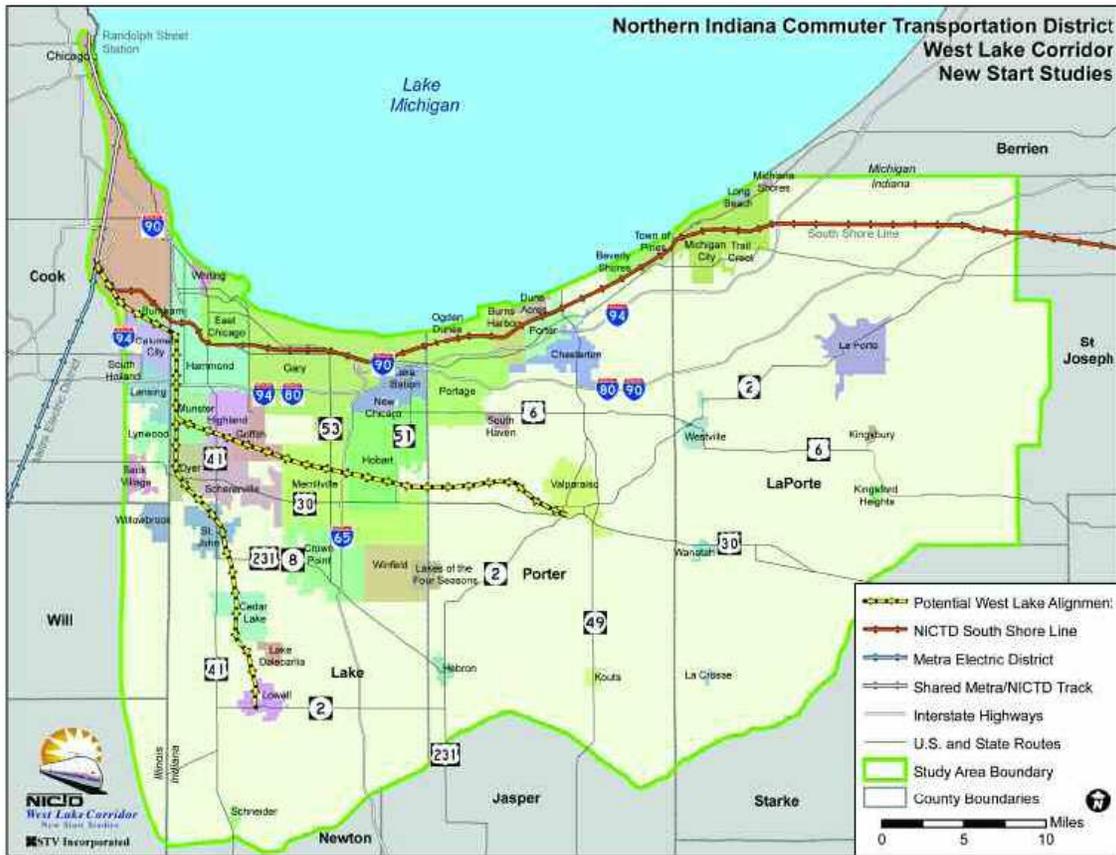
<sup>1</sup> See David Aschauer, "Public Capital and Economic Growth: Issues of Quantity, Finance, and Efficiency," Working Paper No. 233, The Jerome Levy Economics Institute, April 1998 and Kevin Deno and Randall Eberts (1991) "Public Infrastructure and Regional Economic Development: A Simultaneous Equation Approach," *Journal of Urban Economics*, 30(3), p. 329-43.

<sup>2</sup> NICTD

only mass transit service into Chicago for Indiana residents, while residents in Illinois Collar Counties have almost 500 miles of commuter trains in addition to express bus services at their disposal.

The West Lake Corridor Expansion is a proposed extension of the South Shore line involving two sections. Since it is still in the planning stages, the final alignment has not been selected. Multiple routes are being considered, including a route from Chicago to Munster, along with routes from Munster to Valparaiso and Munster to Lowell.

**Figure 1.1: West Lake Corridor**



Source: NICTD and STV Incorporated

**Transportation and Economic Development**

It is widely recognized that innovations, improvements, and investments in transportation capacity have profound implications for economic development. History has demonstrated on many occasions how the transportation advantages of one area –

whether through skillful planning or simple good fortune – have altered the course of growth in ways that are still being felt many generations later.

The mechanisms through which transportation investments influence productivity, capital formation, quality of life and regional competitiveness are increasingly being captured in economic models. Such models not only provide a basis for estimation of the ultimate value of investments in transportation capacity, but they also spell out the separate ways through which improvements in transportation infrastructure impact the decisions made by businesses, workers, and investors to enlarge the economic pie.

The fundamental conceptual foundation of these models is that regional economies compete with each other for investment, people and jobs. While natural elements like climate, geography, and the physical environment are important in explaining where migrating businesses and workers decide to locate, so too are economic factors such as access to markets, wage levels, and relative profitability. And in the knowledge-based, service-oriented economy that has provided the lion's share of new jobs created in the last fifteen years, ready access to a wide variety of specialized resources matters just as much, if not more, than cost.

An extension of commuter rail in NW Indiana, with links to the Chicago loop, represents a significant increase in transportation capacity along one of the busiest corridors of the nation's third largest metropolitan area. Such improvements hold the promise of improving the linkages between NW Indiana and the vibrant, diversified economy of greater Chicago. Such connections are particularly important now, as the transformation of NW Indiana's traditional economic base continues to reduce the footprint of heavy industry in its economy.

The reduction in congestion on existing traffic arteries that new capacity delivers can be expected to lead to:

1. decrease in travel times for personal and freight transportation;
2. a change in labor and production costs associated with small travel times and reduced travel uncertainty;
3. an increase in investment, production, and population;
4. a change in emissions and vehicular safety associated with higher vehicle speeds.

Most, but not all, of these changes will be concentrated in the NW Indiana region where the improvements take place. There will also be some smaller changes in counties at its periphery.

While additions to transportation capacity could be reasonably expected to have a positive impact on any regional economy, in NW Indiana there are special circumstances that make the case even more compelling.

The economic base of Lake and Porter counties has shifted dramatically in the last 35 years. The relative decline of its traditional heavy industry base is reflected in the slow decline in its share of the national economic pie. The services-led growth that has occurred elsewhere in the nation has not been as vigorous in NW Indiana, resulting in a decline in personal income share from .32 percent in 1969 to just .19 percent in 2002.

A second special circumstance of the NW Indiana region lies in the fact that a large and vibrant center of the specialized services economy lies just across the state border, a mere 25 miles away. That is the Chicago central business district. The fact that Chicago jobs continue to pay wages substantially in excess of the national average, while those in Lake and Porter counties have slipped to paying as little as 85 cents per dollar of pay enjoyed nationally, speaks to its ability to adapt and thrive in the new economic climate. Certainly the physical proximity to this concentration of high-paying employment opportunities gives NW Indiana counties a resource to aid in its economic transformation that few other counties can match.

### **Outline of this Report**

The remainder of this report is structured as follows. In order to put forecasts of the Chicago economy in perspective, we first present a detailed economic profile of the entire region, with special emphasis on recent economic performance. This is followed by a presentation and assessment of economic and demographic growth for the next twenty-five years. In Section 4, we make the connection between transportation investment and economic growth, and present estimates of the likely impact of the West Lake Corridor project for NW Indiana. Section 5 presents conclusions, followed by Appendices with technical details of results derived for this report.

## **An Economic Profile of NW Indiana and the Chicago MSA**

In order to place the projections of economic activity in perspective, it is useful to briefly describe and assess the recent performance of the greater Chicago economy, with particular emphasis on the relative performance of the counties of NW Indiana and the Chicago CBD. This section analyzes trends in employment, earnings, income and population in the last fifteen years for the sixteen counties in Wisconsin, Illinois, and Indiana that comprise the NICTD planning region.

### **Our key findings include:**

1. Vast differences in industry mix, earnings per job, and job growth exist between NW Indiana and the remainder of the Chicago MSA;
2. Average earnings per job were 32 percent higher in the Chicago MSA than in NW Indiana, with the gap widening significantly since 1990;
3. The Chicago MSA overall was significantly impacted by the recession of 2001, although declines in income were less marked than declines in jobs;
4. NW Indiana remains the most manufacturing-intensive portion of the overall Chicago MSA, and manufacturing is the only important industry with NW Indiana earnings per job at or above parity with the rest of the region;
5. The Chicago MSA as a whole, and Cook County in particular, is heavily concentrated in high skilled, high paying, white collar-dominated industries that have minimal presence in NW Indiana;
6. Suburban Illinois counties have added jobs faster than the remainder of the entire region, yet Cook County jobs pay significantly more than jobs elsewhere;
7. The Cook County base is so large that even sluggish growth in its employment levels will produce large numbers of net new jobs;
8. Population growth in the Chicago MSA, like elsewhere in the nation, shows faster growth at the periphery than in the more urbanized central core.

The remainder of this section develops and supports these findings in greater detail.

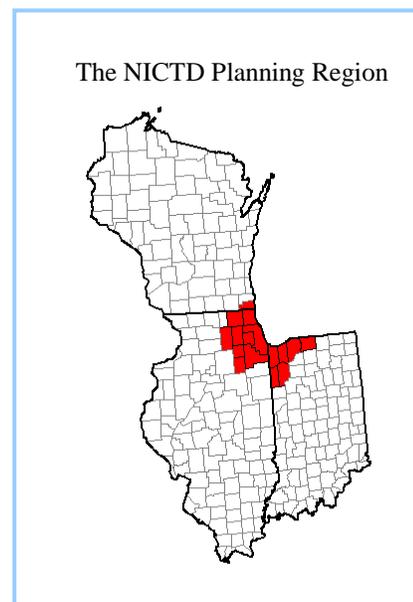
## Geographic Definitions

We will examine economic composition and performance in this report for three distinct, yet overlapping geographies in this report:

- the NICTD planning region (abbreviated NICTD in some tables and graphs), consisting of the following counties: Cook (IL), DeKalb (IL), DuPage (IL), Grundy (IL), Kane (IL), Kendall (IL), Lake (IL), McHenry (IL), Will (IL), Jasper (IN), Lake (IN), LaPorte (IN), Newton (IN), Porter (IN), St. Joseph (IN), and Kenosha (WI). This is the same as the counties in the BEA definition of the Chicago-Naperville-Joliet IN-IL-WI MSA, with the addition of LaPorte and St. Joseph counties in Indiana.
- the Indiana counties within the NICTD planning region (referred to as NW Indiana in the text and illustrations): Jasper, Lake, Porter, LaPorte, Newton and St. Joseph.
- Cook County, Illinois.

Our emphasis on these geographic definitions corresponds to the nature of the transportation investments considered in this study. Those investments seek to expand transportation capacity between NW Indiana and the Chicago central business district (CBD).

Ideally, an economic profile and performance assessment for the CBD (a subset of Cook County) would be presented here as well, but publicly available sub-county data on economic activity are too sparse (and proprietary data too expensive) to allow this. Moreover, the commuter rail and other mass transit options available between much of the balance of Cook County and the CBD make, in our view, an assessment of the county-wide economic base relevant for this study.



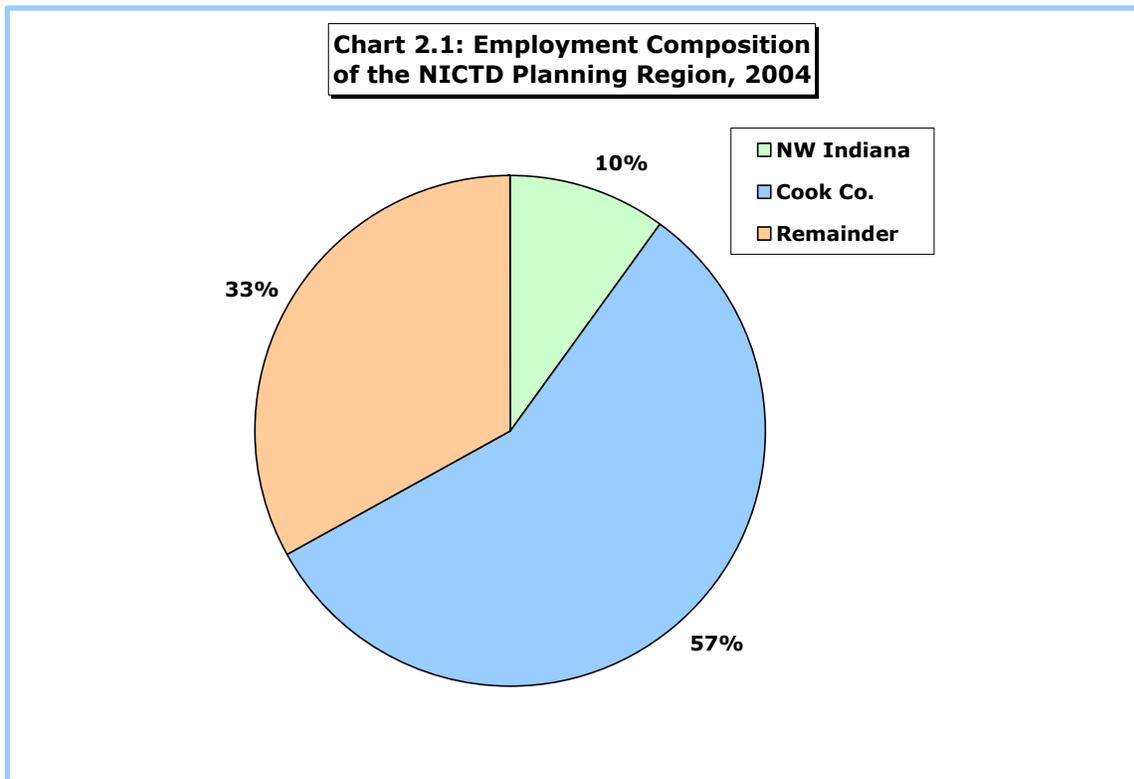
## Employment Profile

There were just under 4,396,000 jobs on payrolls covered by the Federal-State unemployment insurance system (abbreviated “covered employment” hereafter) in the sixteen counties of the NICTD planning region in 2004, according to the U.S. Bureau of Labor Statistics. These represent jobs at employers who are physically located in the region. Some are undoubtedly filled by those who live outside the sixteen county region, as might be noted by other, residence-based definitions of employment. Since the

emphasis of this study is on the physical location of economic activity, we will confine our attention to employer-based estimates.

Covered employment does not include the self-employed, most business proprietors, and some categories of railroad workers. Despite these shortcomings, it is the most timely and comprehensive data available for the time period we study, and the only source of information that offers full industry detail.

Of those 4.4 million jobs, 57 percent, or about 2.5 million, were at employers located within a single county: Cook County, Illinois. Only about 10 percent, or about 430,000 jobs, were at employers in NW Indiana. The remaining third of the job total, roughly 1.45 million jobs, were offered by employers in the suburban Illinois and Wisconsin counties within the MSA.

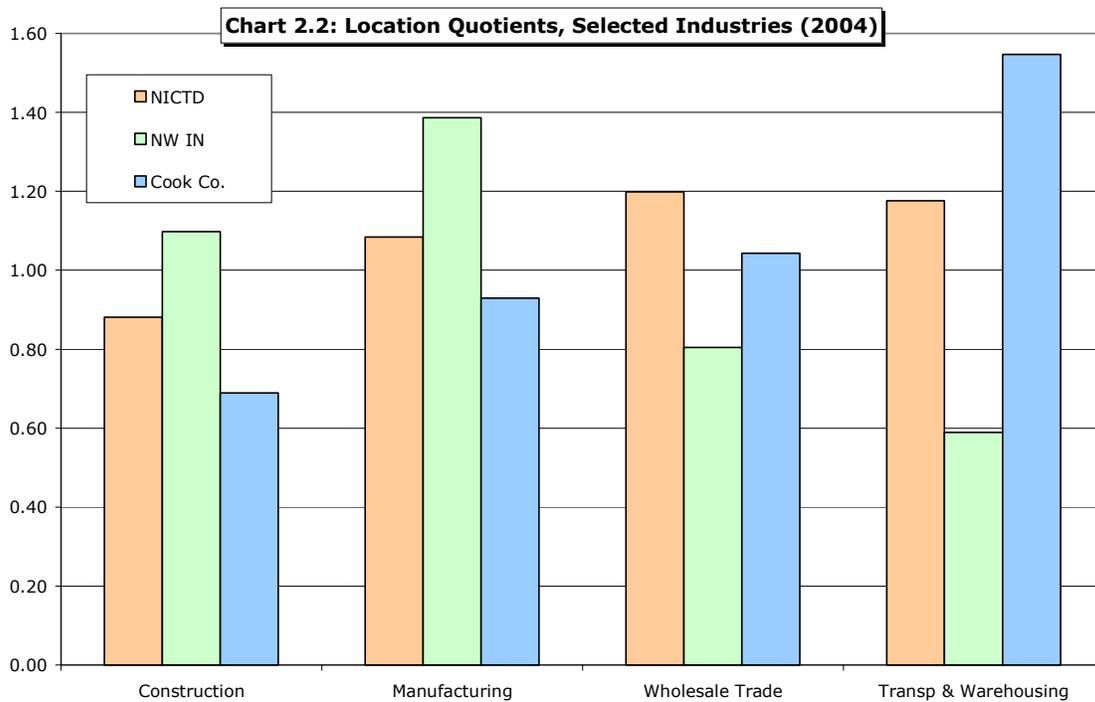


An exhaustive description of the types of jobs represented within this large, diverse economy is beyond the scope of this study. Yet with a very broad brush, the essential character of the greater Chicago economy, as well as the differences within its sub-regions, emerges quite clearly from an examination of employment by major industry.

The Bureau of Labor Statistics now classifies employment and earnings according to the North American Industrial Classification System (NAICS). The NAICS, which replaced the Standard Industrial Classification (SIC) system in use prior to 2001, gives a much fuller treatment of the non-manufacturing sector that has grown in prominence in recent decades.

There are twenty-two major NAICS industries, many of which, such as agriculture and mining, have minimal employment in the tri-state NICTD planning region. A descriptive statistic known as a location quotient (LQ) is a valuable tool in presenting information on employment by major industry. For any given industry, the LQ is the ratio of (i) the share of total employment of that industry for the region to (ii) the employment share for that industry in the national economy. Thus the LQ gives a handy score on the prominence of any individual industry in a region's economy:

- An LQ less than one means that a particular industry is comparatively less prominent in the region being examined than in the nation as a whole;
- An LQ greater than one means the industry is more prominent;
- An LQ equal to one means that the industry's footprint in the region is exactly the same as the national average.

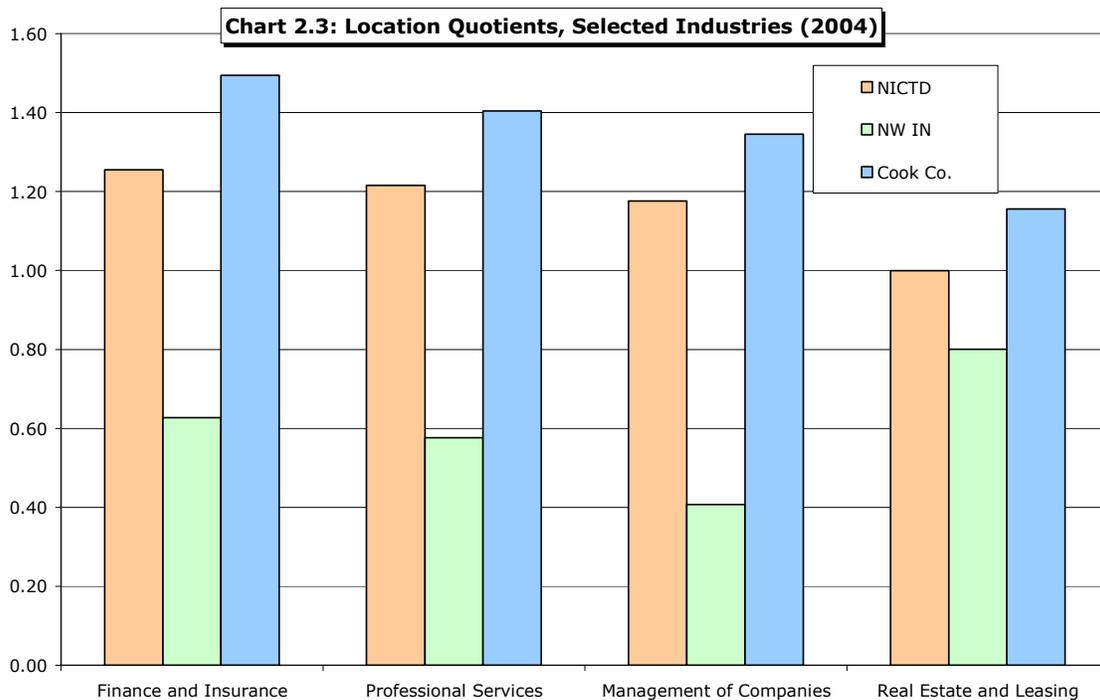


The economy of NW Indiana is more concentrated in construction and manufacturing employment than either the remainder of the region, or the nation as a whole, as shown in Figure 2.1 above. Both industries have an LQ of greater than one for the northwest corner of the state, indicating more specialization in these sectors than the national

average, whereas the LQ's for other NICTD planning region geographies shows much less dominance. The data clearly show that even after the significant manufacturing job losses suffered in the last two decades, the economy of northwest Indiana remains significantly more specialized in manufacturing than the national average or the remainder of the Chicago MSA.

The situation is reversed for wholesale trade and the transportation and warehousing industries, with the Illinois/Wisconsin portions of the planning region showing much higher degrees of concentration than NW Indiana. Cook County is revealed in these data to be a very important player in transportation and warehousing industries, with an employment share that is over 50 percent higher than the national average.

For the white collar-dominated industries depicted in Figure 2.2, the contrast between the industry mix of the overall region, and Cook County in particular, and the counties of NW Indiana is particularly striking. For three high paying services industries – finance and insurance, professional business services, and management of companies -- the concentration of the entire region is more than double what exists in NW Indiana. For these same three industries, the Cook county concentration exceeds that of the region as a whole, and is well in excess of the national average.

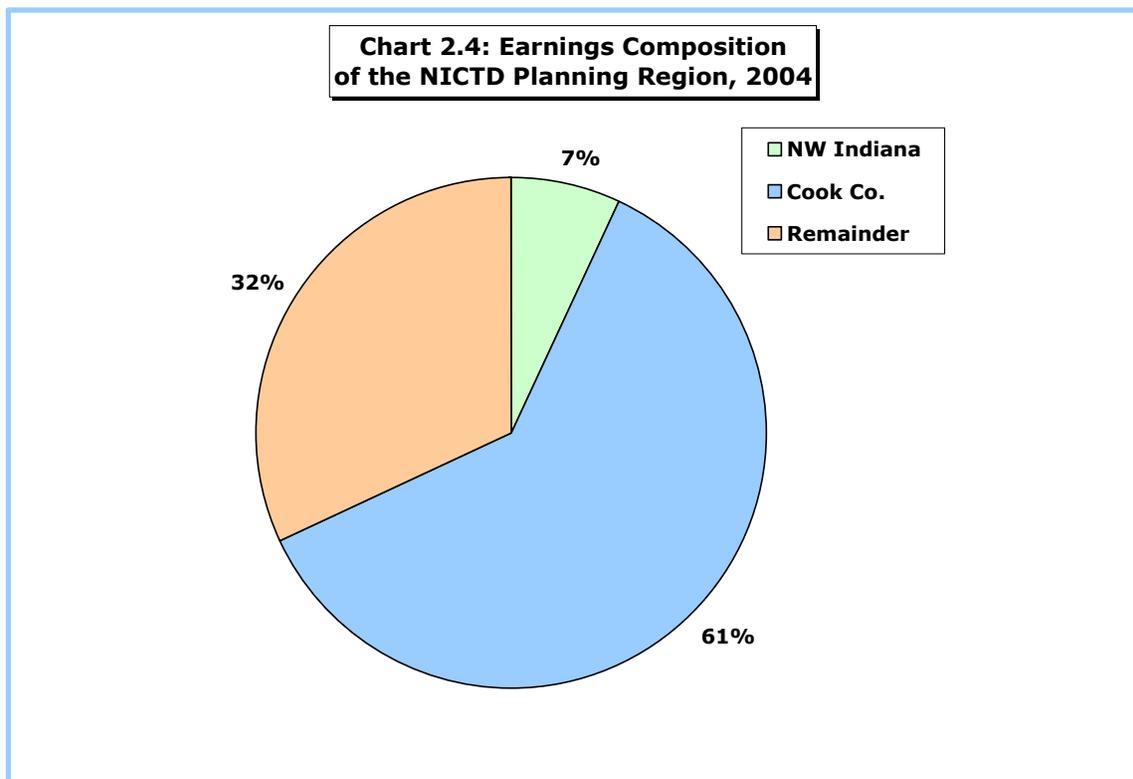


These data underscore the high importance of the specialized services economy that is so dominant in Chicago, and sorely lacking on the Indiana side of the border. Gaining

access to these jobs, through improvements and increases in transportation capacity between NW Indiana and the Chicago CBD, brings the opportunity for significantly improving the employment and earnings potential for Hoosier workers.

### Earnings Profile

Significant earnings differences exist between and within industries in the NICTD planning region. With the exception of manufacturing, where Indiana employers pay wages slightly above those paid elsewhere in the Chicago MSA, wages in Indiana are significantly lower than wages in the remainder of the region. Additionally, the much higher concentration of comparatively high-paying industries such as management of companies and finance and insurance on the Illinois side of the border gives those counties even more weight in the overall earnings mix.



Thus we find that that the NW Indiana counties account for only 7 percent, or about \$14.6 billion, of the \$196.6 billion paid in wages and salaries by NICTD planning region employers. Higher pay of Cook County workers can be seen from the fact that their 57 percent employment share reported above translated into a 61 percent share of total wages paid in 2004. The remainder of the suburban Illinois and Wisconsin counties accounted for 32 percent of the total.

Differences in earnings between NW Indiana and the remainder of the region also show up in the location quotients computed on earnings shares. They tend to make the contrasts between the two sides of the state border for white collar industries look larger.

But rather than present these results, it is much more straightforward to simply present comparisons of average annual pay for workers in individual industries, as shown in Table 2.1.

**Table 2.1: Average Annual Pay by Industry, 2004**

	NICTD	NW Ind	Cook	U.S.
All Industries	\$45,346	\$34,258	\$47,730	\$39,354
Agriculture	\$26,577	\$17,640	\$36,181	\$22,564
Mining	\$65,870	\$59,286	\$64,610	\$66,628
Utilities	\$86,039	\$66,972	\$81,611	\$67,460
Construction	\$54,076	\$42,958	\$57,075	\$40,449
Manufacturing	\$51,813	\$55,839	\$48,758	\$47,927
Wholesale Trade	\$60,298	\$44,114	\$59,929	\$53,310
Retail Trade	\$25,822	\$21,322	\$25,202	\$24,409
Transp./Warehousing	\$46,041	\$40,998	\$45,820	\$41,838
Information	\$62,000	\$37,791	\$65,179	\$60,103
Finance and Insurance	\$84,723	\$41,090	\$91,779	\$70,106
Real Estate	\$47,917	\$25,016	\$50,016	\$37,250
Prof. Services	\$73,295	\$40,520	\$77,870	\$62,556
Mgmt. of Companies	\$104,325	\$76,589	\$107,574	\$80,054
Admin. Services	\$27,820	\$20,952	\$28,124	\$27,362
Educational Services	\$41,321	\$32,774	\$43,478	\$36,035
Health Care	\$40,093	\$36,403	\$40,401	\$37,301
Arts/Entertain/Rec.	\$29,174	\$27,473	\$31,604	\$27,359
Accommodation/Food	\$15,935	\$11,250	\$17,233	\$14,767
Other Services	\$31,439	\$22,011	\$33,577	\$25,296
Public Administration	\$52,434	\$33,685	\$56,820	\$47,176

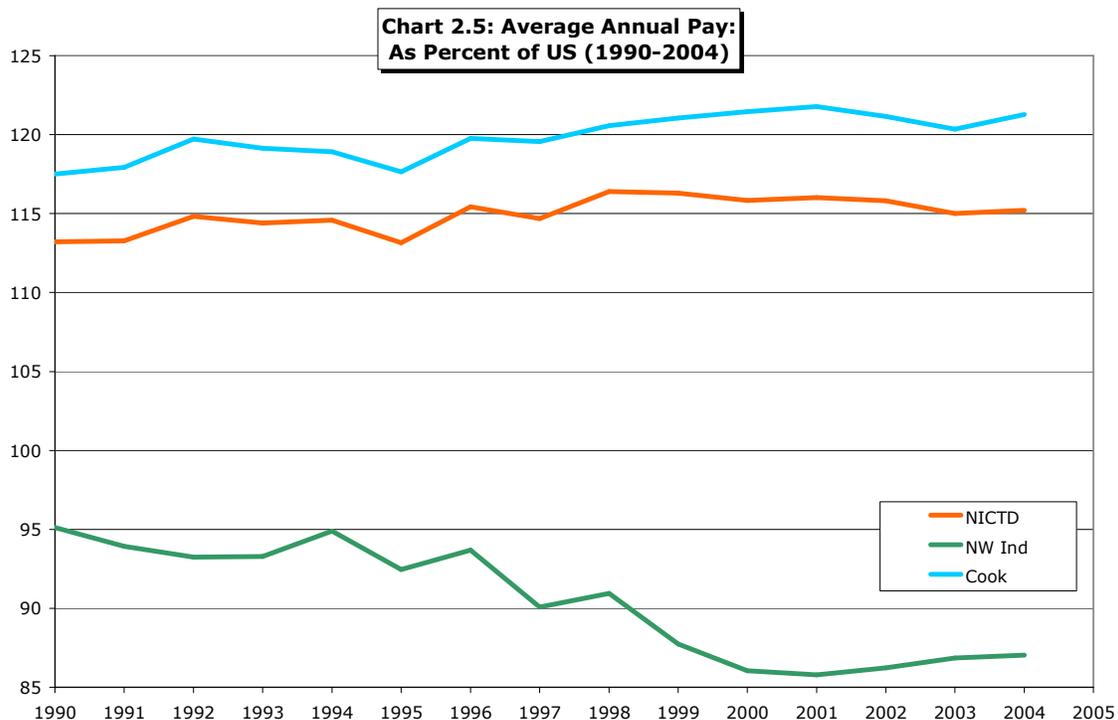
There is considerable variation between industries for all geographies, as is evident from the table. These differences reflect productivity, although for industries like accommodation and food services and retail sales, they also reflect the full-time/part-time composition of the labor force.

But it is easily seen that pay tends to be lower in NW Indiana than for the region as a whole in almost every industry. The one exception is manufacturing, where average annual pay in Indiana is higher than elsewhere. Construction industries in NW Indiana also pay higher than the national average, but lower than the pay of employers in the Chicago MSA.

In white collar industries whose presence in NW Indiana is low, the gap in average annual pay in comparison to the Chicago MSA is especially large. Management of companies, which primarily reflects holding company employment, enjoys average

annual pay of more than \$107,000 in Cook County, compared to just over \$76,000 in NW Indiana. Finance and insurance employers in Cook County pay almost two and a quarter times the salaries of NW Indiana workers in the same industry.

Clearly this is in many cases an apples to oranges comparison, as the scope, specialization, and responsibilities of, say, banking jobs in the Chicago CBD is much different, and typically much higher, than those for the average banking job in NW Indiana. Thus we should not be surprised to find earnings differences of this magnitude between Cook County and NW Indiana.



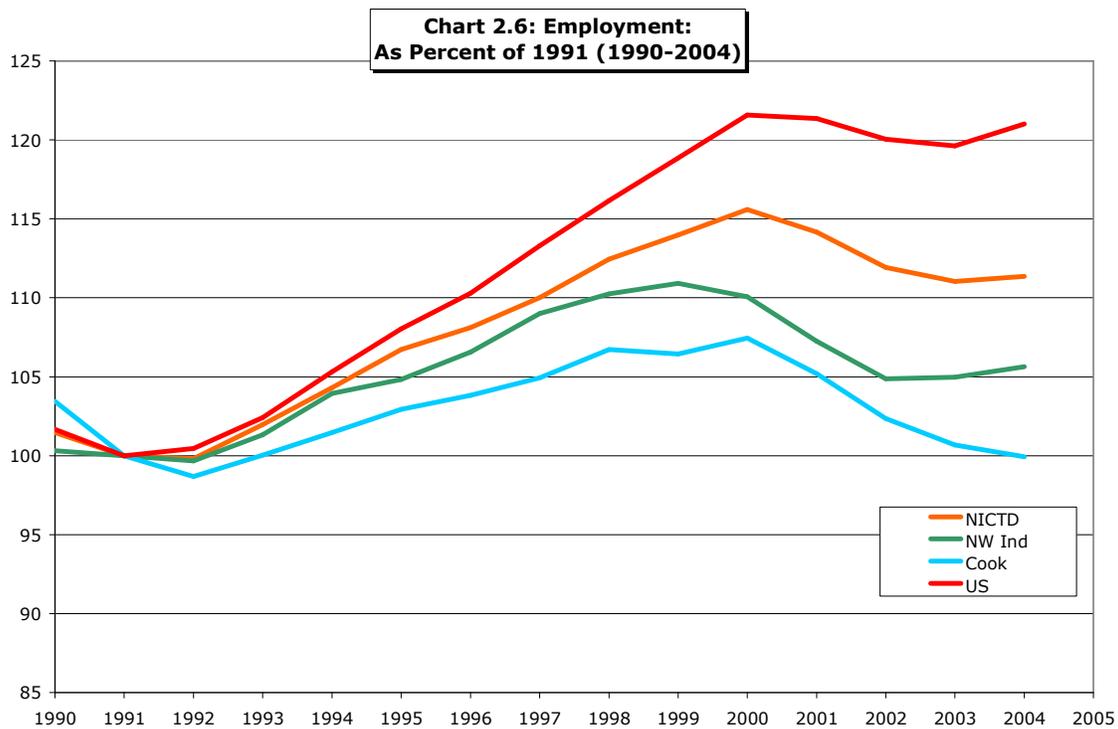
More troubling, however, is the fact that the gap in average annual pay between NW Indiana and the other geographies considered in this study has grown significantly over time. From a 1990 level of about 95 cents on the dollar, the pay of NW Indiana workers relative to the national average has fallen to about 87 cents on the dollar, as shown in the Figure. Over that same time period, the relative pay of workers in the NICTD planning region as a whole, as well as Cook County workers, has actually increased. From a starting point of just over \$1.17 per dollar of U.S. wages paid in Cook County in 1990, relative pay has steadily risen and now stands at just over \$1.21 per dollar of U.S. wages in the region’s most populous county.

The stark differences in earnings that exist – and are even growing -- between NW Indiana and the remainder of the Chicago MSA argue forcefully for improved transportation access to those high paying markets for Indiana workers better than

anything else. No other region of Indiana has such a powerful, dynamic economic opportunity in its midst, and the longer that improvements and additions to transportation capacity are delayed, the longer that gaps such as those depicted above will continue to grow.

### Employment and Earnings Growth

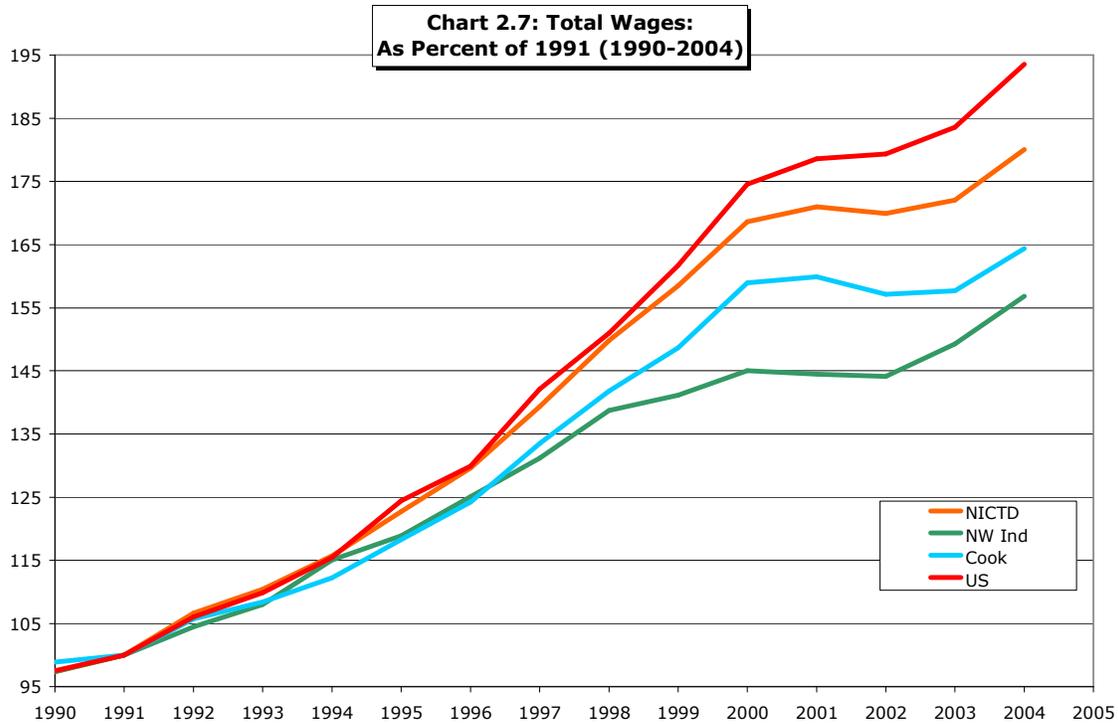
The 1990-2004 period contained the longest post-war economic expansion in U.S. history, sandwiched on either end by two recessions with radically different impacts in the Midwest. The 1991 recession was painful on the coasts of the United States, but was thankfully quite mild in the Midwest. On the other hand, the 2001 recession, often cast as mild in assessments made nationally, was anything but that in this part of the country. The tech bust and stock market declines that began in 2000 in particular were keenly felt in Chicago, and the sluggishness in hiring in most parts of the MSA in the wake of the recession in 2001 continues to this day.



Yet not all of the relative underperformance of the Chicago area economy can be traced to the severity of the recession. As shown in the figure above, the rate of job creation in all of the geographies examined in this study lagged that of the overall U.S. economy during most of the 1990's. Cook County, in particular, had slow growth during most of the expansion, such that its employment in 2004 is lower than the level of 1990. The NICTD region as a whole has about 12 percent more jobs today than year 1991, thanks to faster employment growth in the suburban Illinois and Wisconsin portions of the region.

The U.S. economy, by contrast, stands at almost 22 percent more employment than that same year.

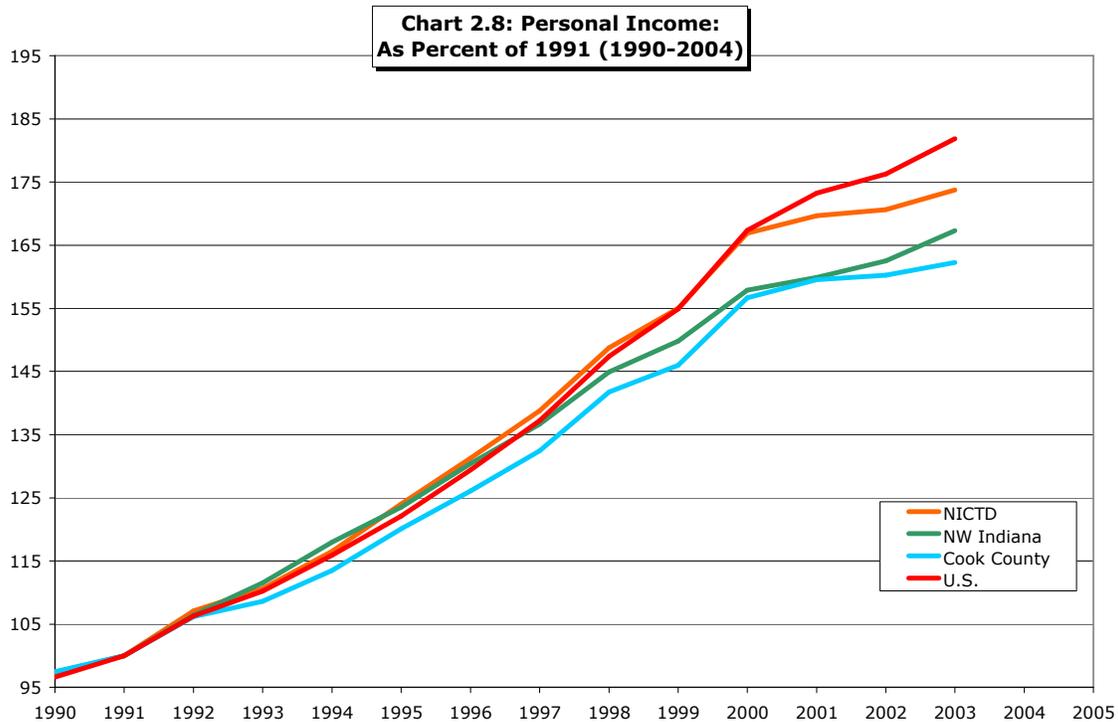
But Cook County's relatively weak job growth over the last 15 years does not argue against improved transportation connectivity through projects such as the West Lake Corridor commuter rail expansion, for at least three reasons. First, the size of the economy (nearly 9 times the earnings base of the six counties of NW Indiana combined) can certainly support larger numbers of Indiana-based workers within even a very slowly growing job base. Secondly, the great disparity in earnings that exists between the two geographies translates into a much larger increase in Indiana resident's earnings that can potentially result. Thirdly, as we demonstrate in the next section, forecasts call for a resumption of growth in Cook County's job base throughout the NICTD planning horizon.



The importance of accounting for earnings growth, rather than simply job growth, in the assessment of economic performance can be seen from the relative behavior of earnings within the NICTD planning region shown in the Figure above. Because of the relative performance of high versus low paying jobs, the Cook County economy's relative performance as measured by earnings over the last fifteen years is significantly different than its job performance alone would indicate. With payroll in 2004 about 64 percent higher than in 1991, Cook County's earnings base has grown more rapidly than job growth, and kept closer pace with national growth throughout the 1990-2004 period.

## Income Growth

The broadest measure of economic prosperity available at the sub-state level is personal income. It includes all dollars that accrue to individuals, including earnings, proprietors income, transfer payments, dividends, interest, and rent. The data differ from what has been presented to this point in that they are residence-based. Thus the data pertain to the income of those who reside in the different geographies within the NICTD region, instead of pertaining to the businesses and employer's location. In a region where cross-county and cross-state commuting is significant, the distinction can be important.

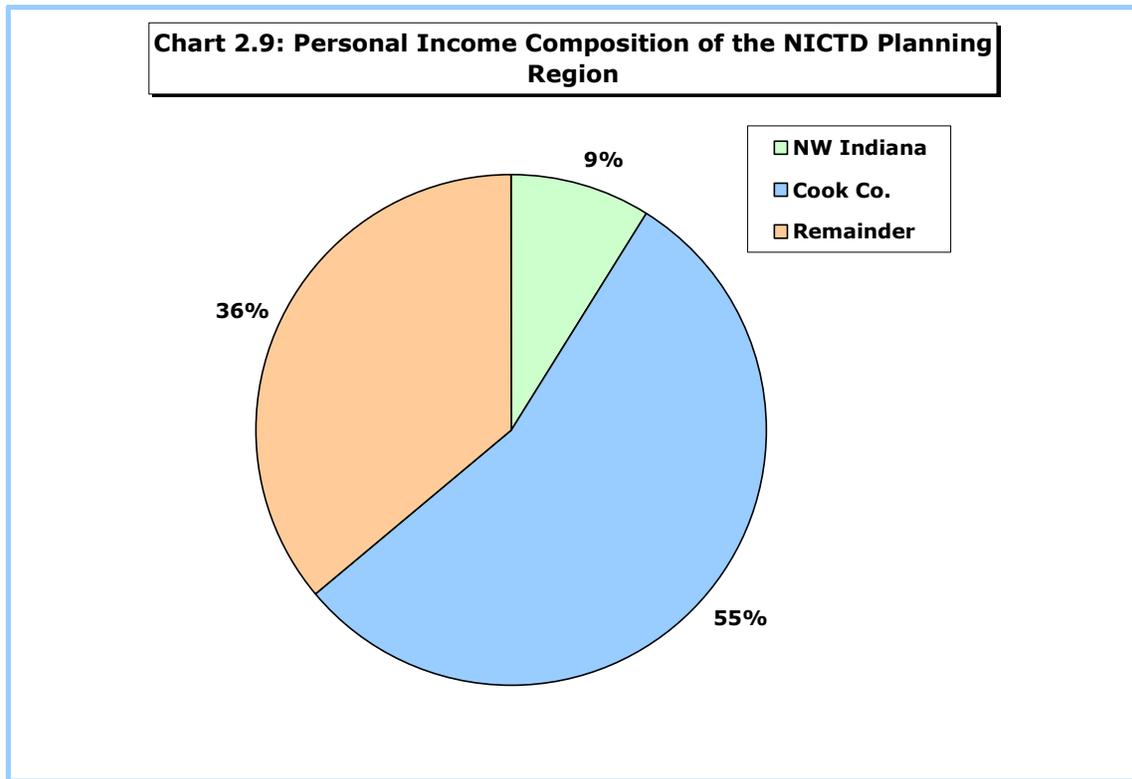


In 2003, personal income for the 16-county region was \$341.6 billion, representing about 3.7 percent of personal income of the entire U.S. economy. Of that total, about \$29.7 billion accrued to residents of the six counties in NW Indiana, a 9 percent share. Cook county residents were paid 55 percent of the total, or \$188.9 billion, while the remaining Illinois and Wisconsin county residents within the Chicago MSA accounted for the remaining 36 percent share.

The fact that the suburban Illinois/Wisconsin counties account for a larger share of (residence-based) personal income than (employer-based) earnings no doubt stems from the fact that hundreds of thousands of suburban residents work at businesses located in the city.

The patterns in personal income growth since 1990 in the various sub-regions of the NICTD planning region are quite similar to those presented for the earnings based on

covered employment, with two caveats. First, the inclusion of nonearned income, particularly dividends, tends to reduce the disparity between different regions, since there is little reason to expect growth in one geography to differ from another. Secondly, the inclusion of counter-cyclical components like transfer payments tends to mitigate the declines associated with the recession.

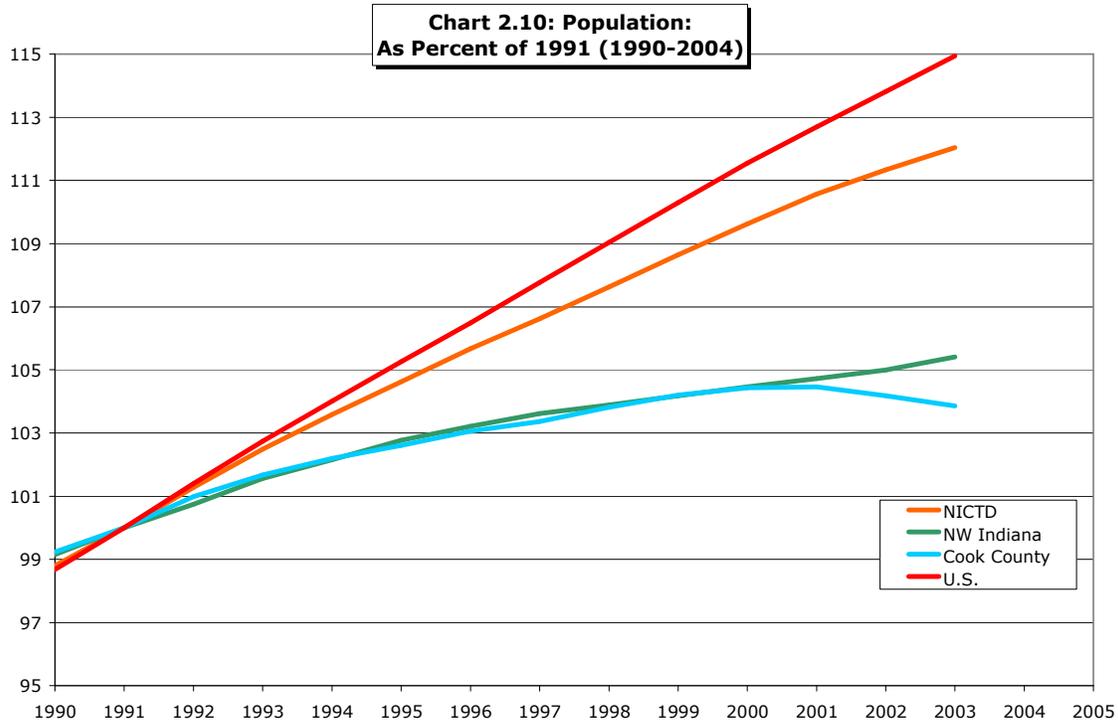


Thus we see from the figure that personal income growth in all NICTD planning region geographies considered in this report have fallen short of national growth over the last fourteen years. The differences in growth are smaller, and in particular, the gap between Cook County personal income growth and that of the counties in NW Indiana is very small, with the six counties in Indiana actually recording slightly higher growth than the region's most populous county. Since this finding pertains to residents, and not jobs, located within the various counties, this finding is of less importance in exploring the potential for improving the connections between NW Indiana residents and Chicago CBD jobs.

### Population Growth

The population growth patterns in the greater Chicago echo the themes in population growth that have unfolded across the entire country. Those have brought us faster growth at the fringes of urbanized areas than at the urban core, as well as faster growth in the south and west regions of the country than in either the Midwest or the Northeast. These

patterns reflect economic opportunity and land prices as well as non-economic factors such as weather, longevity, and even the invention of air conditioning.



There has been much slower growth in both Cook County and in NW Indiana than in the remainder of the Chicago MSA, as can be seen from the figure. While the most populous county in the region did manage to grow its population by 4 percent in the last fourteen years, after suffering a slight population decline in the 1980's, its growth is much less pronounced than the suburban Illinois/Wisconsin counties in the MSA.

NW Indiana counties, which comprised 11 percent of the entire region's 9.7 million residents in 2003, also had very sluggish population growth in the last 14 years, adding about 63,000 people since 1990.

Overall, the NICTD planning region's sixteen counties saw population growth only slightly below the trend nationally, adding about 1.1 million net new residents since 1990, a 13 percent gain.

### Conclusion

The economy of the greater Chicago area is a study in contrasts, particularly between the six counties of the NICTD planning region: Jasper, Lake, LaPorte, Newton, Porter, and St. Joseph, and the Illinois/Wisconsin portion of the tri-state metropolitan statistical area. On the Illinois side of the boundary is a high paying, faster growing economy dominated

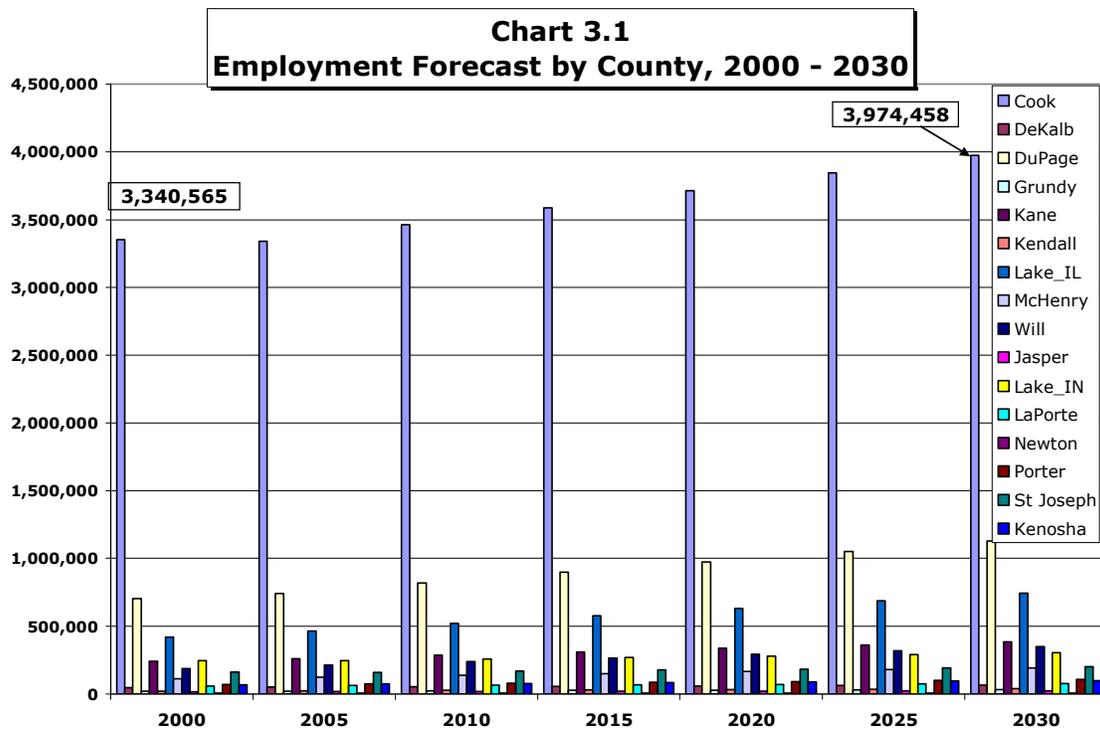
by transportation/logistics, finance and insurance, and a number of other white collar-dominated industries with very little presence on the Indiana side. The gap between the wages paid by Cook County employers, in particular, and those paid by NW Indiana employers is cavernous.

Another contrast is between the growth enjoyed by suburban Illinois/Wisconsin counties in the Chicago MSA and that of NW Indiana. Many of those counties lie along commuter railroads that connect them to the Chicago CBD. Given these wide disparities, both in growth and in pay, the case for pursuing greater transportation connectivity between NW Indiana and Chicago is compelling.

## Projections for Chicago and NW Indiana

The previous section presented a summary of current and historic economic conditions and trends in the NICTD Study Area. This section presents forecasts of population and employment through the year 2030 for the NICTD Study Area. These forecasts are crucial because of the key role population and employment play in the demand for transportation.

The economy portrayed by these forecasts is one that is vibrant, large, and growing. In year 2030 Cook County alone will grow by more than 630,000 net new jobs. There is little doubt that transportation demand within the entire region will continue to grow, and that opportunities for NW Indiana to prosper from improved linkages with the Chicago CBD will remain excellent.



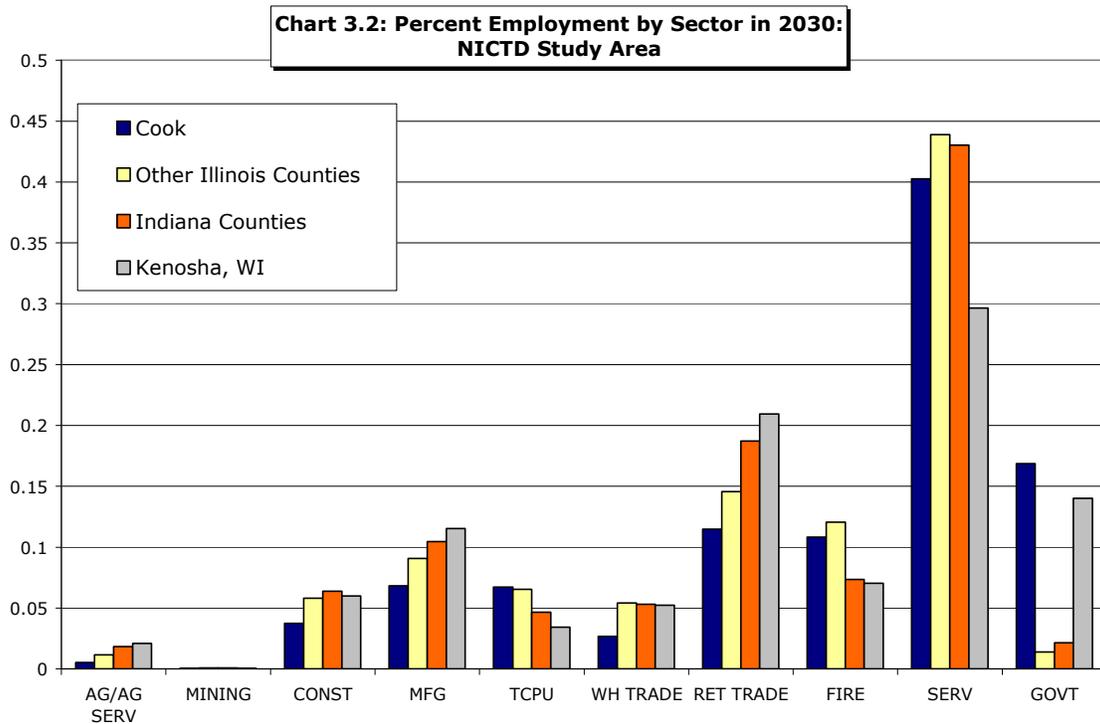
The key findings are:

1. Job growth in Cook County is slower than job growth in the other counties in the NICTD Study Area, but the number of jobs added in Cook County is more than the number added in all the other counties combined because of Cook County's large employment base. Cook County will remain the employment center for the region.

2. Job growth is faster than population growth in Cook County. This will lead to an increase in the number of Cook County workers commuting into Cook County.
3. Population growth is high relative to job growth in the Collar Counties and NW Indiana. In the future, more residents of these areas will commute into Cook County.
4. Per capita personal income is already higher in Cook County than in NW Indiana and will grow faster in Cook County than in NW Indiana. This will make jobs in Cook County more attractive to qualified NW Indiana residents.
5. Current forecasts under predict population growth in NW Indiana.

### Employment

The Chicago core – Cook County will produce more than 630,000 jobs by 2030, the end of the forecast period. These jobs are the highest paying on average in the region and will continue to attract commuters from all over the Illinois and Indiana suburban regions for the next 25 years. The rate of job growth will be faster in the Illinois Collar Counties than in either Cook County or the NW Indiana counties. However because of the current concentration of jobs and the ongoing economy of Chicago, the Loop will continue to be a place to which workers commute and Cook County will still contain more than half the jobs of the region.



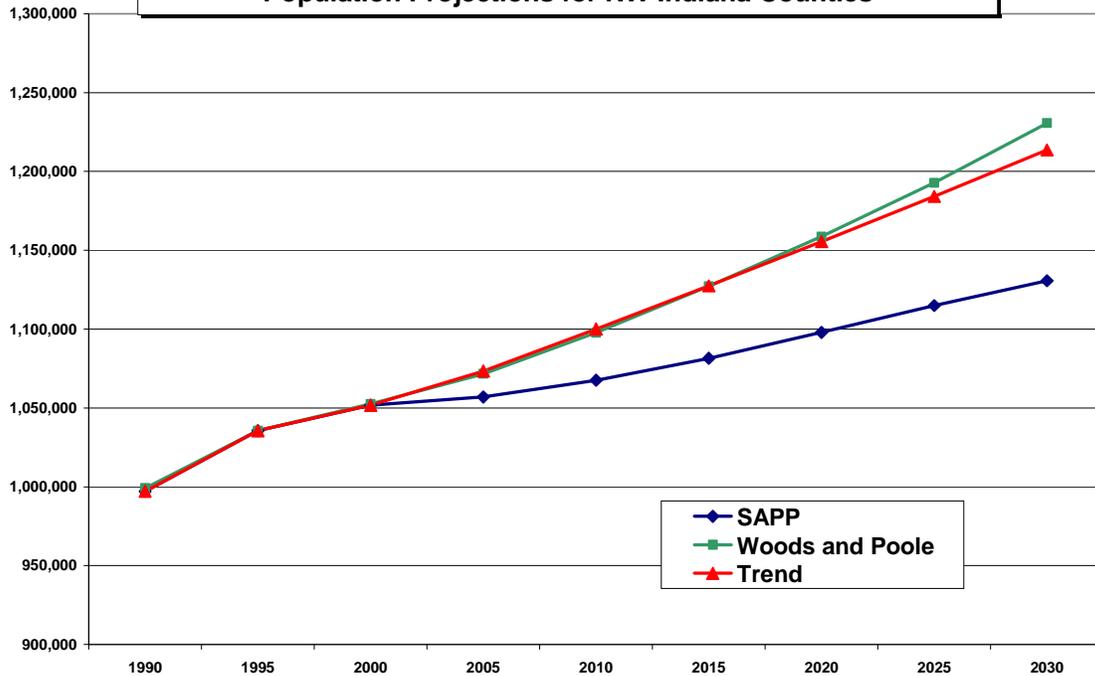
The Chicago MSA of the next few decades will continue to lose manufacturing jobs and will gain employment in Finance, Insurance and Real Estate, Services and Wholesale Trade. The fastest growing sector for the MSA is services at 50.8% over the period, while FIRE employment will grow at 40.7%, and Transportation, Communication and Utilities will expand by 31.9%. Cook County is expected to grow its general services sector by 41.4% and FIRE by 28.1% in the period. NW Indiana will gain jobs in services, 55.9%, FIRE, 47.2%, and Wholesale Trade, 36.1%; and lose 20.6% of its manufacturing jobs. The Illinois Collar Counties are expected to expand services, 56.6%, Construction, 46.5%, and FIRE 48.9%.

## **Population**

Reliable population forecasts are important for estimating future ridership of the West Lake Corridor Expansion. Several population forecasts that cover all or part of the NICTD Study Area are available.

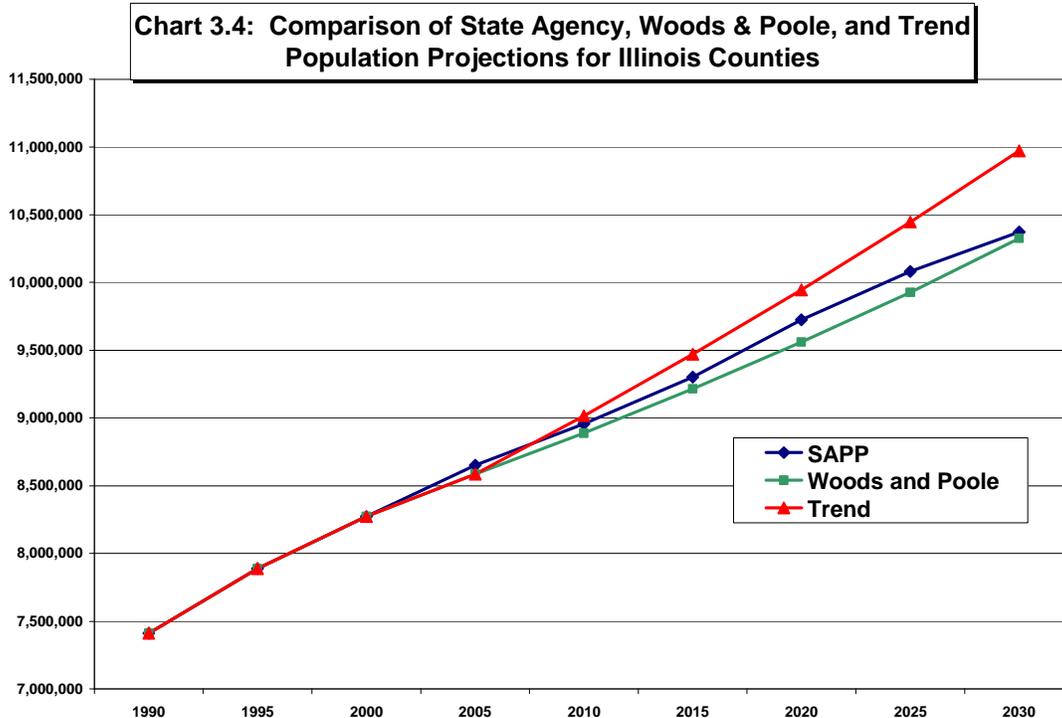
1. State Agency Population Projections (SAPP) at the county level are available for all three states in the NICTD Study Area.
2. The Northeastern Illinois Planning Commission presents a population forecast at the traffic analysis zone (TAZ) level for the six Illinois counties of Cook, DuPage, Kane, Lake, McHenry, and Will.
3. The Northwestern Indiana Regional Planning Commission (NIRPC) provides a forecast for the Indiana counties of Lake, LaPorte and Porter at the TAZ level.
4. The NIRPC forecast is based on the SAPP county level forecast provided by the Indiana Business Research Center.
5. Woods and Poole forecasts of employment and population for all of the counties in the region.

**Chart 3.3: Comparison of State Agency, Woods & Poole, and Trend Population Projections for NW Indiana Counties**

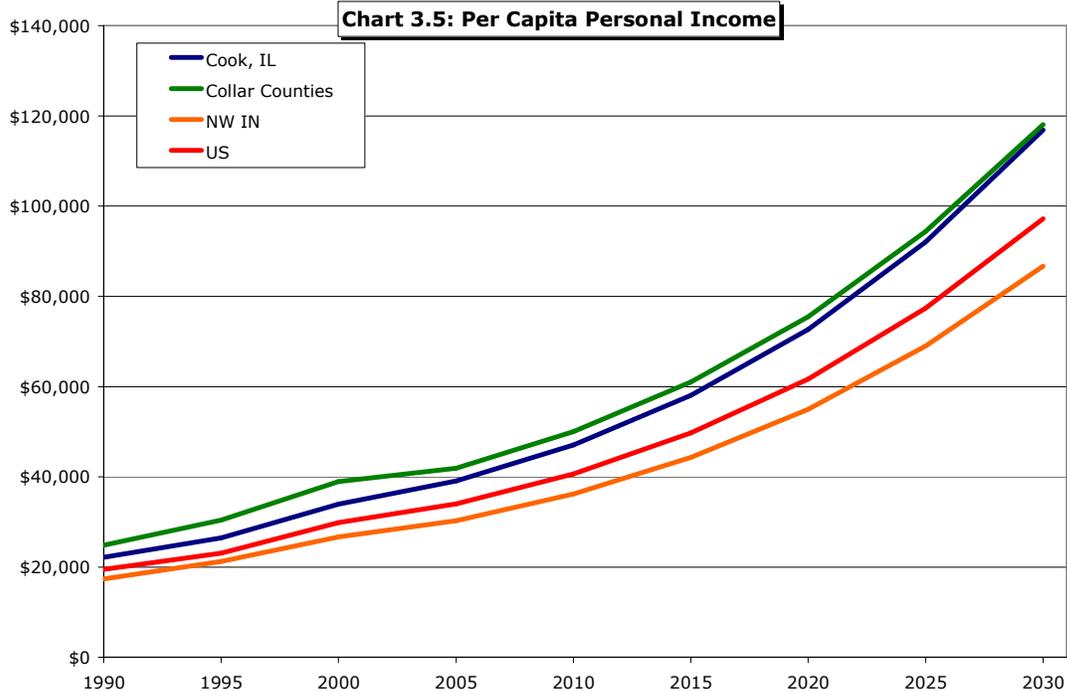


The population of the Chicago MSA is growing more slowly in this period than that of the US as a whole as regions of the South and West continue to expand more rapidly than other areas of the country. NW Indiana is growing more rapidly, however, than it has been in the last two decades as the economy of this region begins to show signs of diversification and steady growth. During the next ten years the Indiana counties within the NICTD service region will add 5.2% to their headcount, and by 2030 the population should have grown by 160,000 persons, or 14.8%.

These trends are in pronounced contrast to both the experiences of residents and the expectations of forecasters. As an example, building permits are 40% higher over the past three years than had been experienced in the prior 15. The forecast for population growth over the next 25 years for NW Indiana – shown in Chart 3.3 – demonstrates an annual rate of change of .55% per year compared to the SAPP forecast currently in use by NIRPC of .27% per year. There is a marked difference in the long term trends for each and the chosen forecast [Woods and Poole] also demonstrates a near term better fit.



Population in the collar counties of Illinois is forecast to increase by 49% from 2005 to 2030, reaching a total population of 4.9 million in 2030. Population in NW Indiana is forecast to increase by 15%, reaching a total population of 1.2 million in 2030. The slowest growth in the region is 2.35% growth in Cook County which is forecast to have a population of 5.4 million in 2030. Despite the slow growth, Cook County will still have more residents than all of the Illinois Collar Counties and nearly half the population of the entire NICTD Study Area.



Per Capita Personal Income in the United States was \$29,847 in 2000 and will grow by 225% from 2000 to 2030. PCPI in Cook County, at \$33,920 in 2000, is already higher than that for the nation and will grow faster than the national PCPI, increasing by 245% from 2000 to 2030. NW Indiana’s PCPI is \$26,712, slightly lower than the national PCPI, and is forecast to grow by 225%, the same rate at which the national PCPI will grow.

### Conclusion

Much of the population growth in the NICTD Study Area will occur in outside of Cook County, in the Illinois Collar Counties and NW Indiana. Despite the patterns of population growth, most jobs will still be located in Cook County. These patterns of growth will lead to an increase in the number of individuals commuting into Cook County, adding more commuters to an already congested system. Also with job growth higher in the Illinois Collar Counties than in NW Indiana there will certainly be an increase in the number of workers commuting from NW IN to the collar counties. (A trend which is born out by recent County to County Worker Flow data from the US Census Bureau.)

## The Case for Increased Transportation Capacity

Traffic congestion is already a problem in the Chicago MSA. A Texas Transportation Institute Study finds that congestion cost in the Chicago MSA were \$4.27 billion dollars in 2003. This is a significant increase from a cost of only \$1.58 billion in 1990. Planning for the West Lake Corridor requires taking account of commuting patterns and the level of traffic congestion. Increasing numbers of commuters from NW Indiana into Northeastern Illinois will increase the demand for the West Lake Corridor. Furthermore, if traffic congestion continues increasing then the West Lake Corridor will gain more commuters as motorists switch to using public transit to avoid congestion.

The key findings are:

1. Chicago already faces problems from traffic congestion. A Texas Transportation Institute Study estimates that delays due to traffic congestion costs \$4.27 billion in 2003.
2. The Texas Transportation Institute Study estimates that reduced congestion from existing public transportation saved \$1.58 million dollars.
3. Increased public transportation capacity is one of the best ways to reduce traffic congestion.
4. The NICTD South Shore Line is already running near capacity.
5. Commuting from NW Indiana to Cook County and the Illinois Collar Counties increased by 22% from 44,153 commuters in 1990 to 53,710 commuters in 2000.
6. Fewer individuals commute from Illinois to NW Indiana. However, the number commuting has increased from 13,716 commuters in 1990 to 14,954 commuters in 2000, an increase of 9%.

## Commuting Trends

In 1990 there were 44,153 workers commuting from NW Indiana to either Cook County or one of the Collar Counties in Illinois. Commuting increased 22% to 53,710 workers in 2000. Commuting to the Collar Counties from NW Indiana has increased at a greater rate than has commuting to Cook County. However, more individual workers are commuting from NW Indiana to Cook County than to the eight Collar Counties. The West Lake Corridor would expand the commuting options for NW Indiana residents commuting to Illinois.

**Table 6.1: Trends in Commuting from Northwestern Indiana to Illinois**

Commuting from Northwestern Indiana to:	1990	2000	Percent Change
Cook	41,207	49,131	19%
IL Collar Counties	2,946	4,579	55%
Total	44,153	53,710	22%

Source: U.S. Census Bureau

Current trends suggest that commuting from NW IN to Chicago will continue to increase. There are two reasons why the number of commuters may grow even more rapidly. First, higher average wages in Chicago make it an attractive place to work. Second, by expanding transportation options and reducing congestion, the West Lake Corridor will make the commute to Chicago less costly in time and unpredictability for those in NW Indiana. The West Lake Corridor will also increase the desirability of NW Indiana as an alternative residence for current Cook County workers.

**Table 6.2: Trends in Commuting from Illinois to Northwestern Indiana**

Commuting to Northwestern Indiana from:	1990	2000	Percent Change
Cook	12,274	12,582	3%
IL Collar Counties	1,442	2,372	64%
Total	13,716	14,954	9%

Source: U.S. Census Bureau

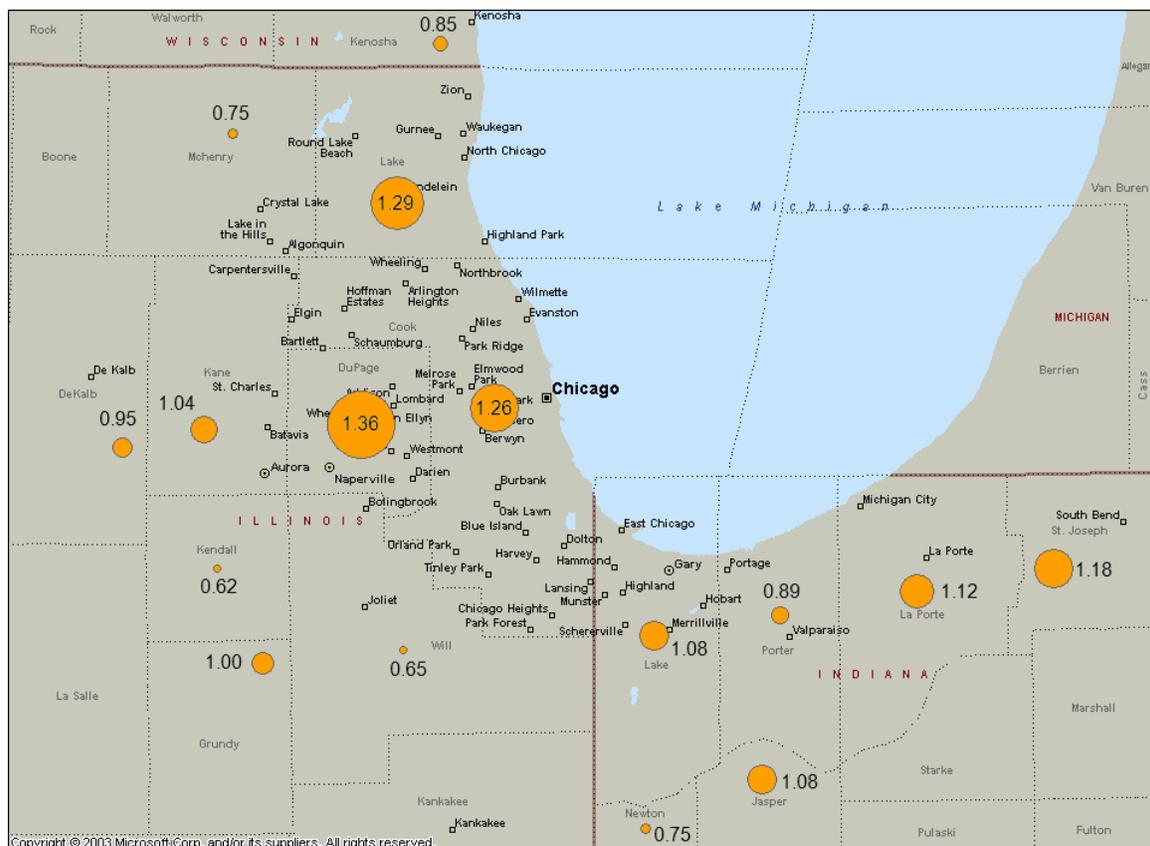
There is also a substantial level of commuting from the Illinois Counties into NW Indiana. The majority of these commuters, 12,582 commuters in 2000, come from Cook County. Most of the growth is occurring in commuters from the Collar Counties, which

is up 64% to 2,372 commuters. While these numbers are small relative to the number commuting into Illinois, they are potential passengers for the West Lake Corridor.

The ratio of employment to labor force also suggests continued demand for commuting. The counties in the region can be divided into three groups: significant exporters of labor, significant importers of labor, and those counties close to a balance between labor force and employment. Significant exporters of labor are Kendall, McHenry, and Will in Illinois; Newton and Porter in Indiana; and Kenosha in Wisconsin. Significant importers of labor include Lake, DuPage, and Cook in Illinois and St. Joseph in Indiana.

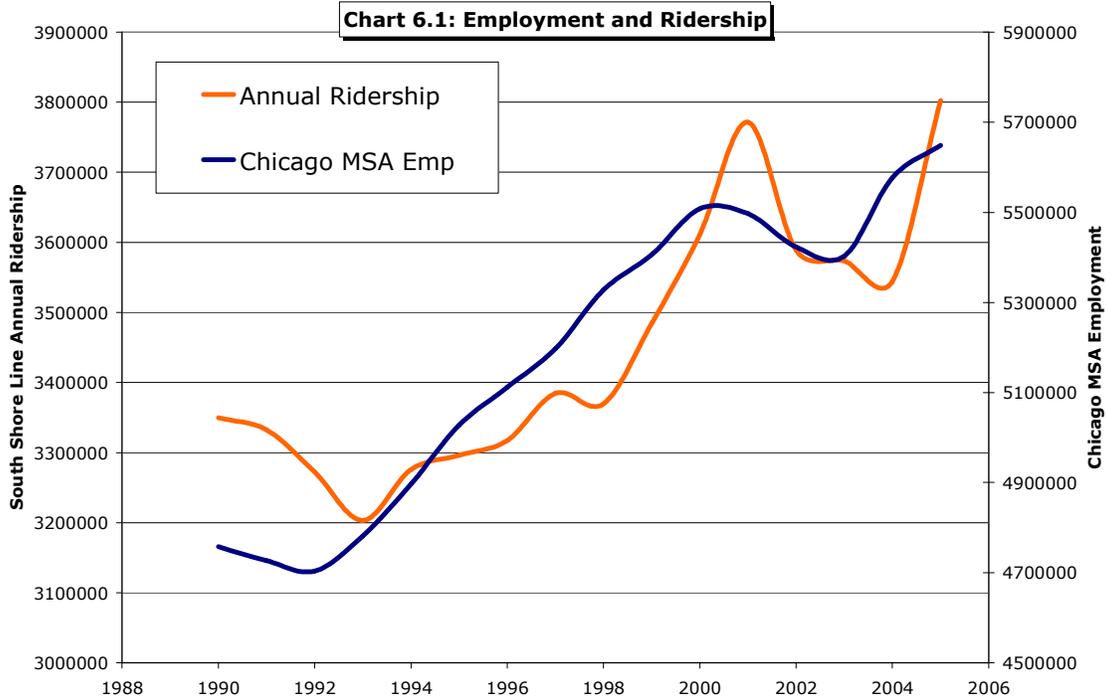
Those counties which are significant exporters of labor are all suburban counties near the edge of the Chicago MSA. While there are growing numbers of jobs in these counties, they serve to a large extent as places of residence for those who work in or near the City of Chicago. Lake, DuPage, and Cook County Illinois are at the core of the Chicago MSA where much employment is located. St. Joseph County also draws in workers because of the presence of South Bend where several large employers are located including Notre Dame University and the South Bend Airport. The continued movement of workers into downtown Chicago and into South Bend will provide substantial demand for the NICTD South Shore Railroad.

**Figure 6.1: Ratio of Employment to Labor Force (2003)**



## Employment and NICTD Ridership

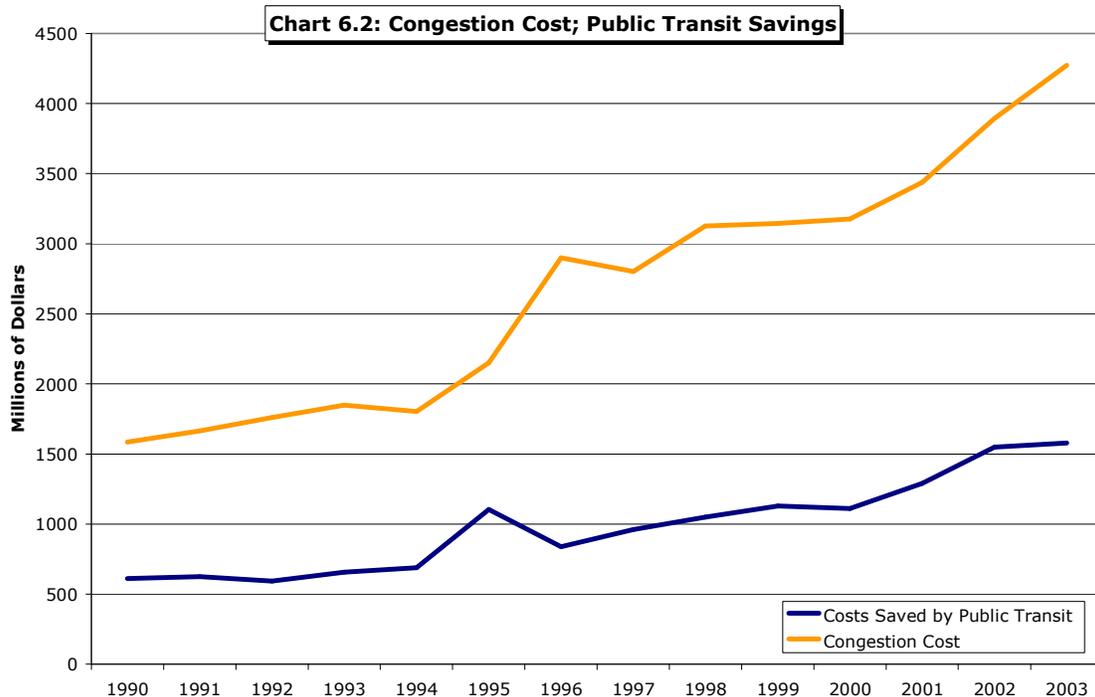
Cook County accounted for over 70% of the regions employment in 1970. This fraction has been declining, due largely to job growth in suburban counties, but remains near 60% of total employment in the NICTD Study Area. Because a large fraction of the regions jobs are located in Cook County, there will be continued demand for commuting between Cook County and the suburban counties of the NICTD Study Area.



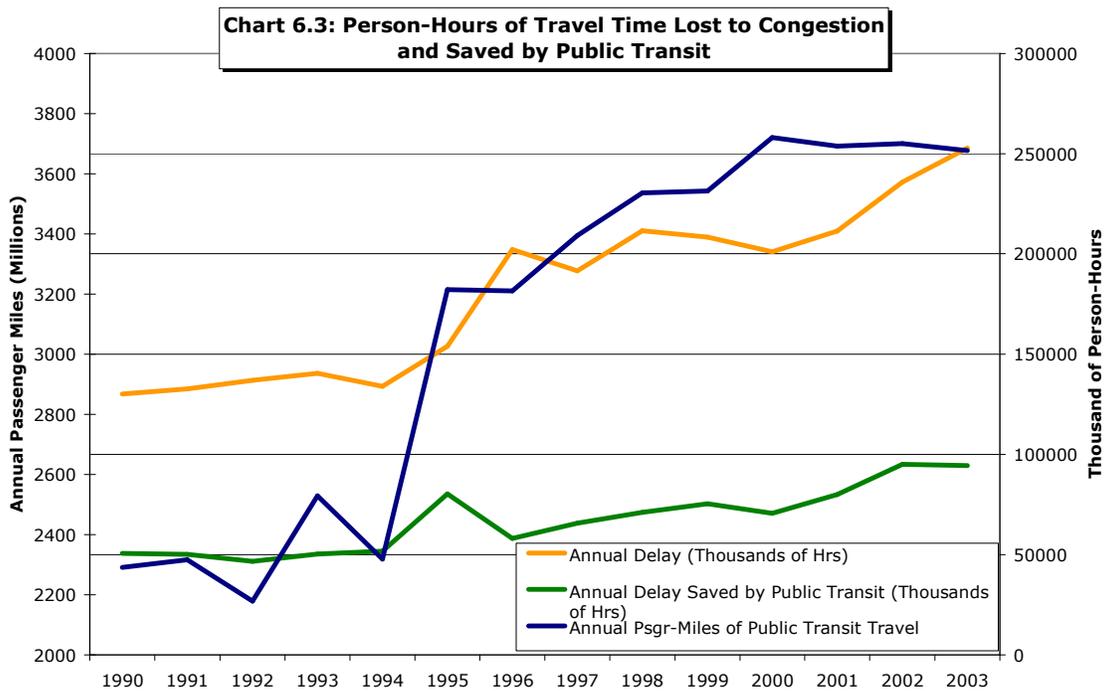
Annual NICTD ridership has tended to follow changes in employment. This relationship reflects the fact that much employment in the region is located in or near downtown Chicago while many residents of the region live in the suburbs and towns surrounding Chicago. As road congestion increases, the South Shore Line should be able to increase ridership faster than employment.

## Traffic Congestion

The costs of transportation congestion on all forms of economic activity have received increasing attention in economics and transportation research. A recently conducted pilot study of the Chicago and Philadelphia regions for the Transportation Research Board suggested that business costs from congestion can run in excess of \$1 billion annually, reflecting both resource costs and lower productivity. The Texas Transportation Institute's (TTI) Urban Mobility Report, which only considers the costs of additional fuel and person hours spent stuck in traffic, estimates the cost of traffic delays due to congestion in the Chicago MSA at \$4.27 billion for 2003, up significantly from a cost of \$1.58 billion in 1990.



The chart below shows the dramatic increase in annual traffic delay due to congestion in Chicago. Total annual delay increased from 130.1 million person hours in 1990 to 252.8 million person hours in 2003. This increase in annual delay is faster than the average increase in annual delay for those cities in the “very large group” in the TTI Report. Annual passenger miles of public transportation travel have increased from 2,291 million miles in 1990 to 3,677 million miles in 2003. The increase in public transit ridership has resulted in significant savings of passenger hours which would otherwise have been lost to delay. Public transit saved 50.6 million passenger hours in 1990 and saved 94.5 million hours in 2003.



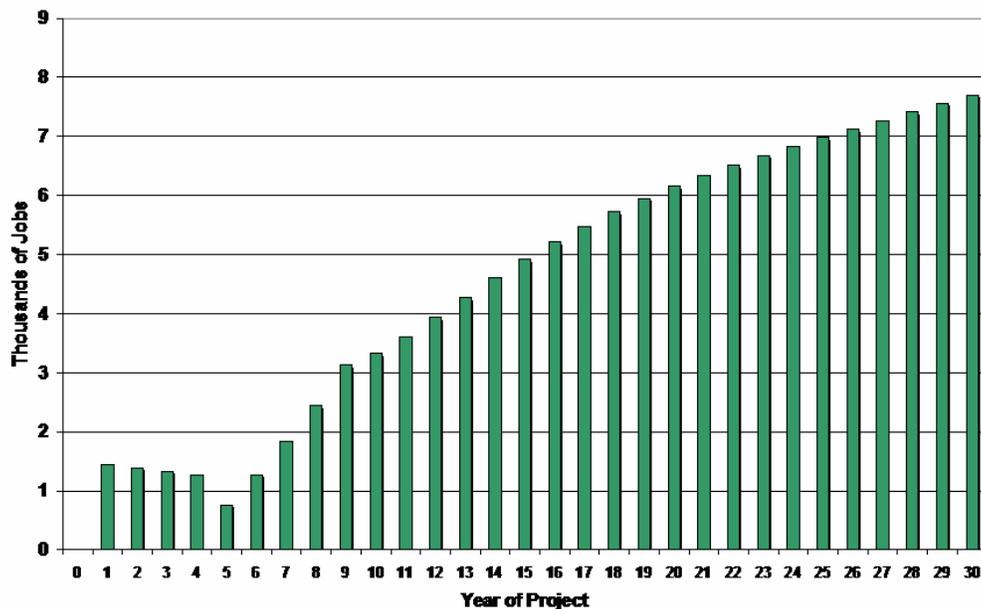
The research suggests that it is not simply the increase in trip time, but also the increased uncertainty in trip time, caused by congestion along transportation arteries that ultimately increases costs and reduces productivity. Moreover, the impacts are not limited to industries in goods-related businesses – through its impact on service industries, labor force commuting, and even access of residents to shopping and other amenities, transportation congestion affects a broad spectrum of pivotal economic variables, including labor costs, labor access, labor productivity, materials costs, and the amenity value of a community. Those changes, in turn, can reduce the attractiveness in an area as a place to live, work, and invest, ultimately producing a lower growth trajectory.

Just as increased congestion can reduce productivity and raise costs, ultimately affecting the competitiveness and market share of the entire economy, so can efforts to reduce congestion have the opposite result. A 2005 Policy Analytics study of transportation improvements examined the benefits, in terms of employment, income and population, for Lake and Porter counties that could result from the West Lake Corridor project and improvement and expansion in connecting bus service.

This was neither a full-blown engineering study nor a detailed cost-benefit analysis. Rather it was an exploratory investigation into the nature and magnitude of the permanent, sustained improvements that investment in transportation capacity could produce in the Lake/Porter economy.

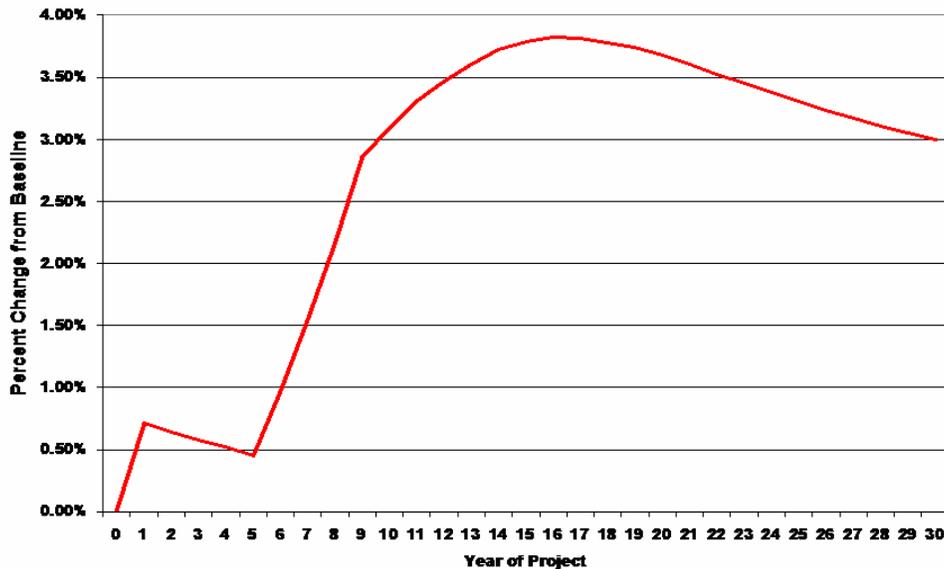
The impacts were modeled with REMI's TranSight Software. The TranSight model accounts for not only the initial economic stimulus of the construction of the transportation project, but also considers the long term effects on vehicle miles and hours traveled, emissions, fuel demand, and the effect of lower transportation costs on industry productivity. The model had a 30 year time horizon with construction completed during year 5. The TranSight model attributes to the West Lake Corridor a 5% reduction in congestion for the transportation system of the two counties. This reduction in congestion produces a net benefit of 7,800 additional jobs in Lake and Porter Counties. Economic output would increase by \$1.3 billion and disposable personal income would increase nearly \$600 million. The transportation improvements would also lead to a population increase of over 10,000 individuals in the two counties

**Chart 6.4: Impact of Transportation Optimization on Employment**



In coming to these conclusions, the study drew heavily on two sources. The first was the Major Investment Study (MIS) contracted in 2000 by NICTD, which extensively analyzed the feasibility of new commuter rail service along what has been called the West Lake Corridor. The cost estimates for conversion of the existing railroads, south to Lowell, east to Valparaiso, and north along the Monon Trail, presented in that study were fundamental in determining the economic impacts presented in the report.

*Chart 6.5: Impact of Transportation Optimization on Investment*



Secondly, the study drew on new developments in transportation research that highlight the role that transportation, and specifically congestion, plays in determining productivity, regional competitiveness and growth. This new research, summarized in a study commissioned by the National Cooperative Highway Research Program in 2001, emphasizes the crucial role that access to specialized resources – labor, customers, and goods – plays in location and expansion decisions of both businesses and households, and is embodied in the functionality and design of REMI/Transight.

Solving the congestion problem requires more than one angle of attack. TTI point out that adding roadway at about the same rate as traffic growth will slow the growth of congestion. However, TTI finds that only 5 of the 85 areas studied were able to accomplish the necessary rate of road growth. Over the past two decades only 50 percent of the needed mileage of roads to maintain a constant level of congestion was added in the areas studied. To keep a constant level of congestion only through transit ridership would require an increase of over one-third of current ridership each year.

TTI suggest several solutions to the problem of congestion. The first solution emphasizes the importance of choice. When public transit is not available individuals face the limited choices of traveling earlier or later to avoid congestion, traveling in congestion, or not taking the trip. The added option of public transit allows individuals a choice of travel which allows the avoidance of congestion altogether.

The second solution is to add capacity. This can be more road lanes or miles, additional bus routes, or additional commuter rail. The addition of capacity is essential in areas like the NICTD Study Area which are experiencing population growth.

The Westlake Corridor helps reduce congestion by adding more capacity as well as by effectively adding an additional travel choice for those who will now have easier access to commuter rail. The effective use of transit oriented design, locating residence and businesses near commuter lines and providing easy pedestrian access, will help reduce congestion even more. The cities of Munster and Valparaiso are already developing transit oriented development plans in anticipation of the West Lake Corridor.

Historic data from the TTI shows that the annual delay in person-hours due to congestion has been increasing since the 1990. Annual passenger-miles traveled by public transit have been increasing over the past decade, helping to reduce the cost of congestion. However, there is still room for improvement. The Collar Counties in Illinois currently have better access to public transit than NW Indiana. Increased public transit in NW Indiana should have pronounced effects on congestion.

## **Conclusion: What does this mean for NICTD and the West Lake Corridor?**

The Chicago Metro area continues to grow; however, the population in Cook County is decreasing. Despite the decreasing population, Cook County will be adding more new jobs than any other county in the region. Clearly more people will be commuting into Cook County, increasing the need for transportation options. As the Illinois suburbs of Chicago continue to spread further from downtown Chicago, Indiana suburbs will become closer than new development in Chicago. Combining this fact with the transportation resources, existing and planned, will make NW Indiana a more attractive alternative for those who desire to live in a suburb of Chicago.

The key findings of this report are:

1. Providing access to the high paying jobs within Cook County for NW Indiana residents through improvements to the South Shore is a top priority for the economic growth and continued development of NW Indiana.
2. Employment growth within Cook County will dominate employment changes elsewhere, fueling greater demand for access to these job locations.
3. Population in NW Indiana is growing much faster than anticipated by forecasters and will continue to outstrip previous trends, providing further demand for transportation improvements.
4. Congestion within the Chicago MSA is increasing and more rapidly than it is in other major urban areas.
5. A reduction in congestion through improvements to the NW Indiana regional transportation infrastructure will provide a significant stimulus to the regional economy in terms of 7,800 net new jobs, a sustained 3.5 percent increase in new investment, lowered production costs, a higher standard of living, and increased quality of life.

## Appendix 1: Population Forecast Methodology

Long term population forecasts are a critical component of transportation planning. Population is a key determinant of transportation demand. The predictions of a transportation demand model are limited by the quality of the population forecast used as an input to the model. An accurate population forecast is also important because the federal government requires population density to be above a threshold level to qualify for federal funding of public transportation projects.

The Indiana Business Research Center (IBRC) produces county level population forecasts for Indiana. The IBRC uses a cohort component method to forecast population. The IBRC carries five-year age groups forward five years at a time, accounting for the impact of deaths, migration, and births. The base population for these projections is the 2000 Census population count by age and sex. Age and sex specific survival rates, calculated with data from the Indiana Department of Health adjusted for expected future mortality improvements, are used to account for deaths. Fertility rates for eight age groups (from 10-14 through 45-49), also calculated with data from the Indiana Department of Health and adjusted to reflect trends in fertility rates, are used to calculate births. Survival rates and fertility rates are used to calculate the “closed population” which is the forecast population before adjusting for migration.

The IBRC calculated migration rates from 1990 to 2000 using historic data from the Census and the Indiana Department of Health. Migration rates for 2000 to 2005 were adjusted to reflect trends in the Census’s post-2000 census population estimates. Because migration rates have been volatile over the past three decades, the migration forecast assumes that migration rates, both positive and negative, trend toward zero.

The Northern Illinois Planning Commission produces a population forecast for the six Illinois Counties of: Cook, DuPage, Kane, Lake, McHenry, and Will. The NIPC forecast differs from the IBRC forecast by using employment forecasts to derive migration assumptions.

Woods and Poole also uses a traditional cohort component analysis based upon calculated fertility and mortality in each county. Migration is modeled based on the demand for labor forecasts by Woods and Poole’s economic model. If demand for labor is forecast to exceed the labor supply, then either labor force participation rates will rise or population in-migration will occur. The opposite is true for those counties where demand for labor is forecast to be lower than the labor supply.

The Woods and Poole forecast and the NIPC forecast produce trends that fit population growth better than the IBRC forecast. Given that demographic trends tend to be relatively stable most of this difference is due differences in the forecast of migration. Migration is usually the largest source of forecasting error. Wisconsin, in its evaluation of its 1990 to

2000, found that error in the total state population projections occurred largely in the forecast of migration, not in the forecast of mortality and fertility. Migration is driven to a large extent by the location of employment opportunities. While it can be difficult to model future employment, ignoring this factor can result in unreliable population forecast, especially when forecasting for a smaller geographical area, such as a county or metropolitan statistical area.

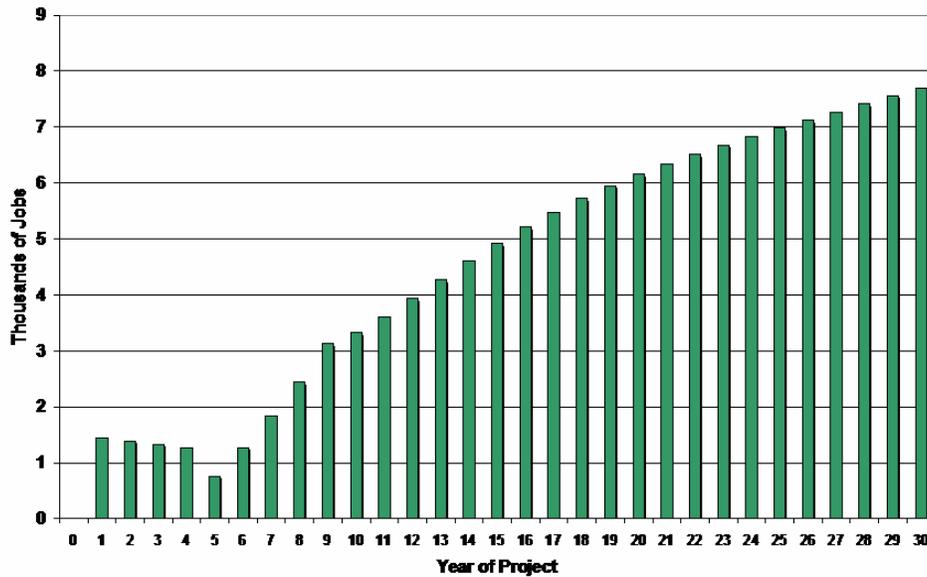
## **Appendix 2: Optimizing Transportation**

The costs of transportation congestion on all forms of economic activity have received increasing attention in economics and transportation research. A recently conducted pilot study of the Chicago and Philadelphia regions for the Transportation Research Board suggested that business costs from congestion can run in excess of \$1 billion annually, reflecting both resource costs and lower productivity. The Texas Transportation Institute's (TTI) Urban Mobility Report, which only considers the costs of additional fuel and person hours spent stuck in traffic, estimates the cost of traffic delays due to congestion in the Chicago MSA at \$4.27 billion for 2003, up significantly from a cost of \$1.58 billion in 1990.

The research suggests that it is not simply the increase in trip time, but also the increased uncertainty in trip time, caused by congestion along transportation arteries that ultimately increases costs and reduces productivity. Moreover, the impacts are not limited to industries in goods-related businesses – through its impact on service industries, labor force commuting, and even access of residents to shopping and other amenities, transportation congestion affects a broad spectrum of pivotal economic variables, including labor costs, labor access, labor productivity, materials costs, and the amenity value of a community. Those changes, in turn, can reduce the attractiveness in an area as a place to live, work, and invest, ultimately producing a lower growth trajectory.

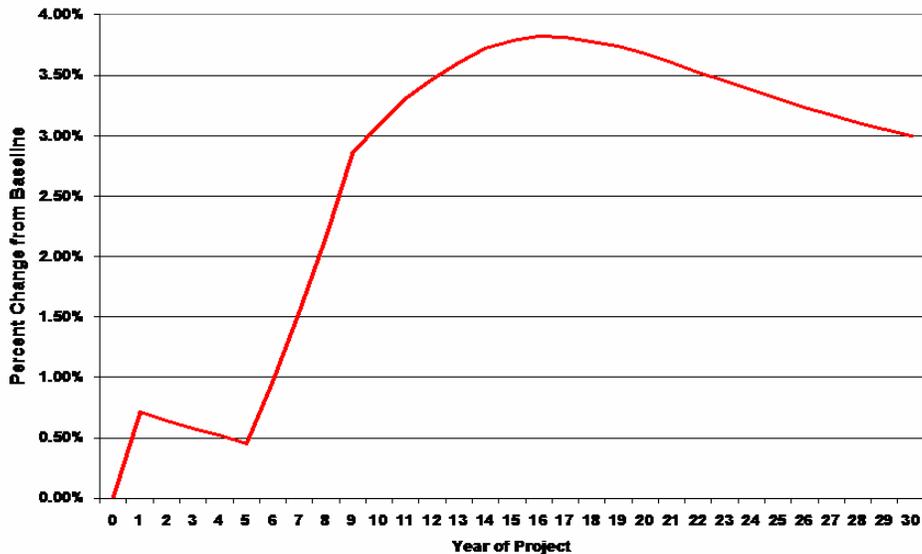
Just as increased congestion can reduce productivity and raise costs, ultimately affecting the competitiveness and market share of the entire economy, so can efforts to reduce congestion have the opposite result. A 2005 Policy Analytics study of transportation improvements examined the benefits, in terms of employment, income and population, for Lake and Porter counties that could result from the West Lake Corridor project and improvement and expansion in connecting bus service.

**Chart A2.1: Impact of Transportation Optimization on Employment**



This was neither a full-blown engineering study nor a detailed cost-benefit analysis. Rather it was an exploratory investigation into the nature and magnitude of the permanent, sustained improvements that investment in transportation capacity could produce in the Lake/Porter economy.

**Chart A2.2: Impact of Transportation Optimization on Investment**



The impacts were modeled with REMI's TranSight Software. The TranSight model accounts for not only the initial economic stimulus of the construction of the transportation project, but also considers the long term effects on vehicle miles and hours traveled, emissions, fuel demand, and the effect of lower transportation costs on industry productivity. The TranSight model attributes to the West Lake Corridor a 5% reduction in congestion for the transportation system of the two counties. This reduction in congestion produces a net benefit of 7,800 additional jobs in Lake and Porter Counties. Economic output would increase by \$1.3 billion and disposable personal income would increase by \$600 million. The transportation improvements would also lead to a population increase of nearly 10,000 individuals in the two counties.

In coming to these conclusions, the study drew heavily on two sources. The first was the Major Investment Study (MIS) contracted in 2000 by NICTD, which extensively analyzed the feasibility of new commuter rail service along the West Lake Corridor. The cost estimates for conversion of the existing rail lines, south to Lowell, east to Valparaiso, and north along the Monon Trail, presented in that study were fundamental in determining the economic impacts presented in the report.

Secondly, the study drew on new developments in transportation research that highlight the role that transportation, and specifically congestion, plays in determining productivity, regional competitiveness and growth. This new research, summarized in a study commissioned by the National Cooperative Highway Research Program in 2001, emphasizes the crucial role that access to specialized resources – labor, customers, and goods – plays in location and expansion decisions of both businesses and households, and is embodied in the functionality and design of REMI/Transight.

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