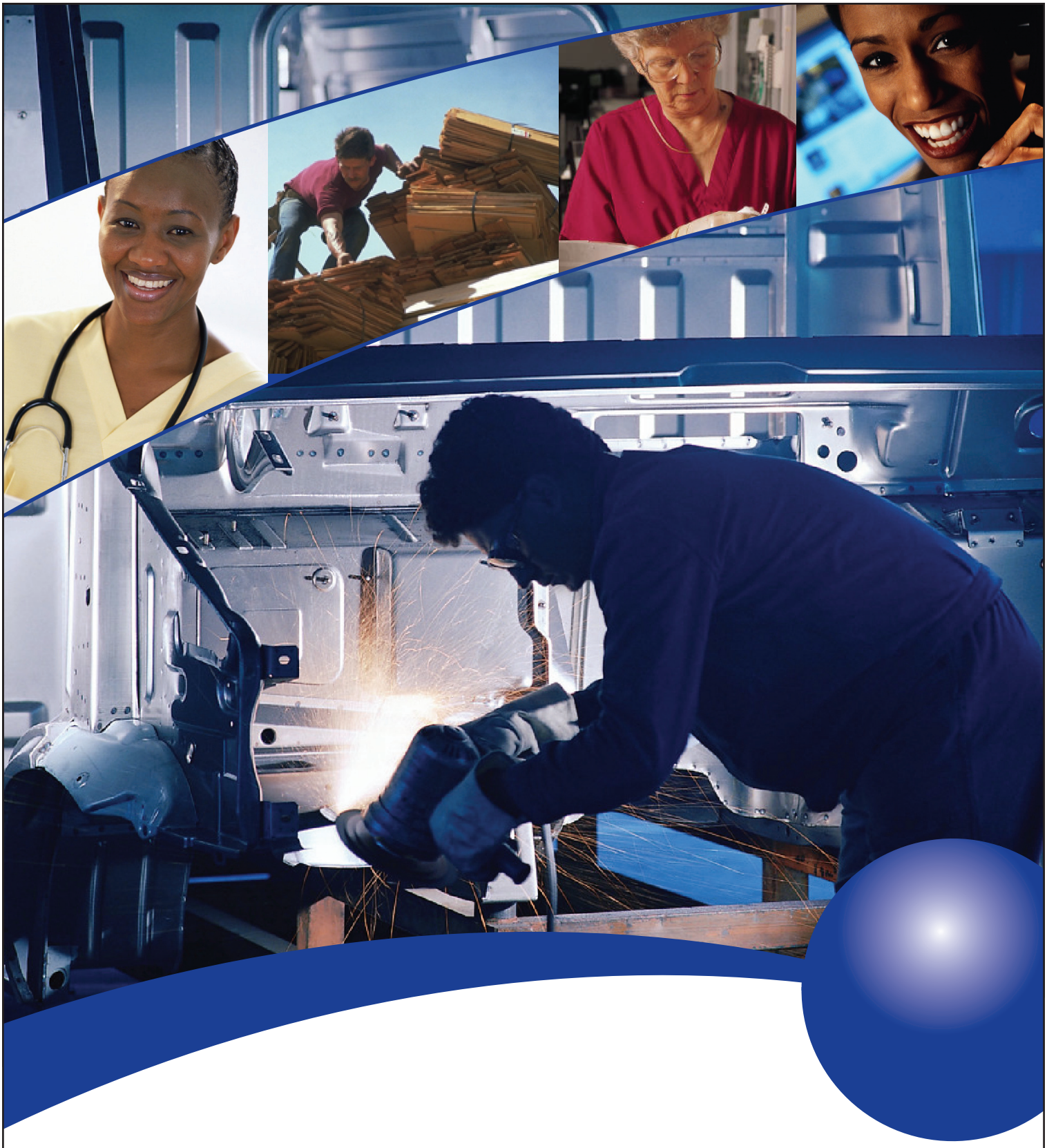


STATE OF THE WORKFORCE REPORT

FEBRUARY 2006

WIB

Workforce Investment Board

OF LUCAS COUNTY

Table of Contents

State of the Workforce Report
February 2006

Report Overview	**3**
Drivers of Workforce Change	**5**
Workforce Supply	**6**
Workforce Demand	**16**
Conclusion	**25**
The Workforce Investment Board of Lucas County	**26**

Mission—To provide leadership to the development of a comprehensive workforce development system that brings together job seekers, employers, workers, educators, government and other partners to strategically increase the economic viability and quality of life in Lucas County/ Northwest Ohio through planning, partnership, and effective resource management.

Vision—To be a valued resource to organizations and systems pursuing strategies designed to enhance the capacity, skill and well-being of our present and future workforce.

WIB
Workforce Investment Board
OF LUCAS COUNTY

Report Overview

Global trends *fundamentally* shape regional workforce demand and quality of workforce supply.

As the first State of the Workforce Report, the 2006 edition sets out to identify the drivers of workforce change and the change resulting or likely to result in our workforce. The report also relies on this first edition to provide a general overview of the local/regional workforce and the strategies being undertaken to provide workforce opportunities.

This report endeavors to be a stimulus for discussion and a rallying point for regional community collaboration on workforce development. It strives to inform a range of community members, including the business community, secondary and higher education institutions, economic development practitioners, public policy makers, and other community leaders, on the current profile of our workforce, changing workforce demand, and strategies to meet that demand. By better meeting current workforce demand and preparing for future demand, the economic vitality of our region will be secured for present generations and for posterity.

SOURCES USED IN THIS REPORT:

- "Is Ohio Experiencing Brain Drain?" *The Issue.* Ohio Board of Regents, November 2004.
- *Occupational Analysis: Toledo Metropolitan Area*, August 2005, Neil Reid, PhD Urban Affairs Center, University of Toledo and Michael C. Carroll, PhD Center for Regional Development, Bowling Green State University.
- "Ohio's Geographic Mobility" *Ohio Trends* Vol. 1, No. 3, July 2000. Ohio State University Extension Data Center.
- "Staying Competitive in a Global Economy: Human Capital Tops the List" *The Issue*. Ohio Board of Regents, September 2005.
- *The 21st Century at Work: Forces Shaping the Future Workforce and Workplace in the United States.* Rand Corporation, 2004.
- "The 21st Century Workforce" *The Issue*. Ohio Board of Regents, May 2002
- "The Coming Knowledge Drain" *Workforce Management.* November 21, 2005. P. 53-54.
- *The Graying of the Ohio Labor Force: Demographic Changes to 2012.* ODJFS, Bureau of Labor Market Information/Office of Workforce Development.
- Lucas County Auditor's Real Estate Information System
- Ohio Department of Development
- Ohio Department of Jobs and Family Services, Office of Workforce Development.
- Ohio Workforce Informer
- Regional Growth Partnership
- Texas A&M University, Real Estate Center
- US Bureau of Labor Statistics
- US Bureau of the Census
- US Small Business Administration

Report Overview

Geographic Scope:

The geographic scope of this report is the Northwest Ohio region generally and the Toledo Metropolitan Statistical Area and Lucas County particularly. As certain data are collected only on a county, MSA, or regional level, datasets utilized in this report will apply to one of four geographic territories, from which inferences can be made that apply to the entire region.

Toledo Metropolitan Statistical Area (MSA)

- Fulton County
- Lucas County
- Ottawa County
- Wood County

Limitations & Caveats:

With a mission to develop a comprehensive workforce system, The WIB is endowed with the responsibility to plan for that system. Caveats to the workforce demand identified and anticipated in this report include the economic aftermath of the 2005 hurricane season, US balance of payments and continued currency devaluation, and the federal budget deficit resulting from the Iraq War and higher national security expenditures. The rebuilding of areas devastated by Hurricanes Katrina and Rita alone could spur the growth of certain employments, while also inducing a workforce migration to the Gulf Coast. Continued high funding for security and military operations could compromise federal program funding in coming fiscal years, especially for state and locally operated human service organizations and educational institutions, so important in developing the capacity, skill, and readiness of the workforce.

Northwest Ohio Economic Region 2

- Defiance County
- Erie County
- Fulton County
- Henry County
- Lucas County
- Ottawa County
- Sandusky County
- Seneca County
- Williams County
- Wood County

* Northwest Ohio *(same as Region 2, but Paulding County added)*

Drivers of Workforce Change

The major drivers of workforce change in the aggregate will also be the major drivers for change in Northwest Ohio. Pervasive, ineluctable global trends *fundamentally* shape regional workforce demand and quality of workforce supply, and can eclipse smaller trends, including predicted local growth in demand occupations, when the global economy undergoes fast-paced, large-scaled transformation, as it has over the past two decades.

Three major drivers of workforce change have been identified in a landmark report prepared for the US Department of Labor by the Rand Corporation, a non-profit research 'think tank'. The report, *The 21st Century at Work: Forces Shaping the Future Workforce and Workplace in the United States*, published in 2004, identifies demographic shifts, technological change, and economic globalization as drivers—the underlying theme in our assessment of the State of the Workforce.

These drivers will have the following effects in the aggregate:

Demographic Shifts

The pace of workforce population growth has been slowing since the 1970s, but the workforce is still growing. In this decade, the nation's workforce growth rate is expected to continue at 1990s growth levels, averaging at 1.1% annually, but is forecast to drop to 0.4% annual growth in 2010-2012 and 0.3% the decade after.[1]

With the baby boom demographic beginning to retire, the workforce age distribution will begin to balance more evenly. Expect the workforce to more closely mirror the nation's population diversity, with higher proportions of participation, and thus more balanced participation, of minority racial and ethnic groups.[1]

Technological Change

The Rand report predicts that stronger, mutually advantageous relationships will be formed across and between technologies and disciplines, creating synergies that will more and more rapidly advance all technology.

The increasing reliance on technology by manufacturing and other sectors of the economy, and the worldwide availability of the technology, continue to change what work gets done in Northwest Ohio and what work gets exported to lower cost markets. To keep pace with rapid technological change, expect increased demand for highly skilled workers who can adapt to constantly changing work environments while continuously developing their skills.

Economic Globalization

Globalization will distribute and displace occupations and industries on the basis of competitive advantage. Globalization of economic markets presents both opportunities and threats to the local workforce market. On the one hand, some sectors such as the automotive industry continually seek opportunities to remain price competitive and so manufacture products on lower cost markets. Alternatively, a number of international businesses have established production facilities in Northwest Ohio in order to be close to automotive-related or purchasing industries. As this trend continues, if not accelerates, the local workforce will be increasingly displaced to new work environments with sometimes very different skill requirements and compensation structures.

The Question: How will these drivers impact our regional workforce?

1 *The 21st Century at Work: Forces Shaping the Future Workforce and Workplace in the United States.* Rand Corporation, 2004.

Workforce Supply

Population:

The populations of Northwest Ohio and Lucas County are expected to decrease slightly. We can infer that the population of the Toledo MSA will also shrink accordingly.

Total Population

	1990	% change	2000	% change	2004	2010	2020
Lucas County	462,361	-1.5	455,054	-1.0	450,632	444,873	434,648
Toledo MSA	614,128	0.7	618,203	-0.2	616,829	n/a	n/a
NW Ohio (11 counties)	978,534	0.9	987,405		n/a	983,768	978,122

Source: US Bureau of the Census
2010 & 2020 Projections Source: Ohio Department of Development

Lucas County Demographics:

The local workforce age distribution (between ages 16 and 65) will become more balanced, with a near-ample supply of younger workers to replace baby boomers when they retire.

- Overall, Lucas County's population demographics compare closely with national averages.
- Lucas County's demographics diverge with national averages in:
  - The proportions of Hispanic/Latino and Black/African-American populations, which are significantly lower.
  - The proportion of the foreign born population, also much lower.
  - The proportion of the population that speaks a language other than English at home.
- The county's age distribution bodes well for workforce replacement of older workers.
  - The largest age demographic, 45 to 54 years, accounts for 15.1% of the population, and is followed closely in size by the 35 to 44 and 25 to 34 years categories.
  - Perhaps most reassuring, the 5 to 14 years age demographic at 14.6% is the next largest age demographic behind 45 to 54 years.
  - With available US Census data, it is not possible to calculate the proportion of Lucas County's population in the 42 to 60 year-old age demographic, considered the baby boom demographic, or those born from 1946 to 1964.

Gender

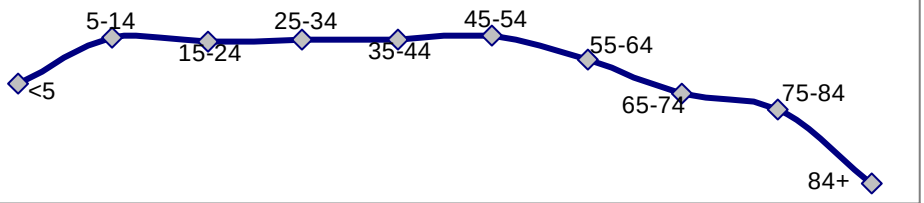
	%	US Avg. %
Male	47.7	48.9
Female	52.3	51.1

Age

	Age	US Avg.
Median Age	36.3	36.2
	%	**US Avg. %**
18 years & over	74.2	74.5
65 years & over	11.8	12.0

Workforce Supply

Age Distribution



	<5	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	84+
%	6.9	14.6	13.4	14.1	14	15.1	10.1	5.8	4.6	1.4

Race

	%	US Avg. %
White (includes Hispanic & Latino)	76.2	75.6
White (non-Hispanic/Latino)	71.1	61.4
Hispanic & Latino of any race	5.1	14.2
Black or African-American	17.6	12.2
Asian	1.4	4.2
Native-American or Alaska Native	0.1	0.8
Other	2.5	5.2
Two or more races	2.2	1.9

Disability Status

	%	US Avg. %
5 years and over	16.6	14.3

Foreign Born

%	US Avg. %
3.8	12.0

Speak A Foreign Language at Home

%	US Avg. %
7.1	18.7

Source: US Bureau of the Census, 2004 Data

Workforce Supply

Workforce Population—Lucas County:

Workforce size due to higher participation rates continues to enlarge in spite of decreasing population size, with a 0.8% gain in size since 1995. Females account for over 49% of Lucas County's workforce in 2004, closely mirroring their proportion of the population.

- About 70% of Lucas County's population is between the ages of 16 and 65.
- As of December 2005, 50.1% of Lucas County's total population is in the civilian workforce, but only 46.4% of the total population is civilian employed. As of December 2005, 50.5% of the nation's population is in the civilian workforce, with 48.0% of the total population employed.

Lucas County					
	1995	% change	2004	% change	Dec. 2005
Workforce	225,335	0.2	225,842	0.6	227,210
Employed	213,732	-2.1	209,230	1.6	212,659
Unemployed	11,603	43.2	16,612	-12.4	14,551
Unemployment Rate %	5.1	2.3	7.4	-1.0	6.4

Source: US Bureau of the Census
Data not seasonally adjusted

Workforce Population—Toledo MSA:

Main Point: Workforce participation has increased 2.6% in the MSA since 1995. The MSA has a higher rate of workforce participation than Lucas County.

- As of December 2005, 54.5% of Toledo MSA's population is in the civilian workforce, with 50.7% of the total population civilian employed. The national average for December 2005 is 50.5%.

Toledo MSA					
	1995	% change	2004	% change	Dec. 2005
Workforce	330,973	1.7	336,450	0.9	339,473
Employed	314,305	-0.5	312,853	1.6	317,980
Unemployed	16,668	41.6	23,597	-8.9	21,493
Unemployment Rate %	5.0	2.3	7.0	-0.7	6.3

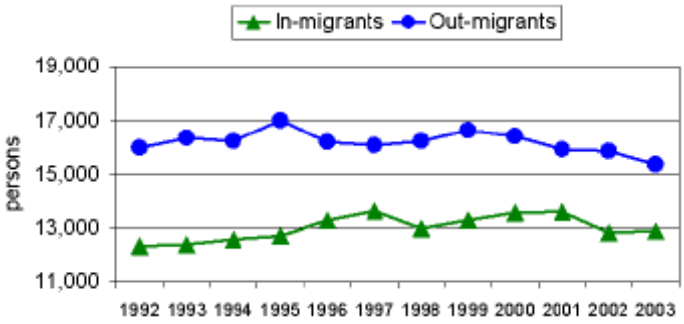
Source: US Bureau of the Census
Data not seasonally adjusted

Workforce Mobility & Stability:

Population Migration

The region has experienced high levels of negative net migration, begging the questions of why our area might be undesirable, why certain employments and industries cannot be sustained, or why we can't retain the more mobile component of our population. In spite of high out-migration and negative net migration, the area benefits from low population churn.

Lucas County Migration Trends



Source: Ohio Department of Development, Lucas County Profile

An indicator of the relative desirability of a geographic area is its net migration. Negative net migration, like that in Lucas County, results from higher out-migration than in-migration. Lucas County's negative net migration indicates that the area struggles to recruit residents, and may even be viewed as a less desirable place than other Ohio counties. In the period of 1986 to 1997, Lucas County had the fourth highest number of negative net migrants of Ohio counties, at –36,385 migrants.[2]

Although Lucas County's out-migration has decreased since the early 1990s, the phenomenon merits discussion as to the desirability of living in Lucas County, the sustainability of employments in fading industries, and the availability of certain employments to retain the more mobile population—those people with higher skill and educational levels.

Another indicator of the relative stability of a population and its resident workforce is population churn. Churn is a measure of how much change there is in the population, by adding together the absolute values of births, deaths, international in-migration, international out-migration, domestic in-migration, and domestic out-migration, and dividing this number into the total population. Lucas County's churn value is low relative to many counties in the US, especially where immigration and large in-migration is robust. In places with low churn values, community organizations tend to be well-adapted and equipped to supply necessary services and accommodations to the population, including special educational and welfare services (e.g., English instruction for non-English speaking immigrants, etc.).

Regional & National Population Trends

According to a study released in July 2000 by the Ohio State University Extension Data Center, more Americans move to southern geographic regions of the nation than to northern regions.[2] This trend has stunted population growth in the Midwest, but sufficient in-migration coupled with natural population increase has resulted in modest population growth. For 2000, the populations of Ohio, Northwest Ohio, and the Toledo MSA all increased over 1990 levels. However, population growth for all three territories was well below the national population growth average of 13.2%.

By the late 1990s, approximately one in six Americans moved each year, with nearly two-thirds of that population moving within a county.[2] One in 18 Americans moves to a different county each year, or about 5.6% of the population.

2. "Ohio's Geographic Mobility" *Ohio Trends* Vol. 1, No. 3, July 2000. Ohio State University Extension Data Center.

Workforce Supply

Lucas County Population Change						
	Population	Total Population Change	Births	Deaths	International Migration	Net Domestic Migration
1991	462,292	-69	9,982	5,450	274	-5,953
2001	454,680	-374	8,285	5,979	777	-3,376
2002	453,963	-717	6,345	4,451	605	-3,171
2003	453,243	-720	6,210	4,462	592	-2,994
2004	450,632	-2,611	6,075	4,601	594	-4,662

Source: US Bureau of Census data compiled by Texas A&M University, Real Estate Center

Worker Mobility:

Lack of mobility can be a major obstacle to landing employment, especially for the comparatively high number of impoverished individuals and families in Lucas County. Lucas County attracts one of the highest numbers of daily worker in-commuters in Ohio.

Poverty & Mobility

The largely immobile impoverished population faces a most fundamental obstacle to working—getting to the workplace!

Mode of Transportation to Workplace Lucas County	
	% of Workforce
Car, truck, or van—drive alone	85.5
Car, truck, or van—carpool	9.2
Public Transportation (excluding taxi)	1.0
Walk	1.3
Other Means	1.2
Work at Home	1.8

Source: US Bureau of Census, Selected Economic Characteristics, 2004

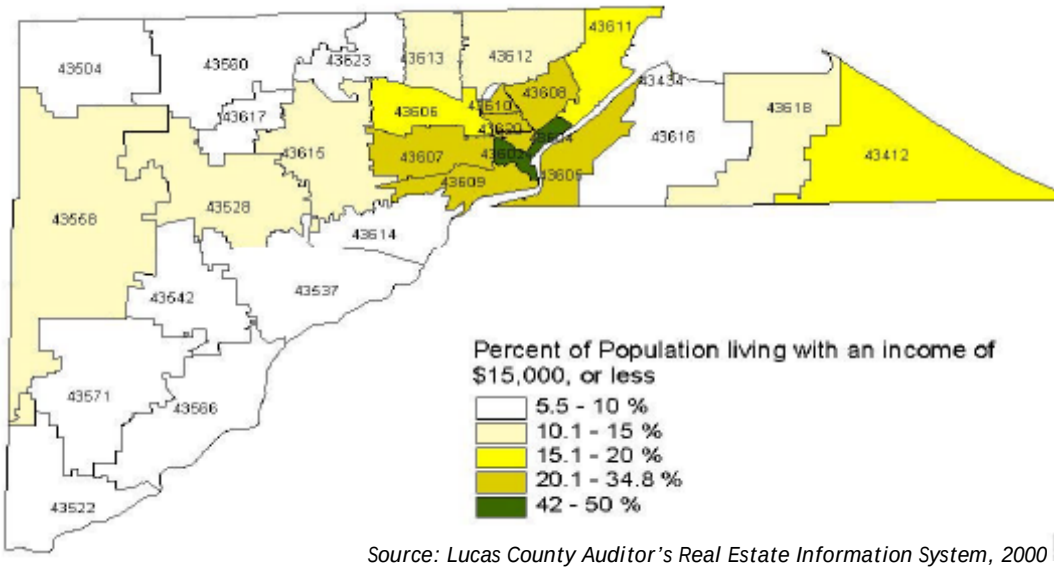
Public transportation schedules and routes are coordinated to increase the mobility of the infirm, disabled, elderly, and poor, and increasingly routes and schedules service popular workplace areas of the metropolitan area. However, the impoverished still face commuting obstacles, for they are more inclined to land low-paying, low-skill service occupations, and service sector employers often are not concentrated into distinct geographic territories afforded public transit service, but instead overspread the metropolis with ubiquity.

When a service sector employer is seeking employees or when policies to increase workforce participation are formulated, mobility, with supply and quality of public transportation, is a highly relevant factor.

- Lucas County's poverty rate was 13.9% in 1999 (*Source: US Bureau of the Census*)
- The distribution of the county's poverty is especially concentrated in Toledo, but is also a salient feature of outlying zip codes, including areas of Springfield and Spencer Townships in western Lucas County, and Jerusalem Township in the east.

Workforce Supply

% Lucas County Population Earning Less than $15,000 Annually by Zip Code



Source: Lucas County Auditor's Real Estate Information System, 2000

Lucas County Commuting

Average Commute Time	21.3 minutes
Lucas County Commute Volume	In: 51,466
	Out: 32,211
	Within: 175,374
	Net: 226,840
# Commuters in Lucas County (net of in- and out- commuters)	19,255

Source: Regional Growth Partnership, 2000

Daily Commutes In & Out of Lucas County

County of Residence	County of Workplace	Number of People
Lucas	Lucas	175,374
Wood	Lucas	19,504
Lucas	Wood	17,054
Monroe, MI	Lucas	12,654
Fulton	Lucas	5,203
Lucas	Monroe, MI	4,456
Ottawa	Lucas	3,418
Lucas	Fulton	1,957
Lucas	Wayne, MI	1,906
Lenawee, MI	Lucas	1,557
Sandusky	Lucas	1,537
Henry	Lucas	952
Wayne, MI	Lucas	922

Source: Ohio Workforce Informer, 2000

Lucas County Commuting Patterns

- Like most urban areas in Ohio, the core city and county of a metropolitan area attract the most in-commuters.
- According to the Ohio Bureau of Labor Market Information, Lucas County is among only five counties statewide with a net gain of over 15,000 commuters per day.

Workforce Supply

Workforce Employment by Occupation:

The five largest occupational employment categories have a low hourly wage of $13.12. Manufacturing has declined precipitously.

- The five largest occupational employments are:
  - Office and Administrative Support at 16.1%
  - Production at 11.7%
  - Sales and Related at 10.2%
  - Food Preparation and Serving Related at 9.0%
  - Transportation and Material Moving at 8.9%
- The average hourly wage of the five highest occupational employments is $13.12.

Toledo MSA Manufacturing Decline

While an agriculturally–rich region of the United States, Northwest Ohio is more notably a major manufacturer and assembler of capital and durable goods, along with being a major manufacturer of transportation equipment. The transportation equipment cluster has long been considered the primary component of the area's economy. However, between 2000 and 2004 nearly 10,000 manufacturing jobs were lost in the Toledo MSA.

Toledo MSA Manufacturing Decline

	All Manufacturing		Transportation Manufacturing	
	Establishments	Employees	Establishments	Employees
2000	1,137	61,605	n/a	n/a
2001	1,125	58,922	n/a	n/a
2002	1,085	55,386	77	16,361
2003	1,074	52,767	75	16,629
2004	1,029	51,875	70	15,237

Source: ODJFS, Office of Workforce Development

The decline of manufacturing poses the workforce development system with the challenge of preparing a massive supply of displaced workers for either demand occupations or occupations likely to result in the near future from growth industries.

Workforce Supply

Occupational Employment Categories in the Toledo MSA	Employment	% Total Employment	Hourly mean wage	Annual mean wage
Total, all Occupations	307,070		$16.93	$35,220
Management	10,680	3.5	$40.40	$84,040
Business and Financial Operations	10,050	3.3	$23.95	$49,810
Computer and Mathematical	2,930	1.0	$25.02	$52,030
Architecture and Engineering	4,290	1.4	$26.46	$55,030
Life, Physical, and Social Science	2,160	0.7	$23.00	$47,830
Community and Social Services	4,670	1.5	$17.41	$36,210
Legal	2,020	0.7	$28.91	$60,120
Education, Training, and Library	16,160	5.3	$21.37	$44,450
Arts, Design, Entertainment, Sports, and Media	3,290	1.1	$17.45	$36,290
Healthcare Practitioner and Technical	20,020	6.5	$28.41	$59,080
Healthcare Support	10,380	3.3	$11.65	$24,230
Protective Service	5,590	1.8	$14.67	$30,520
Food Preparation and Serving Related	27,760	9.0	$8.17	$16,990
Building and Grounds Cleaning and Maintenance	9,570	3.1	$10.39	$21,610
Personal Care and Service	6,820	2.2	$9.61	$19,980
Sales and Related	31,310	10.2	$14.39	$29,920
Office and Administrative Support	49,420	16.1	$13.12	$27,290
Farming, Fishing, and Forestry	240	0.1	$11.28	$23,460
Construction and Extraction	13,010	4.2	$21.35	$44,420
Installation, Maintenance, and Repair	13,640	4.4	$18.17	$37,800
Production	35,860	11.7	$16.26	$33,830
Transportation and Material Moving	27,230	8.9	$13.64	$28,380

Source: Bureau of Labor Statistics

Workforce Supply

Workforce Educational & Training Attainment:

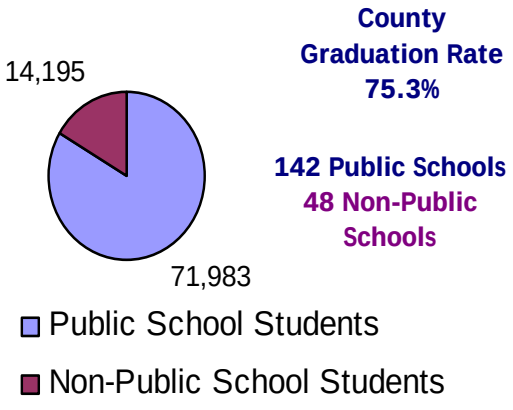
Lucas County's educational attainment is on par with national averages. The majority of persons with bachelor or higher degrees reside in outlying areas.

Lucas County	%	US Avg. %
High School graduate or higher	85.2	83.9
Bachelor degree or higher	21.6	27.0
Less than 9th grade	3.3	
9th to 12th grade, no diploma	11.6	
High school graduate (inc. GED)	35.2	
Some college, no degree	21.6	
Associate degree	6.7	
Bachelor degree	15.6	
Graduate or professional degree	6.0	

Source: US Bureau of Census, 2004

Primary & Secondary Enrollment

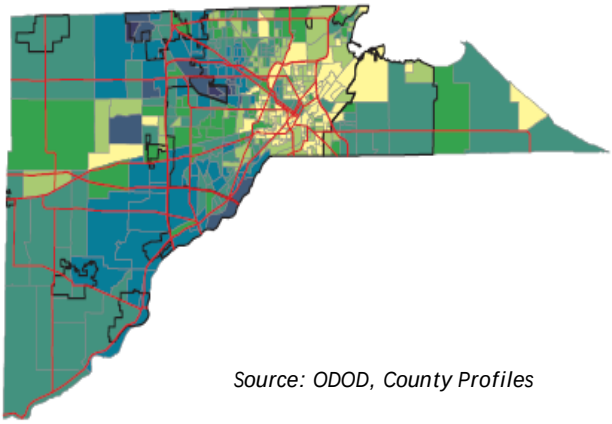
Annually, Lucas County produces over 4,000 high school graduates. (Source: American Community Survey, 2003). This is the start of the supply pipeline of a qualified, talented workforce.



County Graduation Rate 75.3%

142 Public Schools
48 Non-Public Schools

Source: ODOD, County Profiles, 2004



Percent of Persons 25 and Older With a Bachelor's Degree or Greater 2000

- 0% to 5%
- 5% to 10%
- 10% to 15%
- 15% to 30%
- 30% to 50%
- 50% to 70%
- 70% to 100%

Ohio – 21.1%
Lucas – 21.3%

Source: ODOD, County Profiles

Higher Education Enrollment

The supply pipeline of workers is enlarged over the numbers of students high schools graduate, as the concentration of so many higher education institutions attracts regionally, nationally, and internationally.

- Nearby two-year community colleges offering associate degrees have enrollment of 30,156 students.
- The total supply of college students and graduates far outstrips local and regional demand. However, certain college degrees are in high demand (example, four-year nursing degrees) and local demand is not being met with the number of qualified candidates who can be recruited.
- This large emerging workforce can be utilized in the regional economy if it can be accommodated.

Higher Education Institutions within One Hour of Toledo

Ohio Institutions	Type	Students		Michigan Institutions	Type	Students
University of Toledo	4-year	19,480		University of Michigan	4-year	39,533
Bowling Green State University	4-year	20,975		Eastern Michigan University	4-year	23,593
Owens Community College	2-year	20,160		Wayne State University	4-year	33,314
Terra Community College	2-year	2,634		University of Detroit/Mercy	4-year	6,000
Northwest State Comm. College	2-year	3,185		Madonna University	4-year	4,500
University of Findlay	4-year	4,881		Hillsdale College	4-year	1,281
Lourdes College	4-year	1,550		Sienna Heights College	4-year	2,153
Tiffin University	4-year	1,634		Adrian College	4-year	1,013
Defiance College	4-year	1,060		Monroe Community College	2-year	4,177
Heidelberg College	4-year	1,532				
Medical College of Ohio	4-year	1,114		Michigan Total		115,564
Ohio Total		*78,205*		**One Hour TOTAL**		**193,769**

Source: Regional Growth Partnership, 2004 Fall Enrollment Figures

The Brain Drain

A credible definition of 'brain drain' is given by the Ohio Board of Regents. Ohio is not suffering so much a brain drain as its inability to attract from elsewhere young, college-educated persons.

'Brain drain' describes a *net* loss of college graduates in a particular geographic area. In popular culture, brain drain has been widely used to refer to the net loss of young college graduates, defined by the Ohio Board of Regents as those graduates under age 30. Herein, "college graduate" designates attainment of a bachelor's degree or higher. Ohio Board of Regents measures brain drain based not on how many graduates from colleges and universities in Ohio remain in Ohio but on how the total number of college graduates in Ohio changes. For example, if two Ohio college graduates leave the state and three college graduates from other states move to Ohio, then there is a net gain of college graduates and a 'brain gain'. 'Brain exchange' describes a nearly even exchange of graduates.

Ohio is experiencing a brain drain, not because graduates are leaving the state in high numbers, but due to an inability to attract graduates to replace those out-migrants. From 1995 to 2000, out-migration in Ohio averaged 27% and gave the state a ranking of 42nd in the nation.[3] In 2003, 79% of Ohio resident graduates under 30 were employed in-state within one year of graduation.[3] However, from 1995 to 2000, there was a net loss of 24,662 college graduates under the age of 30.[3]

According to a November 2004 Board of Regents report, Ohio has difficulty attracting young college graduates due to:

- *Slow Job Growth*: From 1995 to 2000, the 5.6% increase in non-farm payroll jobs was half the national increase of 12.4%.
- *Low Wages*: The majority of young graduates leave Ohio for states where they can earn an average of 11.6% more, and these states usually are experiencing higher job growth.
- *High Education Levels in Low Demand*: In 2000, the state economy required a 4-year degree or more for only 19% of its jobs, compared to 20.7% for the nation.

This emerging workforce is abundant in our local area, but if in-migration cannot match or eclipse out-migration, the quality of our workforce supply will diminish, making us less attractive to high-skill employers.

3. "Is Ohio Experiencing Brain Drain?" *The Issue.* Ohio Board of Regents, November 2004.

Workforce Demand

Demand for Replacement of the Workforce:

Size & Demographics of the Workforce

Workforce size will continue to increase, yet growth in workforce size will slow while rampant growth continues in the global economy, necessitating technological innovation to make workers more efficient and to accommodate disabled persons into the workforce.

If population size and workforce size are directly related, and with the populations of Lucas County and Northwest Ohio forecast to decline slightly from now to 2020, the workforce could be expected to decrease accordingly. However, it is likely that the size of the workforce will be unchanged or actually enlarged, as workforce participation rates are likely to increase, just as they did in 1995 to the present in spite of population loss. Longer life spans, older age eligibility for certain federal entitlements, increasing participation of minority populations in the workforce, and the identification and ties that people have to their careers all can augment the size of the workforce.

In *The 21st Century at Work* report of the Rand Corporation, workforce growth is expected to continue in this decade at 1990s levels of expansion, 1.1% annually, but will diminish to 0.4% annually in the 2010s and 0.3% annually in the 2020s. This growth estimate is derived from immigration forecasts, natural population increase, the enabling of the disabled population with improved technological accommodation, and trends that suggest participation rates for minority populations will continue to increase.

As noted previously in this report, Lucas County's age distribution bodes well for workforce replacement of older workers, at least in terms of size. Although the baby boom generation will not be matched in the number of emerging workers, the emerging workforce size will not leave a large void. It is possible that a "mass exodus" of retiring workers could create a temporary shortage of qualified workers in some occupations and employments, which is why a pipeline of qualified workers must be prepared.

Retirements

In spite of the age 16 to 65 workforce demographics becoming more balanced, the age 65+ workforce will increase in size and as a proportion of the population. Men will dominate this workforce age demographic. Large numbers of 65+ workers could slow demand for net replacement of workers. Potential "knowledge deficits" must be assessed as an exodus by retirement could create critical worker and knowledge shortages.

The age 65+ workforce is expected to increase as a proportion of the Ohio workforce from 13.4% in 2002 to 16.9% in 2012.[4] This increase is in part attributable to the Senior Citizens Freedom to Work Act of 2000, which abolished earnings penalties, but is also attributable to financial necessity and the preference of some workers to remain engaged in employment.

Later retirement for the current workforce has three major implications for the current and emerging workforce. First, about two-thirds of position openings in Ohio derive net replacement necessity, and net replacement is driven primarily by retirements.[4] When older workers begin retiring from stagnant industries, there might not be a pipeline to supply workers to replace. Second, skilled trades and skilled production, even in manufacturing jobs that are often downsized or become obsolete by production process innovations. Third, fast growing industries in Ohio, such as the healthcare industry, will need to meet large growth needs, as well as large replacement needs.[4]

4. *The Graying of the Ohio Labor Force: Demographic Changes to 2012.* ODJFS, Bureau of Labor Market Information/Office of Workforce Development.

Critical Worker Shortages & Wisdom Withdrawal

What is 'wisdom withdrawal'?: The retirement of older workers who possess critical knowledge in occupations that are crucial to the survival of organizations and entire industries.

Abrupt, massive retirement of older workers at employments with high age medians and that lack younger workers threatens to paralyze certain industries. Industries identified as particularly vulnerable include utilities, oil and gas extraction, chemical, and aerospace, as well as public administration/government.[4] As mentioned previously, in the case of Ohio, skilled trade and skilled production occupations might experience a critical worker shortage, in spite of automation and innovative production processes.

More daunting, replacing wisdom withdrawal is essential to organizational survival. Organizational structures that do not groom or promote younger employees and industries with slow growth or stagnation that have not hired younger employees are top heavy with experienced, knowledgeable leaders. Critical knowledge needs should be identified and crisis planning undertaken by human resources departments to brace for an exodus of the knowledge guardians at the top.[5] HR departments should also plan for replacing retirees from positions that are difficult and unglamorous, and that do not attract younger workers and for which younger workers are not qualified. A local example might be maritime occupations in Great Lakes freight shipping, where workers are away from home for weeks at a time.

To ameliorate the critical worker and wisdom withdrawal resulting from retirements, organizations have three major options. First, delaying older workers' retirements might be necessary and can be achieved by changes in work culture and protocol, as well as with pay and benefits increases.[5] Second, some organizations might have to undertake large training initiatives to quickly train new workers.[5] Third, business strategies could be modified to reduce the dependence on certain knowledge, occupational skills, or the relative importance of jobs from which many workers are retiring.[5] As an example, a European postal delivery client sought help from IBM's Business Consulting Services' Human Capital Management group to devise a solution to massive retirement of delivery people, and has decided to devise a new strategy of delivering mail that relies much less on manual letter carrying.

Turnover & Retention

In an expanding, knowledge-based economy, high global economic growth and high wages paid to knowledge workers will create more disposable income, much of which will be spent in the service sector. The service sector will continue to grow, but the wage gap will widen and high turnover will continue to be a headache for employers.

Low-wage, low-skill positions incur the highest rates of worker turnover, with the service sector leading in turnover. Net replacement of low-wage, low-skill positions constitutes the largest employment demand in most markets, including the Toledo MSA. These positions tend to be in highest demand because they:

- Tend to have high employee turnover due to subsistence wages[6]
- Have low barriers to entry and require little training, so can draw from a large labor pool[6]
- Provide cost-efficient, labor-intensive jobs that cannot be replaced by technology[6]
- Depend on the rise of personal and household discretionary incomes[6]

Retention in low-wage, low-skill positions is difficult because of the appeal of marginal gains to be realized with other employers and competition among employers. For industries scrambling to replace retiring workers, the job seekers' market that may result will necessitate innovative and generous benefits packages to retain workers.

5. "The Coming Knowledge Drain" *Workforce Management.* November 21, 2005. P. 53-54.

6. *Occupational Analysis: Toledo Metropolitan Area*, August 2005, Neil Reid, PhD Urban Affairs Center, University of Toledo and Michael C. Carroll, PhD Center for Regional Development, Bowling Green State University.

Workforce Demand

Fastest Growing Local Workforce Demand:

Demand Occupations

Most of the job openings in the Toledo MSA will be in occupational fields that pay below the MSA average salary.

To fully capture workforce demand, it is useful to look at highest occupational demand and the fastest growing occupations. Highest occupational demand can result from occupational growth, but in the Toledo MSA, results largely from high turnover in service sector positions. Fastest growing occupations, however, present a picture of jobs that are being created—new jobs—and these are mostly good-paying jobs that demand high skills and educational attainment.

Highest Workforce Demand by Occupation

These occupations are top demand occupations in terms of projected job openings (growth and replacement) for the Toledo MSA, 2002-2012. These projections include the jobs created as a result of expansion of the economy and from retirements and occupational turnover.

The total number of different occupations for the Toledo MSA is 382. The average salary for the top 50 demand occupations is $24,170. This is significantly lower than the current average salary of $36,087 for all occupations in Toledo. Of the top 50 demand occupations, only 6 have salaries above the MSA average.

The most common type of education and training that will be required over the next 10 years is short-term, on-the-job training. Fifty-eight percent of the top 50 demand occupations will require short-term, on-the-job training, with 22% requiring moderate-term, on-the-job training.

Top 10 Workforce Demand by Occupation, 2002-2012, Toledo MSA

	2012 Total	Growth	Replacement	Median Annual Wage
Cashiers, except gaming	5,384	1,151	4,233	15,420
Combined food preparation and serving workers, including fast food	4,837	1,669	3,168	14,500
Retail salespersons	4,108	1,178	2,930	17,710
Waiters and waitresses	3,359	853	2,506	14,150
Laborers and freight, stock, and material movers, hand	2,723	458	2,265	19,710
Office clerks, general	2,022	644	1,378	22,280
Janitors and cleaners, except maids and house-keeping cleaners	1,978	970	1,008	18,250
Stock clerks and order fillers	1,424	-182	1,606	19,270
Customer Service Representatives	1,714	1,063	651	26,240
Nursing aides, orderlies, and attendants	1,547	1,014	533	19,960

Source: Occupational Analysis: Toledo Metropolitan Area, August 2005, Neil Reid, PhD Urban Affairs Center, University of Toledo and Michael C. Carroll, PhD Center for Regional Development, Bowling Green State University.

Workforce Demand

Fastest Growing Occupations, 2002-2012, NWO Economic Development Region 2

	2002	2012	Total Change	% Growth	% Annual Growth	Avg. Wage
Medical Assistants	1,390	2,120	730	52.5	4.3	$11.74
Occupational Therapist Assistants	240	360	120	50.0	4.1	$18.89
Computer Software Engineers, Systems Software	170	250	80	47.1	3.9	$28.14
Physical Therapist Assistants	540	780	240	44.4	3.7	$17.55
Physical Therapist Aides	180	260	80	44.4	3.7	$9.86
Network Systems and Data Communications Analysts	260	370	110	42.3	3.6	$27.71
Environmental Engineering Technicians	120	170	50	41.7	3.5	$17.59
Home Health Aides	2,080	2,920	840	40.4	3.5	$9.59
Dental Hygienists	470	650	180	38.3	3.3	$26.64
Dental Assistants	760	1,050	290	38.2	3.3	$13.64

Source: Ohio Workforce Informer

Industries

All composite industries are predicted to grow. Within composite industries, however, individual industry losses and gains can be expected. In the "Transportation and Warehousing" composite industry, whereas the transportation logistics industry might grow, the automotive industry might decline.

Of the top 30 fastest growing occupations, seven of the occupations have an average wage of more than $30 per hour, including the positions of pharmacist, computer software engineer, management analyst, sales manager, and architect.

Fastest Growing Industries, 2002-2012, NWO Economic Development Region 2

	2002	2012	Total Change	% Growth	% Annual Growth
Administrative and Waste Services	22,200	27,800	5,600	25.2	2.3
Real Estate and Rental and Leasing	5,500	6,800	1,300	23.6	2.1
Professional and Business Services	38,600	46,100	7,500	19.4	1.8
Health Care and Social Assistance	53,100	62,800	9,700	18.3	1.7
Financial Services	15,900	18,700	2,800	17.6	1.6
Education and Health Services	58,100	68,300	10,200	17.6	1.6
Transportation and Warehousing	14,000	16,400	2,400	17.1	1.6
Information	6,000	7,000	1,000	16.7	1.6
Arts, Entertainment, and Recreation	8,300	9,500	1,200	14.5	1.4
Finance and Insurance	10,400	11,900	1,500	14.4	1.4

Source: Ohio Workforce Informer

Workforce Demand

Predicted Future & Emerging Occupations:

The cluster-based growth strategy currently being pursued in Northwest Ohio could make for bountiful economic and occupational growth in the region.

"Clusters": The Driver of Industrial & Occupational Growth

In summer 2005, the Workforce Investment Board commissioned a study on the workforce impact of the cluster-based growth strategy being pursued in Northwest Ohio. Dr. Neil Reid of the Urban Affairs Center at the University of Toledo and Dr. Michael C. Carroll of the Center for Regional Development at Bowling Green State University identified the strategy as having the potential to produce occupational growth in high skill, high wage positions.

Clusters are geographic concentrations of interconnected companies who work in tandem with each other, local suppliers, infrastructure providers, educational institutions and other relevant agencies.

Traditionally, desired growth has focused around particular industries. For example, manufacturing occupations from automotive industry growth has long been desired in Northwest Ohio. The focus has been primarily on one type of occupational category—manufacturing—with manufacturing support positions also considered (such as accountant, secretarial, human resources, etc. positions). However, greater growth potential can be realized when the full range of occupations across many companies and institutions connected to automotive industrial growth is identified, and especially when a synergistic match is made between these occupations and the primary industry. For example, when pursued through a cluster-based growth strategy, automotive industry growth in Northwest Ohio creates research and development occupations with educational and research institutions, logistics occupations with trucking and shipping firms, construction occupations with construction companies and public works providers, and growth at auto industry suppliers. There may also be some growth in manufacturing occupations, although it is more likely that innovations in manufacturing techniques will make certain occupations obsolete while making others more highly skilled.

The key to working the cluster-based strategy is in taking the competitive advantage we have in certain extant human, natural, and infrastructure resources, and matching and coordinating industry needs with these local resources. Economic development organizations in Northwest Ohio are strategically matching up local talent and capabilities to industry demand, which develops and nurtures existing business networks, but also creates new networks, and which will help to expand locally the number of high-paying occupations, increase the rate of new business formation, and enhance the innovative capacity of local industry.

Clusters Identified for Northwest Ohio

Industrial Clusters:

- **Automotive**
- **Plastics**
- **Glass**
- **Specialized Energies**

Cross-cutting Clusters:

- **Transportation Logistics**
- **Information Technologies**
- **Advanced Engineering**
- **Alternative Energies**

Implications of the cluster-based growth strategy for workforce growth and development are significant. Greater demand in knowledge-based occupations will require a more highly skilled and educated workforce. Once prepared and employed, this workforce has the potential to assume high paying positions. Such a workforce will compete well in a global economy, where high paying positions go to the geographic territories with the greatest competitive advantage in knowledge. Such a workforce might have a younger median age, as it will require highly educated workers who can be readily recruited from local educational institutions. Finally, such a workforce, engaged in innovative production and relying on innovative technologies, will be creating further demand for technological capital to meet high-tech production goals.

	# Growth Occupations
Production	18
Office and Administrative Support	7
Transportation and Material Moving	6
Installation, Maintenance, and Repair	6
Other	13

Source: Occupational Analysis

Example: The Automotive Cluster

The automotive cluster is forecast to produce high occupational growth in five employment fields. According to the Reid and Carroll report, the average salary of these automotive cluster 50 growth occupations will be above the current average Toledo MSA salary.

Health Care

The dominance of health care sector demand cannot be neglected, even though the cluster-based strategy does not target the sector. Health care is the largest industry in the City of Toledo and a top industry in Northwest Ohio. Seven of the 10 fastest growing occupations are in the health care industry, and the health care and social assistance industry, bundled together, is forecast to grow 18.3% between 2002 and 2012, adding 9,700 jobs, making it the fourth fastest growing industry in the region. *See above charts on fastest growing occupations and industries.*

Demand for Skills, Education, and R&D

Skills

Skills are the foundation for further learning, adaptability, and ultimate success in today's and tomorrow's workforce. Employers are nearly universally demanding a mix of basic, life, soft, and hard skills. Workers must be versatile—versatility ensures day-to-day productivity—but workers must also be adaptable—adaptability ensures survival. The fittest workers have skills and education that make them versatile and adaptable.

"In the last century, the benchmarks of literacy were the basics—reading, writing, and arithmetic. Most workers with these basic literary skills and a good work ethic could find a decent job and provide a comfortable standard of living for themselves and their families." [7]

Employer-Identified Needs

From a roundtable discussion on the State of the Workforce, which brought together employers, educators, community leaders, and workforce development professionals, employers cited the following as essential to meeting current workforce needs:

Skill needs:

Basic math, basic reading, computer competency, ability to self-direct work, multiple skills, and punctuality and attendance

Intangible needs:

Willingness to learn new skills and tasks, willingness to learn before assuming higher positions, commitment to help the business grow, ability to use and adapt to new technologies and protocols, and a positive attitude and strong work ethic

7. "The 21st Century Workforce" *The Issue*. Ohio Board of Regents, May 2002

Workforce Demand

Skill Categories

To better meet current and future workforce demand, the area workforce must have the following universal skills that are essential for success in today's and tomorrow's economies.

Basic Skills:

- **Literacy: the ability to read and write**
- **Numeracy: The ability to count, quantify, and make mathematical calculations**
- **Articulacy: The ability to communicate**

Life Skills:

- **Time Management**
- **Organization**
- **Balance responsibilities and roles**
- **Tolerate and accept diversity and diverse environments**
- **Punctuality and dependability**

Soft Skills:

- **Learning**
- **Adaptability**
- **Critical thinking/abstraction/ problem-solving**
- **Leadership**

Hard Skills:

- **Information competency skills**
  - **The ability to use computers and technology, but also an understanding of the kinds of information needed for a particular task**
- **Occupation-specific skills**
  - **The knowledge and abilities necessary to execute the primary functions of the occupation**

Skills and Employer Needs

- According to employers, the workforce is most deficient in soft skills.
- Soft skills are acquired largely through mentally challenging stimuli, such as through problem-solving.
- Education systems need to help students develop their critical thinking and problem-solving abilities, which are two core soft skills.
- Families and communities that support the intellectual growth of children as well as adults are fertile facilitators for soft skill acquisition.
- Regardless of the occupation, there is one primary hard skill needed: information competency. Information competency can be achieved only if the workforce brings sufficient learning skills to adapt to and master the technological demands of their occupations. Technology training and retraining is a must for nearly all occupations, and the competency to locate and distinguish relevant information is increasingly demanded of occupations.

Education

Acquisition of hard skills and higher educational levels is becoming a must, due to retraining needs, professional development, and one's employability in a changing economy. Associate degrees or journeyman certifications have become necessary for skilled trades and occupations demanding high technical skills, especially in today's manufacturing and production environment.

Demand for the Current Workforce to Gear Up

Hard skills, particularly information competency skills, so necessary for the execution of today's work, are demanded from the current and future workforce. To meet this demand, technology education initiatives in primary and secondary education have manifested into most school curricula. But for certain segments of the current workforce, there may be a competitive disadvantage due to a lag in information competency skills, which could contribute to global relocation of certain employments. Workers have two opportunities to acquire this knowledge, in that either they can take personal initiative to learn these skills or their employers can provide professional development and retraining.

Professional development and retraining is essential to meeting this demand, as well as reimbursement for individual educational expenses. Individual demand for more training and education is driven by cost, employer reimbursement, geography, transportation, and the value one places on knowledge. Busy personal lives, long working hours, and financial handicaps are major obstacles to worker education and training.

Post secondary education provides the most fundamental educational and skills attainment for employability and success. Associate degrees, skilled trade certifications, professional licenses, and other credentials have become essential qualifications for most all good-paying occupations.

Demand on the Emerging Workforce

The emerging workforce, more than past generations, must possess the universal skills outlined above, plus have significant training and education in hard skills. Levels of post-secondary education correlate strongly with earnings potential and employability. Technical training and apprenticeship programs, along with various two-year degree programs and certifications, are essential minimum training and education to land good-paying employment and survive in an increasingly knowledge-based economy.

Research & Development

Concentrations of knowledge and research capacity attract the growing high-tech, knowledge-based employers and industries, while making the area desirable to a range of industries, even if mature industries.

In the cluster-based growth strategy pursued in Northwest Ohio, demand for innovation from industry will be aligned with the research capacity of the region. Area colleges and universities must be willing to partner faculty research and scholarship with industry demands, as well as create a reputation as research and development centers. Microsoft founder and CEO Bill Gates emphasizes that high-technology economic and industry growth, the kind anticipated to grow most rapidly over the next several decades, locates in areas with quality talent, particularly in areas leading research.[8] To court high technology demand employers for innovation and R & D, Northwest Ohio must supply the research and development workforce.

8. "Staying Competitive in a Global Economy: Human Capital Tops the List" *The Issue*. Ohio Board of Regents, September 2005.

Workforce Demand

Demands on Compensation Levels

Compensation and benefit levels must move with national trends and local cost of living indices to counteract Ohio's brain drain and afford Ohioans quality of life.

Challenges to compensation and benefit levels of the present include:

- *The mobility of the college-educated workforce:* As previously mentioned, of young college graduates who leave Ohio for jobs, they migrate to states that pay 11.6% more on average.
- *Turnover:* Greater turnover in traditional employment relationships forecast by the Rand Corporation in its the *21st Century at Work Report* will necessitate fringe benefit offerings. The report also suggests that high skill workers will demand from their employers more stimulation in their work and opportunities to excel, do more, and achieve promotion.
- *Medical Costs:* The high cost of medical care, including preventative care, to employees may well increase demand for health insurance provision.
- *Higher Skills Command Higher Wages:* If employer demand is for higher skills, employers must pay more.

The Global Demand

As our economy transitions, it is increasingly tied to international markets and dependent for success on local skill availability, affordable workforce cost, and adequate supply of other resources.

Increased global economic interdependence, fostered by international political arrangements, technology, and the value of efficiency and choice of markets with competitive advantage, has contributed to massive displacement of certain industries. Manufacturing-intensive industries, particularly those that produce consumer goods, are notable in their exodus from the United States. Manufacturing-intensive Ohio and the Midwest have been wounded economically from the effect of declining manufacturing.

The aggregate demands on the international workforce are to embrace globalization as a means for more efficient and abundant production, embrace technological change as a primary instrument for competitive advantage, and to be inclusive of the whole workforce by better accommodating diversity and disabilities.

Creating & Meeting Demand

Occupational demand in our region will be created and met mostly from two sources: Existing businesses and synergies being forged among businesses and infrastructure, and small business expansion and founding. Nurturing the existing community with a quality workforce supply promises a high return on investment, potentially much higher than using resources to court new businesses to the area. When the regional workforce meets demand, auspicious conditions for business expansion and job creation are paved. Occupational demand in our region also will be created by small business expansion and founding. Eighty percent of new jobs are created by small businesses.[9] The strategies being pursued in Northwest Ohio are based on the premise that real growth comes from within and that matching existing infrastructure and workforce supply with business demand is an efficient, effective means to make our area and its workforce increasingly desirable to employers.

9. United States Small Business Administration

Conclusion

The regional workforce supply and workforce demand will be shaped by demographic shifts and technological advances and changes, in tandem with larger national and international trends. Globalization will continue to generate large economic gains in the aggregate, with potentially large gains in the region if our economy can become increasingly knowledge-based. To succeed as a region in the current and coming decades, we must respond to workplace needs and develop ways to efficiently meet them. Principally, we must ensure the proper workforce supply to meet the workforce demand by identifying workforce demands of industry and employers, preparing our workforce with the skills necessary to satisfy those demands, and crafting and evolving a comprehensive workforce development system to deliver a highly-skilled, capable workforce to the marketplace.

We must also:

- Keep pace with worker recruitment techniques used by human resources
- View turnover and retirement not only in terms of people and positions, but in terms of knowledge retention
- Meet the needs of older workers, more disposed to be dislocated from jobs because of changing technology and more inclined to have a tenuous financial position than younger workers
- Build a pipeline of skilled, qualified, and competent workers to replace retirees
- Provide community education and convene community partners to promote lifelong learning and stress the importance of personal responsibility in landing and keeping employment
- Forecast employers' needs, as they are a moving target

Although we cannot foresee the future in high resolution quality for our workforce and economy, we can harness the promising trends on our horizon, prepare for and counteract the changes that threaten our viability, and pursue coordinated strategies in collaboration to realize gains that will ensure abundant opportunities for our region's citizens, employers, and posterity.

Workforce Investment Board
OF LUCAS COUNTY

PO Box 818
Toledo, OH 43697
www.thewib-lc.org
419.213.6270 419.213.6275f

The WIB is a business-led partnership of private and public sector representatives and a private, nonprofit organization. We focus on identifying and meeting the workforce challenges of employers that are or would like to be located in the region. We also provide strategic planning, policy guidance, and oversight for employment and training programs offered through The Source—Lucas County's One-Stop Career Center. The WIB collaborates with educational, economic development, and business advocacy organizations to leverage their collective resources for solutions to workforce issues that benefit both employers and job seekers.

Board Members

Executive Committee:

William Brennan, Chair
Jan Ruma, Vice Chair
Victoria Kamm, Secretary/Treasurer
William Benner
Stacy Hammer, Chair, Workforce Information Committee
Gary Johnson
Ann Okuley, Chair, Youth Council
Ron Rothenbuhler, Chair, One-Stop Committee

Jacqueline Barnes
Doris Beach
Michael Beazley
Marvin Belknap, Jr.
C. Kaye Brazier
Kathy Brentlinger
Daniel Briones
Tim Chambers
Anthony Coleman
Clement Cybulski, Jr.
Crystal Dixon
David Dmytryka
Phillip Fox
Jim Fry
Joanne Gall
Larry Gaster
Linda Glover
Rev. Otis Gordon
Eileen Granata
Olivia Holden
Paul Hubbard
Marisol Ibarra
Kimberly Johnson
Wun Jung Kim
Mark Kruse
Bob Maxwell
Amy Mergen
Dean Monske
James O'Brien
James Powell
Mollie de Rojas
Dale Shreve
Gregg Simon
Teresa Smith
Linda Stacy
Mary Jo Waldock

William K. Willis, Jr. *Executive Director*
Blake J. Culver, *Project Manager*
Kimberly Yost, *Executive Assistant*

This report is made possible by the generous auspices of Lucas County, Ohio and the Lucas County Commissioners.
Tina Skeldon Wozniak, President
Pete Gerken
Margaret Thurber