



# 2015 Ozaukee County Economic Indicator Report

Kate Pawasarat  
Ozaukee County UW-Extension  
Community Development Educator

Steven Deller  
University of Wisconsin--Madison/Extension  
Professor and Community Development Specialist

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# Executive Summary

The 2015 Ozaukee County Economic Indicator Report provides an analysis of economic data in an effort to better understand the current state of the Ozaukee County economy. The report has been prepared at the request of Ozaukee Economic Development and uses income and employment data to explore the strengths and weaknesses of Ozaukee County's economy.

## Key Findings

- Ozaukee County's residents and its workforce make up two somewhat overlapping, but different groups. A majority of people who live in Ozaukee County do not work in the county and the majority of people who work in Ozaukee County do not live in the county.
- Per capita personal income in Ozaukee County is strong and among the highest for US counties. In addition, Ozaukee County residents have a larger proportion of income from investments and property than residents in the four-county Milwaukee metropolitan area (Milwaukee, Ozaukee, Washington and Waukesha Counties) and the state.
- Median household income in Ozaukee County is also strong. Ozaukee County has a smaller proportion of low-income households and a larger proportion of high-income households, when compared to the Milwaukee area and the state.
- Ozaukee County job numbers have returned to pre-recession levels, while the Milwaukee area and Wisconsin have yet to fully recover (as of 2013) from employment losses experienced in the late 2000s. Yet annual average wages per job in Ozaukee County are below both the Milwaukee area and state averages.
- Annual average unemployment rates for Ozaukee County have consistently remained below Milwaukee area and Wisconsin rates over the last ten years, and have been declining since 2009.
- The manufacturing industry accounts for the largest share of jobs in Ozaukee County. The county has a relative strength or specialization in manufacturing, but the share of employment in manufacturing has been declining somewhat in recent years.
- The health care and social assistance industry accounts for the second largest source of jobs in Ozaukee County and has seen a considerable employment increase over the last five years.

# Introduction

As communities undertake economic growth and development initiatives, it is useful to reflect on the current state of the local economy. Where are we now, how did we get here, and where does it appear that we are going? Reflecting on these questions by reviewing the relevant economic data can help inform economic growth and development initiatives. To help stimulate this reflection, Ozaukee Economic Development approached Ozaukee County UW-Extension with a proposal to undertake a study of the Ozaukee County economy. This report is the product of that effort.

The intent of this study is not to make specific policy recommendations but rather to provide an objective analysis of economic data. What are the strengths and weaknesses of the county economy? What are the “comparative advantages” that can be built upon making for a more dynamic local economy? Are there elements of the economy that may be considered a “threat” to a more dynamic local economy? Can “threats” be turned into “opportunities”? One of the challenges when thinking about strengths, weaknesses, opportunities and threats, is that the data can be interpreted in more than one way: where some may see threats others see opportunities. One can think of whether the data suggest that the glass is half full or half empty. The intent of the analysis is to help stimulate reflection, discussion and refine our thinking about the local economy.

There are several ways to measure economic strengths and weaknesses ranging from employment and income to business formation and property values. Each measure of economic activity has its strengths and weaknesses. In addition, some may place more importance on some indicators over others. For example, is the high growth of low paying jobs preferable to slower growth in higher paying jobs? There is no “correct” answer and opinions may vary across communities. In this study we focus on income and employment. Here income includes total income as well as income from employment (wages, salaries and proprietor income).

We begin by exploring trends in income with a focus on sources of income and how income is distributed across households in the county. Next we explore patterns in county employment with a particular focus on using employment data to identify industrial (business sector) strengths and weaknesses. We compare levels of industrial employment in Ozaukee County to the four-county Milwaukee metropolitan area (Milwaukee, Ozaukee, Washington, and Waukesha Counties) and Wisconsin.

# Background

This report considers data sources that describe two groups of people: people who live in Ozaukee County and people who work in Ozaukee County (see Data Appendix for discussion). There is some overlap between the groups, yet, in many ways they reflect two distinct populations. The first section of the report focuses on the income patterns of people who live in Ozaukee County. It is important to note that a majority of employed individuals who live in Ozaukee County do not work in Ozaukee County (Figure 1). Instead many people work in neighboring counties including Milwaukee (39.4%), Waukesha (11.3%), Washington (6.0%), Sheboygan (2.4%), and beyond.

FIGURE 1. OZAUKEE COUNTY RESIDENTS & PLACE OF WORK



WHERE OZAUKEE COUNTY RESIDENTS WORK	SHARE
MILWAUKEE COUNTY	39.4%
OZAUKEE COUNTY	36.1%
WAUKESHA COUNTY	11.3%
WASHINGTON COUNTY	6.0%
SHEBOYGAN COUNTY	2.4%

Source: US Census Bureau, OnTheMap Application (2011 Primary Jobs)

The second section of the report focuses on the employment patterns of people who work in Ozaukee County. Here too, it is important to note that the majority of people who work in Ozaukee County do not live in Ozaukee County (Figure 2). In much the same way that Ozaukee County residents commute to neighboring counties for work, many Ozaukee County workers live in neighboring counties such as Milwaukee (22.9%), Washington (12.9%), Waukesha (7.2%), and Sheboygan (6.2%).

FIGURE 2. OZAUKEE COUNTY WORKERS & PLACE OF RESIDENCE



WHERE OZAUKEE COUNTY WORKERS LIVE	SHARE
OZAUKEE COUNTY	39.0%
MILWAUKEE COUNTY	22.9%
WASHINGTON COUNTY	12.9%
WAUKESHA COUNTY	7.2%
SHEBOYGAN COUNTY	6.2%

Source: US Census Bureau, OnTheMap Application (2011 Primary Jobs)

Given these commuting patterns, it is important to distinguish when data sources (see Data Appendix) describe the county's residents and when they describe its workers. Additionally, it is difficult to draw direct connections between resident-based income data and worker-based employment data, but both types of data provide useful information about Ozaukee County's economy.

# Income

Both personal income and household income are economic indicators that can be used to gauge the economic well-being and purchasing power of residents in a particular area. In this case, income includes all sources of income ranging from wages and salaries to investment income (e.g., dividends, interest and rent) and transfer payments (e.g., social security payments and unemployment insurance payments). This section focuses on the income of Ozaukee County residents.

## Personal Income

Ozaukee County continues to have the highest per capita personal income in the state, with a 2013 per capita personal income of \$66,164 (Table 1). This is considerably higher than the Milwaukee metropolitan area and Wisconsin as well as neighboring counties. The county's per capita personal income also stands out nationally. In 2013, Ozaukee County had the 64th highest per capita personal income in the US among 3,113 counties, with a per capita personal income of 147.8% of the US per capita personal income.

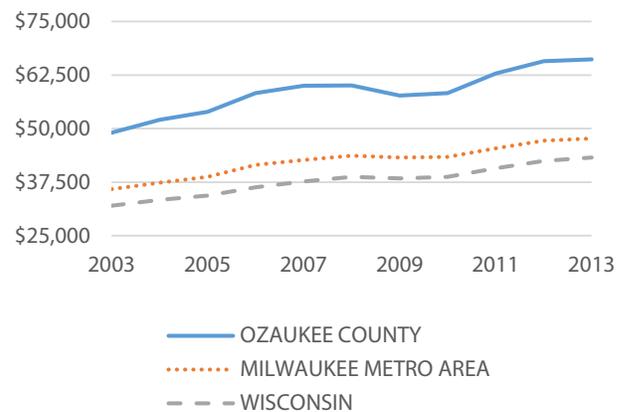
TABLE 1. 2013 PER CAPITA PERSONAL INCOME

OZAUKEE COUNTY	\$66,164
WAUKESHA COUNTY	\$59,379
WASHINGTON COUNTY	\$48,935
SHEBOYGAN COUNTY	\$46,508
MILWAUKEE METRO AREA	\$47,688
WISCONSIN	\$43,244
MILWAUKEE COUNTY	\$41,017

Source: Bureau of Economic Analysis

Looking at per capita income over the past ten years we can see a general upward trend and the effects of the Great Recession in the late 2000s (Figure 3). Note that income is presented in "nominal" dollars; the effects of inflation have not been removed. But given that inflation rates have been relatively modest over the past ten years, overall trends would remain if per capita income was presented in "real" dollars.

FIGURE 3. PER CAPITA PERSONAL INCOME



Source: Bureau of Economic Analysis

Perhaps more important is that per capita income as reported here does not reflect variations in the "cost of living" across the state and metropolitan area. One simple way to compare cost-of-living is to compare what the US Census refers to as "gross rent". "Gross rent" is the contracted monthly rent of an apartment plus estimated utility costs if not included in the monthly rent. Research has suggested that rental values are a strong predictor of cost-of-living.

Based on the most recent US Census data, the median gross rent for Ozaukee County is \$812 which is slightly more than for Milwaukee County at \$792, but lower than Waukesha County (\$908) and Washington County (\$820). The statewide median is \$759. When viewed in this light, per capita income in Ozaukee County is strong.

## Sources of Income

As noted previously, there are several sources of personal income including wages and salaries; supplements to wages and salaries (such as employer contributions for pension and insurance); proprietors' income; investment or property income including dividends, interest, and rent; and personal current transfer receipts, such as Social Security, Medicare and Medicaid benefits and unemployment insurance payments.

Net earnings by place of residence (which includes wages and salaries, supplements to wages and salaries, and proprietors' income) accounts for approximately two thirds of total personal income in Ozaukee County, the Milwaukee metropolitan area, and Wisconsin (Figure 4). The remaining third consists of income from dividends, interest, and rent as well as personal current transfer receipts.

In Ozaukee County, investment and property income from dividends, interest, and rent account for a much larger proportion of income. In 2013, income from dividends, interest and rent accounted for 25% of total personal income in Ozaukee County, compared to 18% in the Milwaukee metropolitan area and 18% in Wisconsin. Conversely, personal current transfer receipts account for a larger proportion of income in the Milwaukee area (17%) and Wisconsin (17%), compared to Ozaukee County (10%).

There are both positive and negative dimensions to the county's higher dependency on investment and property related income. The strength is that much of this money reflects an inflow of dollars from outside the county. The higher the level of these "injections" of income into the region the greater

the potential for stimulating local economic activity. The weakness is that these flows can be sensitive to changes in the financial markets.

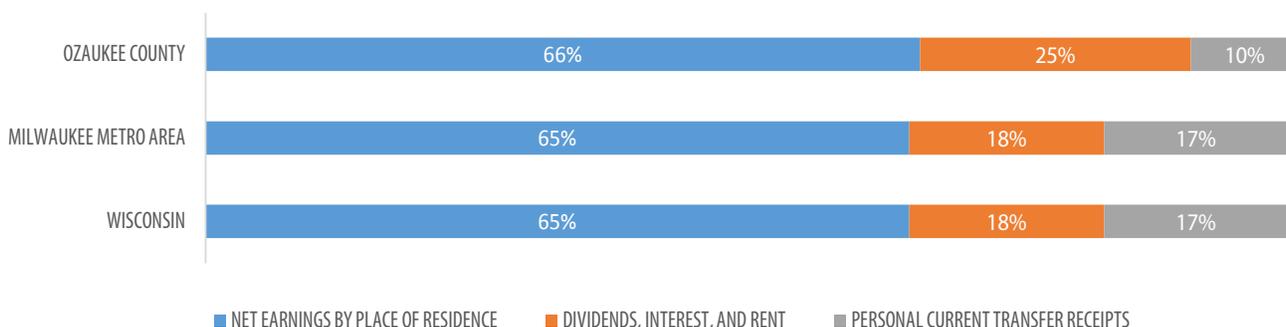
During the Great Recession, income from dividends, interest and rent decreased noticeably in Ozaukee County, but has since rebounded to above pre-recession levels. In contrast, income from personal current transfer receipts, which includes unemployment insurance compensation and other government benefits, has increased in Ozaukee County over the last ten years. This is likely due to the growth in social security and related health care programs (i.e., Medicare) as the county population ages.

## Inflow/Outflow of Commuter Earnings

An important component of total personal income as reported by the Bureau of Economic Analysis is referred to as "residence adjustment". This value represents the net flow of total labor earnings of commuters traveling either to or from Ozaukee County for work. Ozaukee County has a positive residence adjustment value, indicating that Ozaukee County residents who work outside of the county earn more as a group than those who commute into the county for work.

In 2013, Ozaukee County had an earnings inflow of \$2.33 billion, compared to an earnings outflow of \$867 million, resulting in a net residence adjustment of \$1.47 billion. This accounts for a considerable proportion of total personal income in the county - about 25.5% of the county's total personal income in 2013 is attributed to the residence adjustment. This reinforces the connection between Ozaukee County and outside employment centers.

FIGURE 4. SOURCES OF PERSONAL INCOME



Source: Bureau of Economic Analysis

FIGURE 5. HOUSEHOLD INCOME DISTRIBUTION



Source: US Census Bureau, 2009-2013 American Community Survey

## Household Income

While per capita income focuses on the average income for each individual living in a particular geographic area, household income is a measure of the combined income of all individuals 15 years old and over who live in the same household. Like per capita personal income, Ozaukee County has a very high median household income. Recent data from the US Census Bureau’s American Community Survey estimate median household income in Ozaukee County at \$75,457 (Table 2). This is substantially higher than the Milwaukee area and Wisconsin as well as some nearby counties, with the exception of Waukesha County (\$75,850). If we again consider regional cost-of-living, overall income levels for the county appear strong.

As one might expect given the high median household income in Ozaukee County, the distribution of household incomes in Ozaukee County is somewhat different than the distributions in the Milwaukee area and Wisconsin. In general, Ozaukee County has a smaller proportion of low-income households and a larger proportion of high-income households, when compared to the surrounding metropolitan area and the state.

For example, in 2013, 33% of Ozaukee County households had incomes below \$50,000, while close to half of all households in the Milwaukee area and Wisconsin had incomes below this level (Figure 5). Similarly, 10% of Ozaukee County households had incomes above \$200,000, while just 4% of Milwaukee area households and 3% of Wisconsin households fell into this income category.

TABLE 2. MEDIAN HOUSEHOLD INCOME

WAUKESHA COUNTY	\$75,850
OZAUKEE COUNTY	\$75,457
WASHINGTON COUNTY	\$66,159
MILWAUKEE METRO AREA	\$53,479
SHEBOYGAN COUNTY	\$52,920
WISCONSIN	\$52,413
MILWAUKEE COUNTY	\$43,193

Source: US Census Bureau, 2009-2013 American Community Survey

Note: Because of sampling variability, median household income estimates may not be statistically different from one another due to the margins of error associated with the estimates.

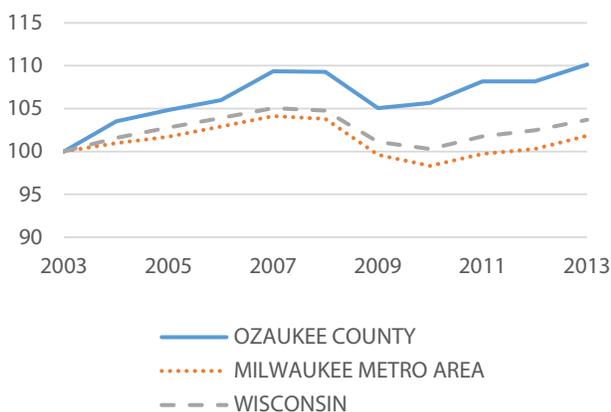
# Employment

Perhaps the most commonly used measure of economic activity beyond income is employment. Many times local economic growth and development discussions take place within the context of job growth. Many elected officials cast their economic policies around jobs and measure the success of their efforts around job creation. Thus when reflecting on the strengths and weaknesses of the local economy, it is imperative to examine trends in employment. Perhaps a more practical reason for exploring employment trends is that this is one type of data that is widely collected and updated on a regular basis making it the most comprehensive source of data available.

## Employment Growth

If we look at the growth of overall employment for Ozaukee County over the past ten years and compare it to the Milwaukee metropolitan area and Wisconsin three things become evident (Figure 6). First, from 2003 to 2007 employment growth in Ozaukee County appears to be stronger than the larger Milwaukee area and Wisconsin, particularly the period immediately before the Great Recession. Second, the impact of the Great Recession on employment is clearly evident. Third, the recovery from the Great Recession has been slow. Yet Ozaukee County has now (2013) recovered all the jobs that were lost to the Great Recession (54,122 jobs in 2008 and 54,542 jobs in 2013), while the Milwaukee area and Wisconsin have yet to return to pre-recession levels.

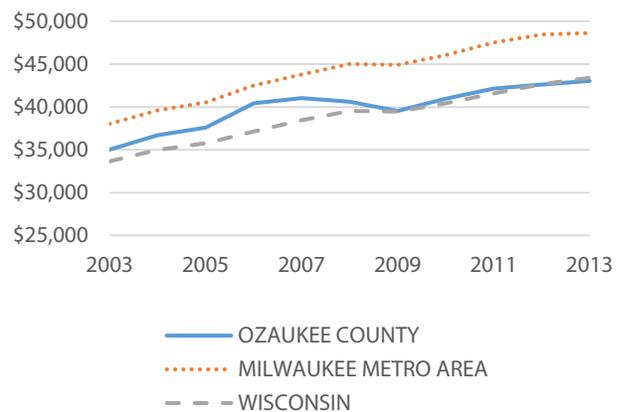
FIGURE 6. EMPLOYMENT GROWTH INDEX



Source: Bureau of Economic Analysis

A key question, however, is whether the quality of the jobs that have been recovered has remained the same. Unfortunately, the data do not distinguish between a high-paying full-time job and a part-time job that pays minimum wage – in most employment data counts a job is a job. One way to address this is by looking at average annual wages paid by businesses within the county. When we do this, we see that although employment growth in Ozaukee County has been relatively strong since the Great Recession, average wages per job have not increased at the same rates as wages in the Milwaukee area or the state overall during this time (Figure 7).

FIGURE 7. ANNUAL AVERAGE WAGES PER JOB



	2013 ANNUAL AVG. WAGES PER JOB
WAUKESHA COUNTY	\$50,587
MILWAUKEE COUNTY	\$48,953
<b>MILWAUKEE METRO AREA</b>	<b>\$48,644</b>
RACINE COUNTY	\$45,342
WISCONSIN	\$43,403
SHEBOYGAN COUNTY	\$43,239
<b>OZAUKEE COUNTY</b>	<b>\$43,044</b>
WASHINGTON COUNTY	\$41,545
KENOSHA COUNTY	\$39,833
WALWORTH COUNTY	\$35,536

Source: Bureau of Economic Analysis

In 2013, annual wages per job averaged \$43,044 in Ozaukee County, which was just under the state average of \$43,403 and below the Milwaukee area average of \$48,644. Historically, annual average wages in Ozaukee County have been lower than in Milwaukee County. Yet annual average wages in Ozaukee Coun-

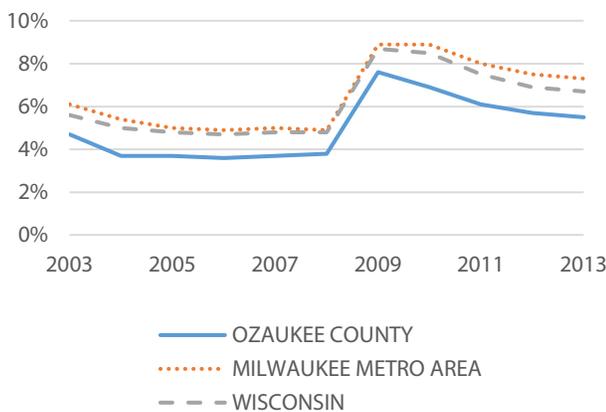
ty remain above those in Washington, Kenosha, and Walworth Counties.

A simple comparison of per capita income, median household income and wages per job provides additional insights into the Ozaukee County economy. In essence, how is it possible for per capita income to be so much higher than the average wage per job? First, recall that non-labor related income is particularly strong in the county (25% of income comes from dividends, interest and rental income). Second, there are very large in- and out-commuting flows so labor-related income is not limited to employment in Ozaukee County.

## Unemployment

As with employment growth, Ozaukee County has fared relatively well in terms of unemployment rates during and after the Great Recession. Annual average unemployment rates for Ozaukee County have remained below the Milwaukee area and Wisconsin rates from 2003 through 2013 (Figure 8). In the last ten years, annual average unemployment in Ozaukee County was lowest in 2006, at 3.6%, and reached a peak of 7.6% in 2009. Since 2009, unemployment rates have been declining. Ozaukee County's annual average unemployment rate for 2013 was 5.5%.

FIGURE 8. ANNUAL AVERAGE UNEMPLOYMENT



Source: Bureau of Labor Statistics, Local Area Unemployment Statistics

Thus while the number of jobs has returned to pre-Great Recession levels the unemployment rate remains somewhat elevated. Again, this is complicated, at least in part, by the role of cross-county commuting among Ozaukee County residents for employment.

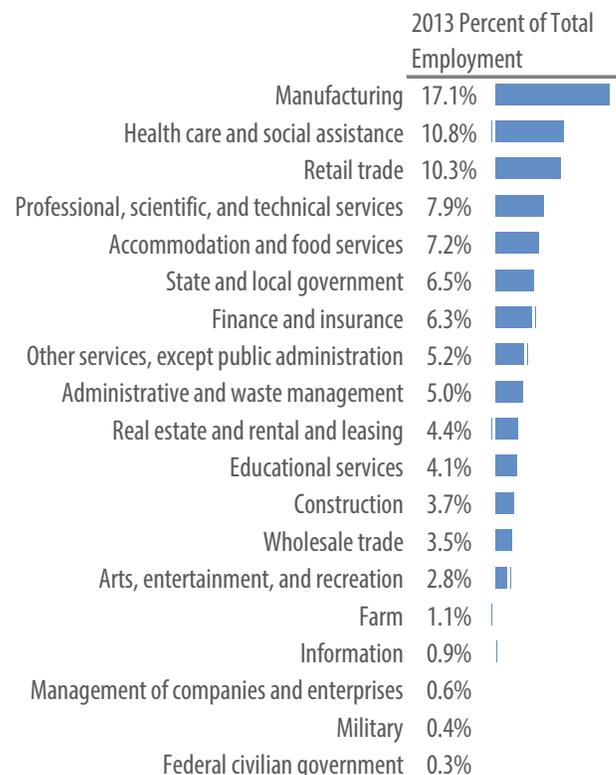
The question though, is what is a “reasonable” unemployment rate? Economists have suggested that the “natural” unemployment rate may be around 4% and rates below that may be pointing to general labor shortages.

Economists argue that there are two parts to the unemployment rate: a frictional component and a structural component. The frictional component is reflective of constant “churn” in the economy: businesses start and close (churn) and people are moving between jobs. The “natural” unemployment rate is tied to that frictional component. Structural unemployment is tied to underlying problems with the economy, such as the recent Great Recession. The question is what is an acceptable or reasonable rate of unemployment for Ozaukee County.

## Employment by Industry

To gain insights into the industrial strengths and weaknesses of the Ozaukee County economy we explore the distribution of employment across industries (Figure 9). Manufacturing represents a

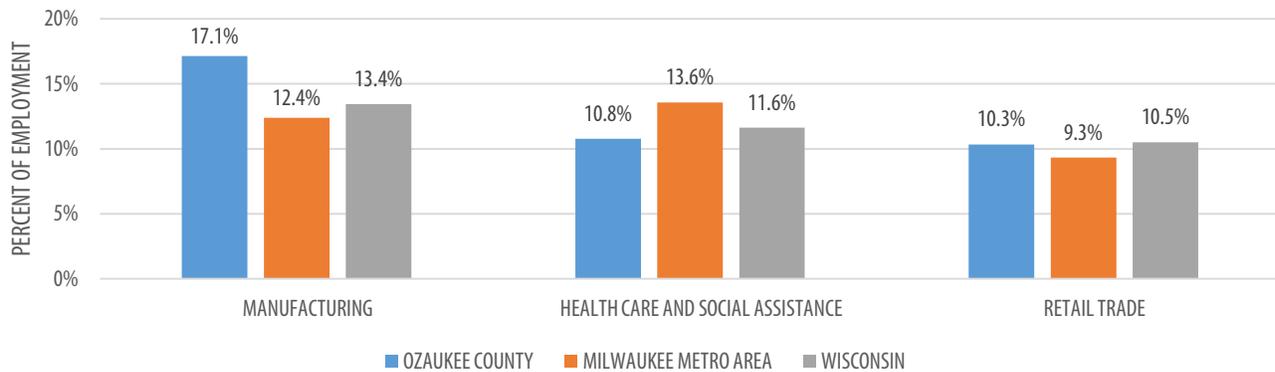
FIGURE 9. OZAUKEE COUNTY EMPLOYMENT BY INDUSTRY



Source: Bureau of Economic Analysis

Note: Employment data for Forestry, fishing, and related activities; Mining; Utilities; and Transportation and warehousing are not available to avoid disclosure of confidential information

FIGURE 10. EMPLOYMENT BY INDUSTRY



Source: Bureau of Economic Analysis

significant source of employment in Ozaukee County, accounting for 17.1% of jobs in 2013. The second largest source of employment is the health care and social assistance industry, representing 10.8% of the county's jobs. Both of these sectors tend to pay above average annual wages, reflecting a strength of the Ozaukee County economy. Yet the retail trade industry is also a considerable source of employment in the county and tends to pay below average annual wages.

In isolation it is difficult to draw significant conclusions from industry employment data for Ozaukee County. When the data for Ozaukee County is compared to the Milwaukee area and Wisconsin, a fuller picture begins to emerge. For example, manufacturing accounts for a sizable share of jobs not only in the county, but also in the region and the state (Figure 10). Yet the proportion of manufacturing jobs is higher in Ozaukee County, indicating that the county has a relative strength or specialization in the manufacturing industry. On the other hand, Ozaukee County has a smaller share of jobs in the health care and social assistance industry compared to the region and state, despite the fact that it's the second largest source of employment in the county.

In addition to looking at employment data at one point in time, it also can be useful to see how industry employment levels have changed over time. Looking at a ten year period from 2003 to 2013, the health care and social assistance industry has seen the largest increase in employment in the county (Figure 11). The industry accounted for 3,650 jobs in the county in 2003 and jumped to 5,873 jobs in 2013. So despite lagging behind the region and state in the proportion of jobs currently, the industry appears to

FIGURE 11. OZAUKEE COUNTY CHANGE IN EMPLOYMENT BY INDUSTRY



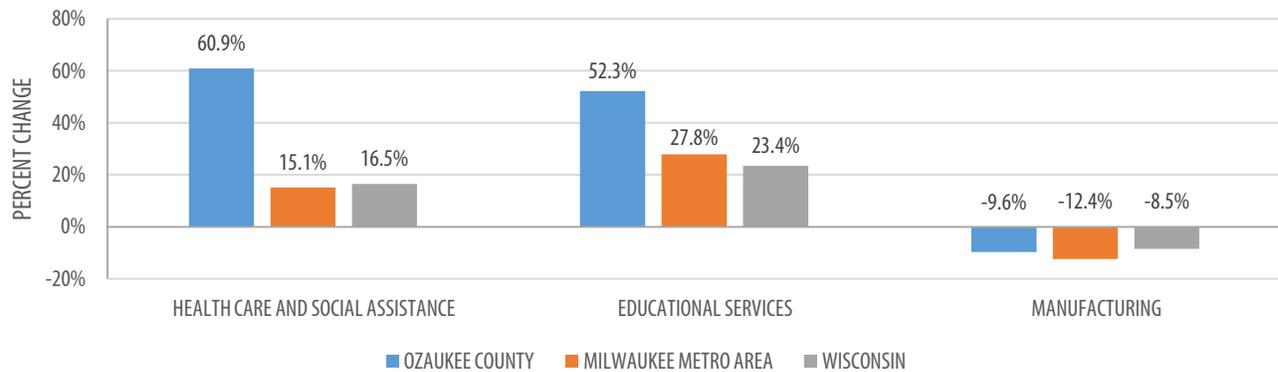
Source: Bureau of Economic Analysis

Note: Employment data for Forestry, fishing, and related activities; Mining; Utilities; and Transportation and warehousing are not available to avoid disclosure of confidential information

be on the rise in the county. Similarly, educational services saw a sizable increase in employment in the county during the same time period.

On the other hand, the manufacturing industry experienced a 9.6% decrease in jobs in Ozaukee

FIGURE 12. CHANGE IN EMPLOYMENT BY INDUSTRY: 2003-2013



Source: Bureau of Economic Analysis

County, dropping from 20.9% of total employment in 2003 to 17.1% in 2013. So although manufacturing is an area of strength in the county currently, recent employment trends raise some questions about the long-term future of the industry as a source of employment.

The employment trends seen in Ozaukee County over the last ten years are somewhat similar to those seen in the Milwaukee area and Wisconsin. Employment increases in the health care and social assistance industry and educational services industry were seen across the board, but the increases were greater in Ozaukee County, compared to the Milwaukee area and Wisconsin (Figure 12). Conversely, manufacturing employment decreases of some type were seen at the county, metropolitan area, and state levels.

## Wages/Salaries by Industry

In addition to employment patterns, it is important to consider the quality of the jobs that are associated with each industry. While job quality can be defined in several ways ranging from a safe working environment to flexibility in work hours to any benefits package associated with the job, the most common way to look at job quality is to examine overall compensation per job. In this case, employee compensation includes wages, salaries, profit sharing income and employer contributions to benefit plans (retirement and/or health insurance) and employer payment into social security. One must keep in mind that these data are by place of employment (jobs within Ozaukee County) and given the strong commuter flows are not necessarily reflective of income of people living in the county (see Data Appendix).

In terms of employee compensation, the management of companies and enterprises industry offers the greatest compensation per job in Ozaukee County at \$94,556 (Figure 13). Yet employee compensation per job for this industry is lower than in the Milwaukee area as a whole and statewide (Figure 14). Manufacturing is also a relatively high paying industry in Ozaukee County with employee compensation per job in the county falling between the Milwaukee area and state values. Finally, employee compensation per job for the health care and social assistance industry is slightly higher in Ozaukee County than in the Milwaukee area and Wisconsin overall.

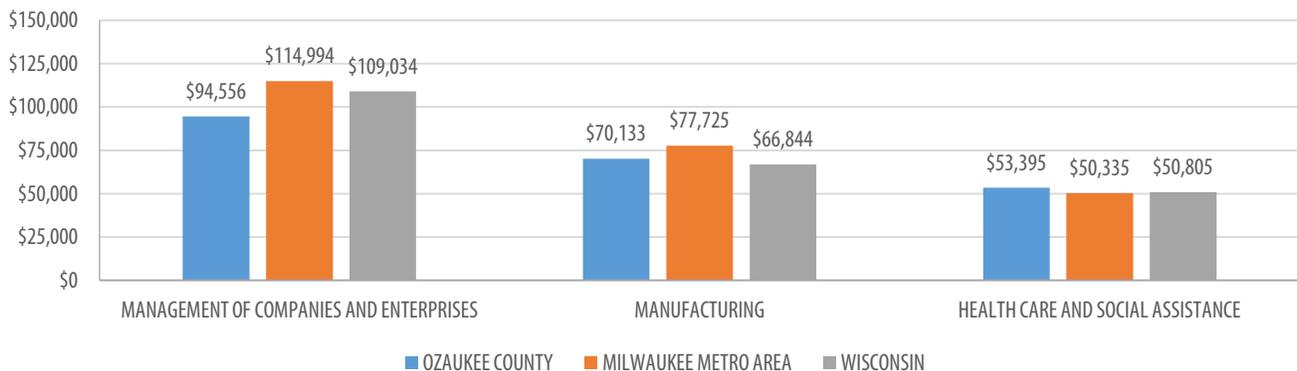
FIGURE 13. OZAUKEE COUNTY EMPLOYEE COMPENSATION PER JOB

	2013 Compensation per Job
Management of companies and enterprises	\$94,556
Federal civilian government	\$80,486
Wholesale trade	\$72,752
Manufacturing	\$70,133
State and local government	\$69,860
Health care and social assistance	\$53,395
Finance and insurance	\$50,441
Information	\$43,560
Professional, scientific, and technical services	\$41,097
Construction	\$35,100
Military	\$31,925
Educational services	\$27,465
Administrative and waste management services	\$26,674
Retail trade	\$24,200
Other services, except public administration	\$21,960
Accommodation and food services	\$16,192
Farm	\$14,831
Arts, entertainment, and recreation	\$14,479
Real estate and rental and leasing	\$5,651

Note: Employment data for Forestry, fishing, and related activities; Mining; Utilities; and Transportation and warehousing are not available to avoid disclosure of confidential information

Source: Bureau of Economic Analysis

FIGURE 14. EMPLOYEE COMPENSATION PER JOB



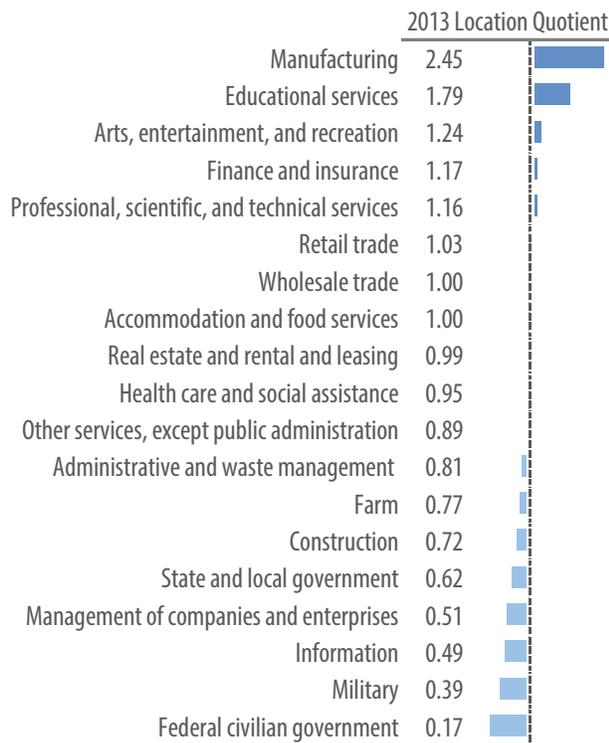
Source: Bureau of Economic Analysis

## Location Quotients

Location Quotients are used to determine whether an area has a relative strength or specialization in a particular industry. Location Quotients are calculated by comparing the share of employment for each industry sector in Ozaukee County to the share for the US. A Location Quotient of one indicates that Ozaukee County has the same share of employment as the US for a given industry. A Location Quotient above one indicates a greater share of employment in the county compared to the US, signifying the county has a relative strength or specialization in that industry.

Ozaukee County's highest Location Quotient is 2.45 for the manufacturing industry (Figure 15). This is consistent with data that show that Ozaukee County has a larger share of employment in manufacturing than the Milwaukee area and Wisconsin overall. On one hand, this is positive because manufacturing jobs tend to be good, high-paying jobs. On the other hand, this can be a challenge because from a national perspective, industry growth in manufacturing is being seen in capital equipment rather than labor.

FIGURE 15. OZAUKEE COUNTY LOCATION QUOTIENTS



Source: Bureau of Economic Analysis

Other sectors where Ozaukee County has a Location Quotient above one include educational services (1.79) and arts, entertainment, and recreation (1.24). It is important to keep in mind here that educational services does not include public education (i.e., public K-12 schools, the public technical schools or the University of Wisconsin system, which are included under state and local government). Although educational services may be a relative strength, this sector makes up a rather small proportion of employment in Ozaukee County, which may lessen the importance of its Location Quotient.

Over the last ten years, the most significant changes in Location Quotient have occurred in educational services and health care and social assistance (Figure 16). In both cases, Ozaukee County has seen increases in the strength or specialization of those industries. Changes in Location Quotient in other industry sectors have been relatively minimal (a change of less than 0.2).

FIGURE 16. OZAUKEE COUNTY CHANGE IN LOCATION QUOTIENTS



Source: Bureau of Economic Analysis

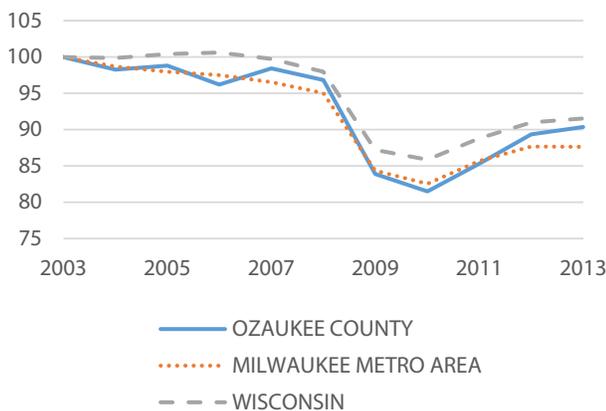
## Industry-Specific Analyses

While a detailed discussion of the performance of each industry is beyond the scope of this analysis, there are two sectors in particular that warrant further discussion: manufacturing as well as the health care and social assistance sectors. We focus on these two because of the relative importance of manufacturing to the Ozaukee County economy and the growth that has been occurring in the health care sector.

### Manufacturing

Over the last ten years, Ozaukee County, the Milwaukee area, and the state have experienced similar trends in manufacturing employment (Figure 17). The trends have included a noticeable decrease in employment during the period of the Great Recession followed by a weak recovery from 2010 to 2013, resulting in an overall decrease in employment coming out of the Great Recession. Overall, Ozaukee County experienced a 9.6% decrease in manufacturing employment from 2003 to 2013.

FIGURE 17. MANUFACTURING EMPLOYMENT GROWTH INDEX



Source: Bureau of Economic Analysis

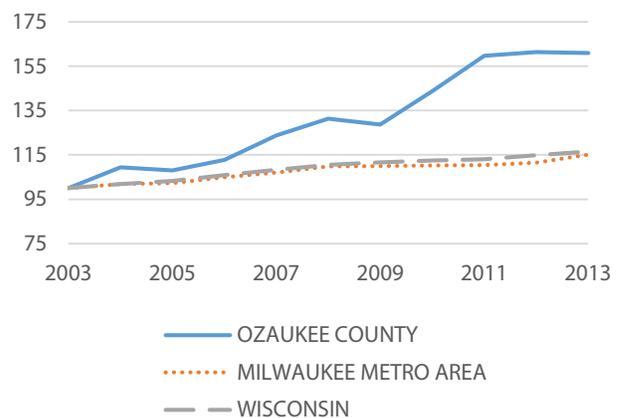
The long-term trend in manufacturing from a national perspective is to shift away from labor to more capital intensive production technologies. The introduction of computer and robotic technologies has seen the demand for labor in manufacturing to slowly decline. In addition, the shifting technology in manufacturing is seeing an increase in the demand for more highly skilled labor and a slow decline in the demand for less skilled labor. One positive aspect of this shift is higher wages associated with highly

skilled labor, however, a downside is a decrease in overall employment.

### Health Care and Social Assistance

Unlike the manufacturing industry, Ozaukee County employment trends in health care and social assistance have not mirrored trends seen in the Milwaukee area or the state (Figure 18). Health care and social assistance employment has seen a rather dramatic rise in Ozaukee County over the last ten years, likely due to the opening of the Aurora Medical Center in Grafton.

FIGURE 18. HEALTH CARE AND SOCIAL ASSISTANCE EMPLOYMENT GROWTH INDEX



Source: Bureau of Economic Analysis

Because of the diversity of employment opportunities within the health care sector in particular and the quality of the jobs as measured by wages, this sector may warrant additional attention as a source of economic growth and development in Ozaukee County.

# Conclusion

Overall, the economic well-being of Ozaukee County residents is strong. Ozaukee County has a very high per capita personal income as well as a very high median household income. Ozaukee County residents have a larger proportion of income from investments and property than in the surrounding metropolitan area and statewide and much of this income comes from outside of the county.

In terms of its workforce, Ozaukee County has recovered the quantity of jobs that were lost to the Great Recession, while the Milwaukee metropolitan area and Wisconsin have yet to return to pre-recession job levels. However, annual average wages per job in Ozaukee County are below both Milwaukee area and state averages, raising questions about the quality of jobs in the county.

Looking at individual industries, manufacturing provides a considerable source of good, high-paying jobs in the county. Yet the industry's position as a leader of employment in the county may be at risk in the long-term. Moreover, the industrial classification used in this analysis is very broad and specific industrial detail is lost. For example, manufacturing is treated as one industry in this study and finer insights into manufacturing cannot be drawn out from the data reported here.

In general, it is clear that the Ozaukee County economy is strongly linked to the surrounding metropolitan economy as is evident by the strong in-and-out-commuting flows. But exactly how strong are these linkages and are there certain characteristics of these linkages that Ozaukee County could build upon? This may be a potential area for future study and analysis.

# Data Appendix

The data for this report are drawn from two primary sources: the Bureau of Economic Analysis, Regional Economic Information System (BEA-REIS) maintained by the US Department of Commerce and the US Census Bureau's American Community Survey. The BEA-REIS data is widely available for use at: <http://www.bea.gov/regional/> and US Census data is available for use at: <http://factfinder.census.gov/>

The important difference between these two sources of employment and income data is the level upon which it is collected. The BEA-REIS data is collected at the firm level so the data is tied to the physical location of the firm. US Census data are collected at the household level so the data are tied to the physical location of the household or place of residence. If the county were a "closed economy" with no commuting, then the two sources of data would yield identical estimates of employment and income. But because of the high levels of commuting in and out of the county there will be notable differences across the two sources.



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