
A Profile of Socioeconomic Measures

Selected Geographies: Chippewa County MI

Benchmark Geographies: United States

Produced by
Economic Profile System-Human Dimensions Toolkit
EPS-HDT
January 28, 2013

About EPS-HDT

About the Economic Profile System-Human Dimensions Toolkit (EPS-HDT)

EPS-HDT is a free, easy-to-use software application that produces detailed socioeconomic reports of counties, states, and regions, including custom aggregations.

EPS-HDT uses published statistics from federal data sources, including Bureau of Economic Analysis and Bureau of the Census, U.S. Department of Commerce; and Bureau of Labor Statistics, U.S. Department of Labor.

The Bureau of Land Management and Forest Service have made significant financial and intellectual contributions to the operation and content of EPS-HDT.

See www.headwaterseconomics.org/eps-hdt for more information about the other tools and capabilities of EPS-HDT.

For technical questions, contact Ray Rasker at eps-hdt@headwaterseconomics.org, or 406-570-7044.



Headwaters Economics is an independent, nonprofit research group. Our mission is to improve community development and land management decisions in the West.



www.blm.gov

The Bureau of Land Management, an agency within the U.S. Department of the Interior, administers 249.8 million acres of America's public lands, located primarily in 12 Western States. It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.



www.fs.fed.us

The Forest Service, an agency of the U.S. Department of Agriculture, administers national forests and grasslands encompassing 193 million acres. The Forest Service's mission is to achieve quality land management under the "sustainable multiple-use management concept" to meet the diverse needs of people while protecting the resource. Significant intellectual, conceptual, and content contributions were provided by the following individuals: Dr. Pat Reed, Dr. Jessica Montag, Doug Smith, M.S., Fred Clark, M.S., Dr. Susan A. Winter, and Dr. Ashley Goldhor-Wilcock.

Table of Contents

	Page
Trends	
How have population, employment, and personal income changed?	1
Components	
How have the components of population changed?	2
How have the components of employment changed?	3
How has the mix of wage and salary and proprietors income changed?	4
How has the mix of labor earnings and non-labor income changed?	5
Industry Sectors	
How has employment by industry changed historically?	6-7
How has employment by industry changed recently?	8-9
How has personal income by industry changed historically?	10-11
How has personal income by industry changed recently?	12-13
Performance	
How have earnings per job and per capita income changed?	14
How do wages compare across industries?	15
How has the unemployment rate changed?	16
What are the commuting patterns in the region?	17
Do national recessions affect local employment?	18
Benchmarks	
How does performance compare to the benchmark?	19-20
Data Sources & Methods	21
Links to Additional Resources	22

Note to Users:

This report is one of fourteen reports that can be produced with the EPS-HDT software. You may want to run another EPS-HDT report for either a different geography or topic. Topics include land use, demographics, specific industry sectors, the role of non-labor income, the wildland-urban interface, the role of amenities in economic development, and payments to county governments from federal lands. Throughout the reports, references to on-line resources are indicated by superscripts in parentheses. These resources are provided as hyperlinks on each report's final page. The EPS-HDT software also allows the user to "push" the tables, figures, and interpretive text from a report to a Word document. For further information and to download the free software, go to:

www.headwaterseconomics.org/eps-hdt

How have population, employment, and personal income changed?

This page describes trends in population, employment, and real personal income. If this report is for an individual county, it also shows the county (metropolitan, micropolitan, or rural) classification.

According to the U.S. Census Bureau, Chippewa County, MI is designated as a Central Micropolitan Statistical Area.

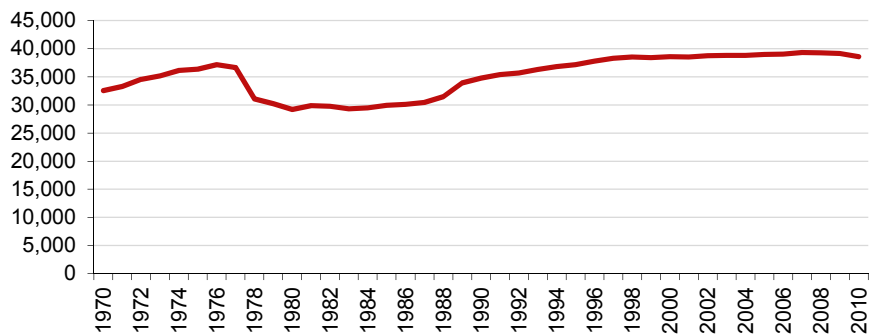
Total Population, Employment, & Real Personal Income Trends, 1970-2010

	1970	1980	1990	2000	2010	Change 2000-2010
Population	32,559	29,209	34,788	38,593	38,612	19
Employment (full and part-time jobs)	12,140	10,419	14,361	18,782	17,863	-919
Personal Income (thousands of 2011\$s)	569,647	556,148	698,213	946,747	1,053,369	106,623

Population and personal income are reported by place of residence, and employment by *place of work* on this page.

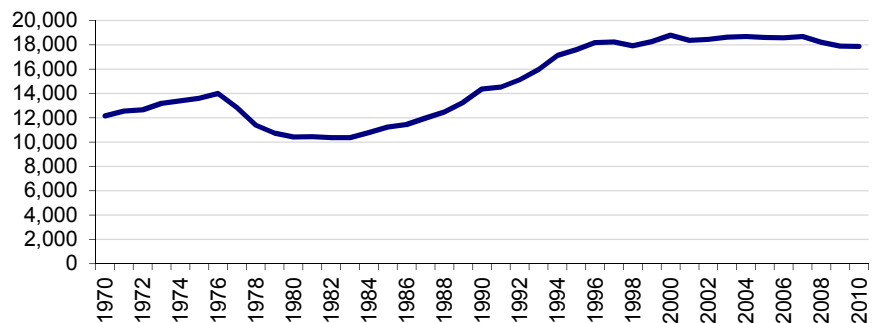
- From 1970 to 2010, population grew from 32,559 to 38,612 people, a 19% increase.

Population Trends, Chippewa County, MI



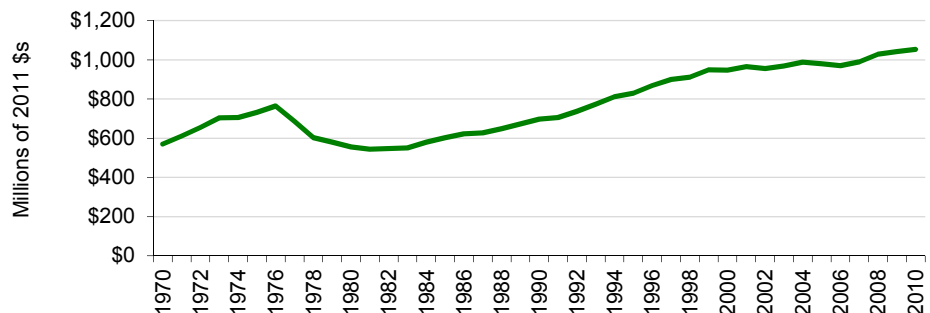
- From 1970 to 2010, employment grew from 12,140 to 17,863 jobs, a 47% increase.

Employment Trends, Chippewa County, MI



- From 1970 to 2010, personal income grew from \$569.6 million to \$1,053.4 million (in real terms), a 85% increase.

Personal Income Trends, Chippewa County, MI



Study Guide and Supplemental Information

How have population, employment, and personal income changed?

What do we measure on this page?

This page describes trends in population, employment, and real personal income. If this report is for an individual county, it also shows the county (urban-rural) classification.

Population: The total number of people by place of residence.

Employment: All full and part-time workers, wage and salary jobs (employees), and proprietors (the self-employed) reported by place of work.

Personal Income: Income from wage and salary employment and proprietors' income (labor earnings), as well as non-labor income sources (dividends, interest, and rent, and transfer payments) reported by place of residence. All income figures in this report are shown in real terms (i.e., adjusted for inflation). Subsequent sections of this report define labor earnings and non-labor income in more detail.

Metropolitan Statistical Areas: Counties that have at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties. Metropolitan Statistical Areas are classified as either Central or Outlying.

Micropolitan Statistical Areas: Counties that have at least one urban cluster of at least 10,000 but less than 50,000 population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties. Micropolitan Statistical Areas are classified as either Central or Outlying.

Rural: Counties that are not designated as either Metropolitan or Micropolitan.

Why is it important?

Long-term, steady growth of population, employment, and real personal income is generally an indication of a healthy, prosperous economy. Erratic growth, no-growth, or long-term decline in these indicators are generally an indication of a struggling economy.

Growth can benefit the general population of a place, especially by providing economic opportunities, but it can also stress communities, and lead to income stratification. When considering the benefits of growth, it is important to distinguish between standard of living (such as earnings per job and per capita income) and quality of life (such as leisure time, crime rate, and sense of well-being).

A related indicator of economic performance is whether the local economy is negatively affected by periods of national recession. This issue is explored in depth in the section "Do national recessions affect local employment?" later in this report.

The size of a population and economy (metropolitan, micropolitan, and rural) can have an important bearing on the types of economic activities present as well as opportunities and challenges for area businesses.

Additional Resources

In addition to U.S. Census Bureau county classifications offered here, a number of other county classification systems are available:

The Bureau of Economic Analysis offers a way to classify all counties in the country into "BEA Economic Areas." These are counties clustered around "nodes" of metropolitan or micropolitan areas. Maps of BEA Economic Areas can be seen at: bea.gov/regional/docs/econlist.cfm ⁽¹⁾; the methods are available at: bea.gov/SCB/PDF/2004/11November/1104Econ-Areas.pdf ⁽²⁾.

The Economic Research Service of the U.S. Department of Agriculture offers a county classification system based on economic dependence on particular sectors (for example, "Farming-dependent," "Mining-dependent"), economic activity ("Non-metro recreation"), and by policy type (for example, "Housing-stress," and "Persistent poverty"). Economic Research Service codes can be found at: ers.usda.gov/Briefing/Rurality/Typology ⁽³⁾. This web site also offers an alternative definition in the form of "Rural-Urban Continuum Codes."

Headwaters Economics has developed a "Three Wests" county typology for all counties in the 11 contiguous western U.S. states based on access to markets via highway or air travel. The following web site offers maps, a journal article on the subject, and an interactive tool that allows the user to compare a county to custom selected peers or benchmark; see: headwaterseconomics.org/3wests.php ⁽⁴⁾.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA30.

Components

How have the components of population changed?

This page describes various components of population change and total population growth (or decline). Total population growth (or decline) is the sum of natural change (births & deaths) and migration (international & domestic).

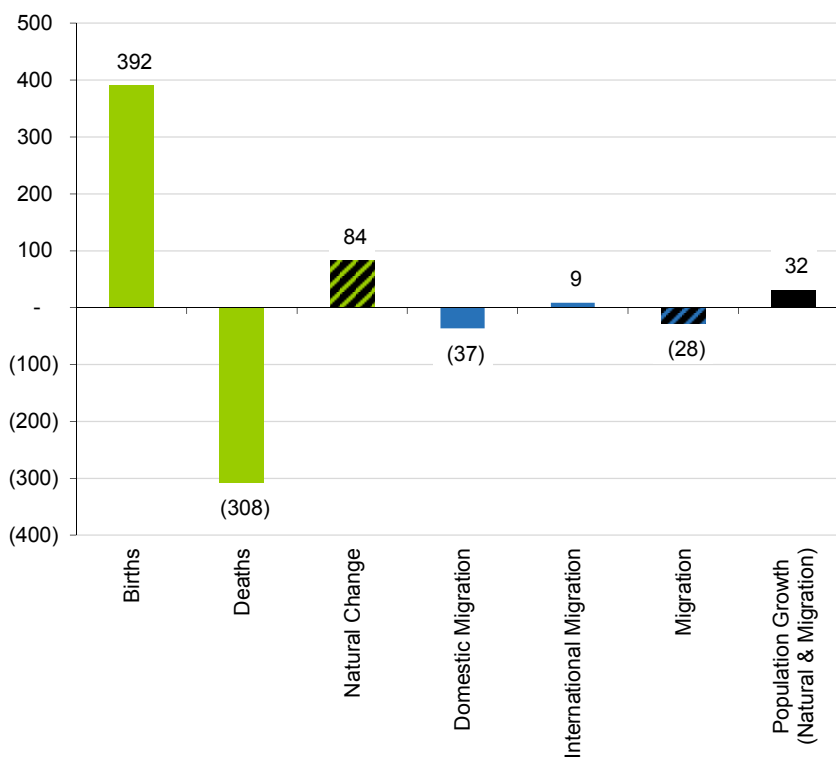
Components of Population Growth, 2000-2011

	Change 2000-2011
Population Growth (2000 - 2011)	198
Avg. Annual Population Change (Natural Change & Net Migration)	32
Avg. Annual Natural Change (Births & Deaths)	84
Avg. Annual Births	392
Avg. Annual Deaths	308
Avg. Annual Net Migration (International & Domestic)	-28
Avg. Annual International Migration	9
Avg. Annual Domestic Migration	-37
Avg. Annual Residual	-24

Percent of Population Growth, 2000-2011

Avg. Annual Natural Change (Births & Deaths)	100.0%
Avg. Annual Net Migration (International & Domestic)	0.0%

Average Annual Components of Population Growth*, Chippewa County, MI, 2000-2011



- From 2000 to 2011, population grew by 198 people, a 1% increase.
- From 2000 to 2011, natural change contributed to 100% of population growth.
- From 2000 to 2011, migration contributed to % of population growth.

* The Census Bureau makes a minor statistical correction, called a "residual" which is shown in the table above, but omitted from the figure. Because of this correction, natural change plus net migration may not add to total population change in the figure.

Study Guide and Supplemental Information

How have the components of population changed?

What do we measure on this page?

This page describes various components of population change and total population growth (or decline). Total population growth (or decline) is the sum of natural change (births & deaths) and migration (international & domestic).

Why is it important?

It is useful to understand the components of population change because it offers insight into the causes of growth or decline and it helps highlight important areas of inquiry. For example, if a large portion of population growth is from in-migration, it would be helpful to understand what the drivers are behind this trend, including whether people are moving to the area for jobs, quality of life, or both. If a large portion of population decline is from out-migration, it would similarly be important to understand the reasons, including the loss of employment in specific industries, youth leaving for education or new opportunities, and elderly people leaving for better medical facilities.

Methods

The Bureau of the Census makes a minor statistical correction, called a "residual." This is defined by the Bureau of the Census as resulting from "two parts of the estimates process: (1) the application of national population controls to state and county population estimates and (2) the incorporation of accepted challenges and special censuses into the population estimates. The residual represents change in the population that cannot be attributed to any specific demographic component of population change."

Additional Resources

For a glossary of terms used by the U.S. Census Bureau, see: [census.gov/popest/about/terms.html](https://www.census.gov/popest/about/terms.html) ⁽⁵⁾.

For methods used by the U.S. Census Bureau, see: [census.gov/popest/methodology/index.html](https://www.census.gov/popest/methodology/index.html) ⁽⁶⁾.

For terms used by the U.S. Census Bureau, see: [census.gov/popest/about/terms.html](https://www.census.gov/popest/about/terms.html) ⁽⁵⁾.

For more information on demographics, see the EPS-HDT Demographics report.

Data Sources

U.S. Department of Commerce. 2012. Census Bureau, Population Division, Washington, D.C.

Components

How have the components of employment changed?

This page describes changes in two components of employment: wage and salary jobs, and proprietor jobs.

Wage and Salary: This is a measure of the average annual number of full-time and part-time jobs by place of work. All jobs for which wages and salaries are paid are counted. Full-time and part-time jobs are counted with equal weight.

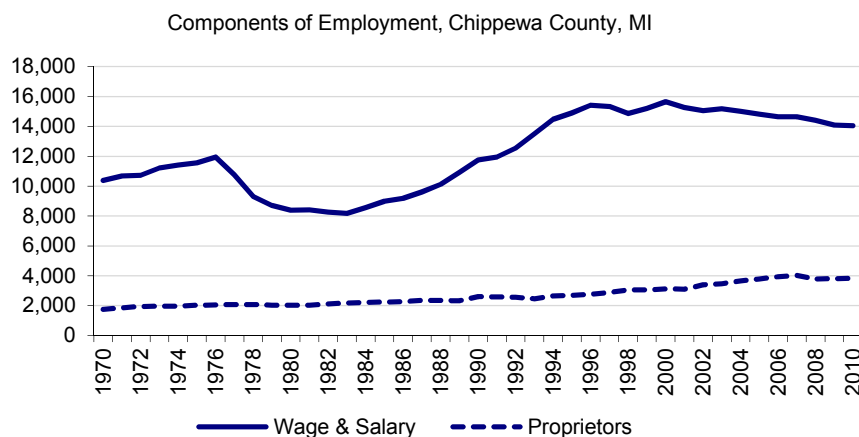
Proprietors: This term includes the self-employed in farm and nonfarm sectors by place of work. Nonfarm self-employment consists of the number of sole proprietorships and the number of individual business partners not assumed to be limited partners. Farm self-employment is defined as the number of non-corporate farm operators, consisting of sole proprietors and partners.

Components of Employment Change, 1970-2010

	1970	1980	1990	2000	2010	Change 2000-2010
Total Employment	12,140	10,419	14,361	18,782	17,863	-919
Wage and salary jobs	10,384	8,396	11,759	15,652	14,039	-1,613
Number of proprietors	1,756	2,023	2,602	3,130	3,824	694
						% Change 2000-2010
Total Employment						-4.9%
Wage and salary jobs	85.5%	80.6%	81.9%	83.3%	78.6%	-10.3%
Number of proprietors	14.5%	19.4%	18.1%	16.7%	21.4%	22.2%

All employment data in the table above are reported by *place of work*. Includes full-time and part-time workers.

- From 1970 to 2010, wage and salary employment (people who work for someone else) grew from 10,384 to 14,039, a 35% increase.
- From 1970 to 2010, proprietors (the self-employed) grew from 1,756 to 3,824, a 118% increase.



Study Guide and Supplemental Information

How have the components of employment changed?

What do we measure on this page?

This page describes the changes in two components of employment: wage and salary employment, and proprietors.

Wage and Salary: This is a measure of the average annual number of full-time and part-time jobs by place of work. All jobs for which wages and salaries are paid are counted. Full-time and part-time jobs are counted with equal weight.

Proprietors: This term includes the self-employed in nonfarm and farm sectors by place of work. Nonfarm self-employment consists of the number of sole proprietorships and the number of individual business partners not assumed to be limited partners. Farm self-employment is defined as the number of non-corporate farm operators, consisting of sole proprietors and partners.

Why is it important?

A high level of growth in proprietors' employment could be interpreted as a sign of entrepreneurial activity, which is a positive indicator of economic health. However, in some areas, particularly in remote rural areas, it is possible that a high proportion of self-employed is an indication that there are few jobs available. People may work for themselves because it is the only alternative and they may work for themselves in addition to holding a wage and salary job.

One way to see whether growth and a high-level of proprietors' employment is a positive sign for the local economy is to look at the long-term trends in proprietors' personal income. If proprietors' employment and real personal income are both rising, this is a healthy indicator of entrepreneurial activity. If, on the other hand, proprietors' employment is rising and real personal income is falling, this can be a sign of economic stress. The following section of this report examines this relationship.

Methods

For details on how the Bureau of Economic Analysis defines proprietors' employment, see: bea.gov/regional/definitions/nextpage.cfm?key=Proprietors%20employment ⁽⁷⁾.

Additional Resources

For a glossary of terms used by the Bureau of Economic Analysis, see: bea.gov/glossary/glossary.cfm ⁽⁸⁾.

For an example of an academic study where proprietors' employment is considered an indication of entrepreneurial activity, see: Mack, E., T.H. Grubestic and E. Kessler. 2007. "Indices of Industrial Diversity and Regional Economic Composition." *Growth and Change*. 38(3): 474-509.

For more information on farm employment and earnings, see the EPS-HDT Agriculture report.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA30.

Components

How has the mix of wage and salary and proprietors income changed?

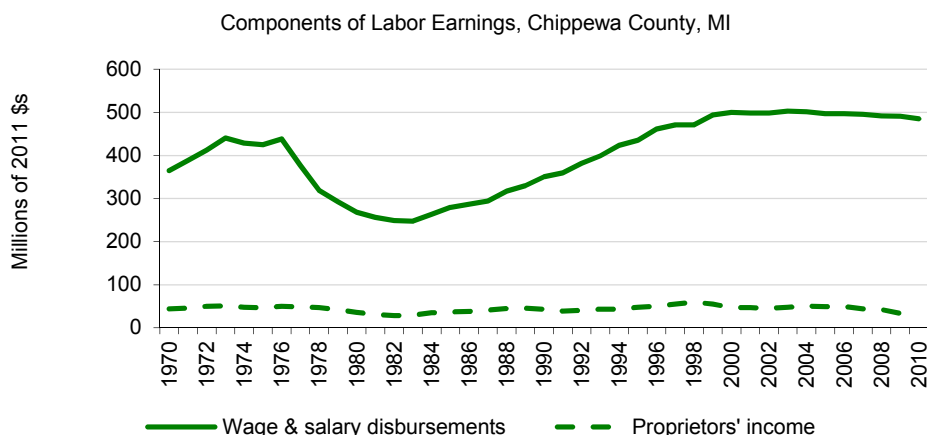
This page describes the components of labor earnings (in real terms): income from wage and salary, and proprietors' employment. It also looks more closely at proprietors, comparing long-term trends in proprietors' employment and personal income.

Components of Labor Earnings Change, 1970-2010 (Thousands of 2011 \$s)

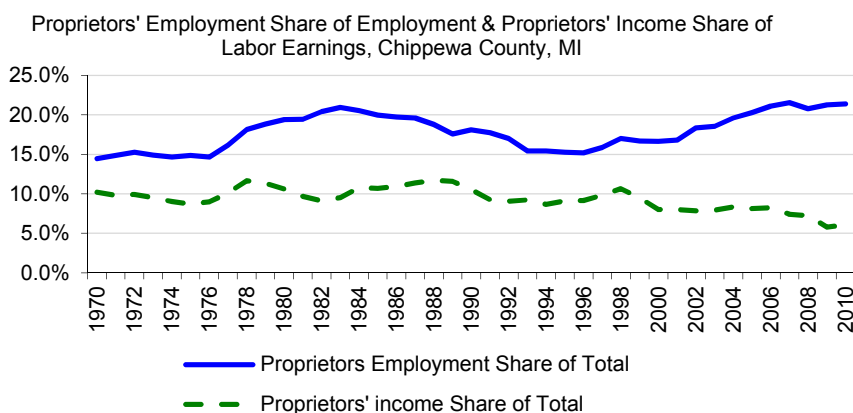
	1970	1980	1990	2000	2010	Change 2000-2010
Earnings by place of work	465,120	364,139	476,056	672,642	679,490	6,848
Wage & salary disbursements	364,888	268,474	350,827	499,596	485,302	-14,294
Supplements to wages & salaries	55,899	59,576	82,220	126,269	158,977	32,708
Proprietors' income	44,333	36,088	43,009	46,776	35,211	-11,566
						% Change 2000-2010
Earnings by place of work						1.0%
Wage & salary disbursements	78.5%	73.7%	73.7%	74.3%	71.4%	-2.9%
Supplements to wages & salaries	12.0%	16.4%	17.3%	18.8%	23.4%	25.9%
Proprietors' income	9.5%	9.9%	9.0%	7.0%	5.2%	-24.7%

All income data in the table above are reported by *place of work*, which is different than earnings by *place of residence* shown on the following page of this report.

- From 1970 to 2010, labor earnings from wage and salary employment grew from \$364.9 million to \$485.3 million (in real terms), a 33% increase.
- From 1970 to 2010, labor earnings from proprietors' employment shrank from \$44.3 million to \$35.2 million (in real terms), a -21% decrease.



- In 1970, proprietors represented 14% of total employment. By 2010, proprietors represented 21% of total employment.
- In 1970, proprietors represented 10% of total labor earnings. By 2010, proprietors represented 6% of total labor earnings.



Study Guide and Supplemental Information

How has the mix of wage and salary and proprietors income changed?

What do we measure on this page?

This page describes the components of labor earnings (in real terms): income from wage and salary, and proprietors' employment. It also looks more closely at proprietors, comparing long-term trends in proprietors' employment and personal income.

Labor Earnings: This represents (on this page) net earnings by place of work.

Wage and Salary: This is a measure of the average annual number of full-time and part-time jobs in each area by place of work. All jobs for which wages and salaries are paid are counted. Full-time and part-time jobs are counted with equal weight.

Proprietors: This term includes the self-employed in nonfarm and farm sectors. Nonfarm self-employment consists of the number of sole proprietorships and the number of individual business partners not assumed to be limited partners. Farm self-employment is defined as the number of non-corporate farm operators, consisting of sole proprietors and partners.

Note that labor earnings are only one component of total personal income. The other major component, non-labor income, is described later in

Why is it important?

The table and figures can be used to compare the relative importance, and change in importance, of wage and salary jobs and proprietors as a source of employment and earnings.

Rapid growth and/or high proportions of proprietors' employment and income can be a sign of a healthy economy that is attracting entrepreneurs and stimulating business development. Correlating this growth here with patterns of population growth (such as high levels of in-migration) and unemployment rates (robust business development activity tends to be associated with lower rates of unemployment) may support this finding. High levels of proprietors in an economy can also indicate a weak labor force and a lack of opportunity. This may be the case if proprietors' employment is increasing and labor earnings as a whole are flat or declining.

Additional Resources

Labor Earnings is the same as Net Earnings by Place of Work, as defined by the U.S. Department of Commerce. For a glossary of terms used by the Bureau of Economic Analysis, see: bea.gov/regional/definitions ⁽⁹⁾.

For more information on farm employment and earnings, see the EPS-HDT Agriculture report.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Tables CA05 & CA05N.

Components

How has the mix of labor earnings and non-labor income changed?

This page describes changes in labor earnings and non-labor sources of income.

Labor Earnings: This represents (on this page) net earnings by place of residence, which is earnings by place of work (the sum of wage and salary disbursements, supplements to wages and salaries, and proprietors' income) less contributions for government social insurance, plus an adjustment to convert earnings by place of work to a place of residence basis.

Non-Labor Income: Dividends, interest, and rent (money earned from investments), and transfer payments (includes government retirement and disability insurance benefits, medical payments such as mainly Medicare and Medicaid, income maintenance benefits, unemployment insurance benefits, etc.) make up non-labor income. Non-labor income is reported by place of residence.

Components of Personal Income Change, 1970-2010 (Thousands of 2011 \$s)

	1970	1980	1990	2000	2010	Change 2000-2010
Total Personal Income	569,647	556,148	698,213	946,747	1,053,369	106,623
Labor Earnings	433,622	340,165	408,404	583,598	581,772	-1,826
Non-Labor Income	136,024	215,982	289,809	363,148	471,597	108,448
Dividends, Interest and Rent	61,934	86,492	145,219	170,406	145,893	-24,513
Transfer Payments	74,091	129,490	144,591	192,743	325,704	132,961

Percent of Total

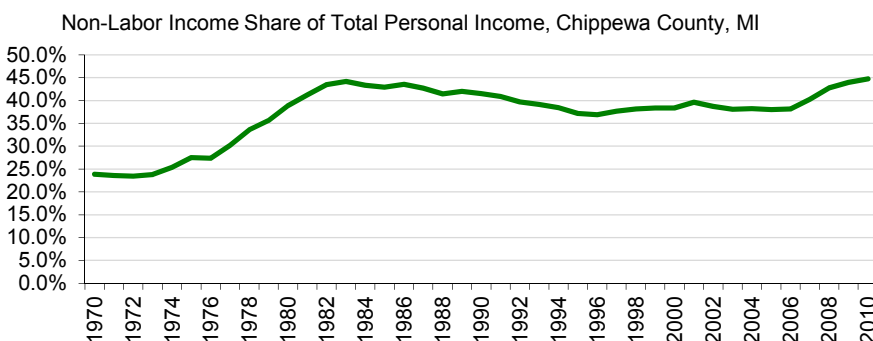
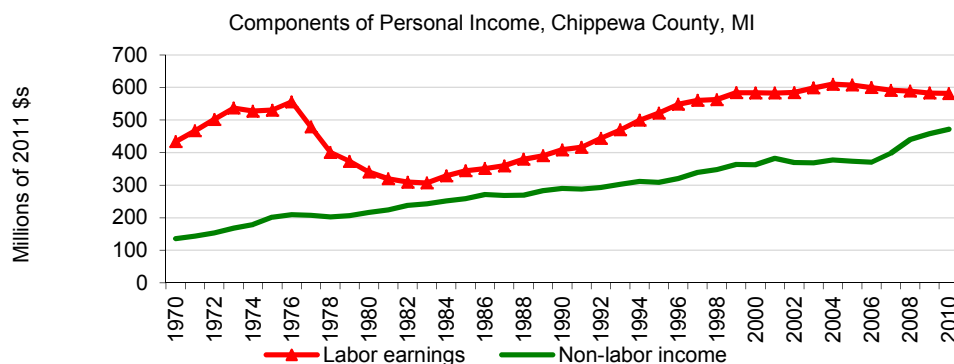
	1970	1980	1990	2000	2010	% Change 2000-2010
Total Personal Income						11.3%
Labor Earnings	76.1%	61.2%	58.5%	61.6%	55.2%	-0.3%
Non-Labor Income	23.9%	38.8%	41.5%	38.4%	44.8%	29.9%
Dividends, Interest and Rent	10.9%	15.6%	20.8%	18.0%	13.9%	-14.4%
Transfer Payments	13.0%	23.3%	20.7%	20.4%	30.9%	69.0%

All income data in the table above are reported by *place of residence*. Labor earnings and non-labor income may not add to total personal income due to adjustments made by the Bureau of Economic Analysis.

- From 1970 to 2010, non-labor income grew from \$136.0 million to \$471.6 million (in real terms), a 247% increase.

- From 1970 to 2010, labor income grew from \$433.6 million to \$581.8 million (in real terms), a 34% increase.

- In 1970, non-labor income represented 24% of total personal income. By 2010 non-labor income represented 45% of total personal income.



Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Tables CA05 & CA05N.

Study Guide and Supplemental Information

How has the mix of labor earnings and non-labor income changed?

What do we measure on this page?

This page describes changes in labor earnings and non-labor sources of income.

Labor Earnings: This represents (on this page) net earnings by place of residence, which is earnings by place of work (the sum of wage and salary disbursements, supplements to wages and salaries, and proprietors' income) less contributions for government social insurance, plus an adjustment to convert earnings by place of work to a place of residence basis.

Non-Labor Income: Dividends, interest, and rent (money earned from investments), and transfer payments (includes government retirement and disability insurance benefits, medical payments such as mainly Medicare and Medicaid, income maintenance benefits, unemployment insurance benefits, etc.) make up non-labor income. Non-labor income is reported by place of residence.

Dividends, Interest, and Rent: These sources of income are sometimes referred to as "investment income" or "property income" and include personal dividend income, personal interest income, and rental income of persons with capital consumption adjustment.

Transfer Payments: This component of personal income is payments to persons for which no current services are performed. It consists of payments to individuals and to nonprofit institutions by federal, state, and local governments and by businesses.

Why is it important?

In many geographies non-labor income is often the largest source of personal income and also the fastest growing. This is particularly the case in some rural areas and small cities. An aging population, stock market and investment growth, and a highly mobile population are some of the reasons behind the rapid growth in non-labor income.

The growth in non-labor income can be an indication that a place is an attractive place to live and retire. The in-migration of people who bring investment and retirement income with them (verify from previous pages that in-migration is increasing) is associated with a high quality of life (for example, local recreation opportunities), good health care facilities, and affordable housing (important for those on a fixed income). Non-labor income can also be important to places with struggling economies, either as a source of income maintenance for the poor or as a more stable form of income in areas with declining industries and labor markets.

When investigating non-labor income some important issues for public land managers include whether the area is attracting retirees and people with investment income, the role public lands play in attracting and retaining people with non-labor income, how these people use or enjoy public lands, and whether these uses or ways of enjoying public lands are at odds with current uses or management.

If public lands resources are one of the reasons growing areas are able to attract and retain non-labor sources of income, then public lands are important to local economic well-being by contributing to economic growth and per capita income. If, on the other hand, contracting populations or industries result in a shrinking labor market, non-labor income may be important as a remaining source of income and can help stabilize downturns.

Methods

The term "labor" is used in this report to differentiate labor from non-labor sources of income. As defined by the U.S. Department of Commerce, labor earnings are "net earnings by place of residence." For a glossary of terms used by the Bureau of Economic Analysis, see: bea.gov/regional/definitions ⁽⁹⁾.

Labor earnings and non-labor income may not add to total personal income because of adjustments made by the Bureau of Economic Analysis to account for contributions for social security, cross-county commuting, and other factors.

Additional Resources

For detailed analysis of non-labor income and its components, see the EPS-HDT Non-Labor Income report.

For more information on the aging of the population and poverty measures, see the EPS-HDT Demographics report.

For a glossary of terms used by the Bureau of Economic Analysis, see: bea.gov/glossary/glossary.cfm ⁽⁸⁾. Note that the term "non-labor" income is not used by BEA, it is used here to refer to the sum of non-labor related sources of personal income.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Tables CA05 & CA05N.

Industry Sectors

How has employment by industry changed historically?

This page describes historical employment change by industry. Industries are organized according to three major categories: non-services related, services related, and government. Employment includes wage and salary jobs and proprietors. The employment data are organized according to the Standard Industrial Classification (SIC) system and reported by place of work.

Employment by Industry, 1970-2000

	1970	1980	1990	2000	Change 1990-2000
Total Employment (number of jobs)	12,140	10,419	14,361	18,782	4,421
Non-services related	1,277	1,594	2,023	2,482	459
Farm	376	519	480	406	-74
Agricultural services, forestry, fishing & other	79	65	85	133	48
Mining (including fossil fuels)	150	129	45	97	52
Construction	362	413	593	868	275
Manufacturing (including forest products)	310	468	820	978	158
Services related	4,664	5,409	7,309	8,585	1,276
Transportation & public utilities	701	663	632	665	33
Wholesale trade	212	242	203	281	78
Retail trade	1,817	1,787	3,062	3,349	287
Finance, insurance & real estate	418	568	569	776	207
Services	1,516	2,149	2,843	3,514	671
Government	6,199	3,416	5,029	7,715	2,686

Percent of Total

					% Change 1990-2000
Total Employment					30.8%
Non-services related	10.5%	15.3%	14.1%	13.2%	22.7%
Farm	3.1%	5.0%	3.3%	2.2%	-15.4%
Agricultural services, forestry, fishing & other	0.7%	0.6%	0.6%	0.7%	56.5%
Mining (including fossil fuels)	1.2%	1.2%	0.3%	0.5%	115.6%
Construction	3.0%	4.0%	4.1%	4.6%	46.4%
Manufacturing (including forest products)	2.6%	4.5%	5.7%	5.2%	19.3%
Services related	38.4%	51.9%	50.9%	45.7%	17.5%
Transportation & public utilities	5.8%	6.4%	4.4%	3.5%	5.2%
Wholesale trade	1.7%	2.3%	1.4%	1.5%	38.4%
Retail trade	15.0%	17.2%	21.3%	17.8%	9.4%
Finance, insurance & real estate	3.4%	5.5%	4.0%	4.1%	36.4%
Services	12.5%	20.6%	19.8%	18.7%	23.6%
Government	51.1%	32.8%	35.0%	41.1%	53.4%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

The employment data above are organized according to the Standard Industrial Classification (SIC) system. The data end in 2000 because in 2001 the Bureau of Economic Analysis switched to organizing industry-level data according to the newer North American Industrial Classification System (NAICS). More recent employment trends, organized by NAICS, are shown in subsequent sections of this report.

Study Guide and Supplemental Information

How has employment by industry changed historically?

What do we measure on this page?

This page describes historical employment change by industry. Industries are organized according to three major categories: non-services related; services related; and government. Employment includes wage and salary jobs and proprietors. The employment data are organized according to the Standard Industrial Classification (SIC) system and reported by place of work.

Non-Services Related: Consists of employment in industries such as farm, mining, and manufacturing.

Services Related: Consists of employment in industries such as retail trade, finance, insurance and real estate, and services.

Government: Consists of federal, military, state and local government employment, and government enterprise.

Why is it important?

Understanding which industries are responsible for most jobs and which sectors are growing or declining is key to grasping the type of economy that exists, how it has changed over time, and evolving competitive strengths.

Most new jobs created in the U.S. economy in the last thirty years have been in services related sectors, a category that includes a wide variety of high and low-wage occupations ranging from jobs in hotels and amusement parks to legal, health, business, and educational services. The section in this report titled "How do wages compare across industries?" shows the difference in wages between various services related industries and compared to non-services related sectors.

In many small rural communities, government employment (e.g., the Forest Service and Bureau of Land Management) represents an important component of the economy. In others there have been important changes in employment in mining (which includes fossil fuel energy development), manufacturing (which includes lumber and wood products), and construction.

Methods

The data end in 2000 because in 2001 the Bureau of Economic Analysis (BEA) switched to organizing industry-level information according to the newer North American Industrial Classification System (NAICS). More recent employment trends, organized by NAICS, are shown in subsequent sections of this report.

It is not normally appropriate to put SIC and NAICS data in the same tables and figures because of the difference in methods used to organize industry data. The SIC coding system organizes industries by the primary activity of the establishment. In NAICS, industries are organized according to the production process. See the Data Sources and Methods section of this report for more information on the shift from SIC to NAICS.

The terms non-services related and services related are not terms used by the U.S. Department of Commerce. They are used in these pages to help organize the information into easy-to-understand categories.

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses supplemental data from the U.S. Department of Commerce to estimate these data gaps. These values are indicated with tildes (~).

Additional Resources

For online SIC and NAICS manuals and definitions of industry codes see: bls.gov/bls/NAICS.htm ⁽¹⁰⁾.

According to projections by the U.S. Department of Labor, from 2008 through 2018 "goods-producing" employment in the U.S. (mining, construction, and manufacturing) will not grow. By 2018, goods-producing sectors will account for 12.9 percent of all jobs, down from 14.2 percent in 2008. In contrast, "service-producing" sectors are expected to account for 96 percent of the growth in new jobs. The fastest growing are projected to be professional and business services, and health care and social assistance. See: Bartsch K. J. 2009. "The Employment Projections for 2008-18" Monthly Labor Review Online. 132(11): 3-10, available at:

bls.gov/opub/mlr/2009/11 ⁽¹¹⁾. See also: bls.gov/opub/mlr/2012/01/art1full.pdf ⁽¹²⁾ for 2010-2020 projections.

For an overview of how historical changes in employment have affected rural America, see: Whitenar, L.A. and D.A. McGranahan. 2003. "Rural America: Opportunities and Challenges." Amber Waves. February, available at: ers.usda.gov/Amberwaves/Feb03/features/ruralamerica.htm ⁽¹³⁾.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps-hdt ⁽¹⁴⁾.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25.

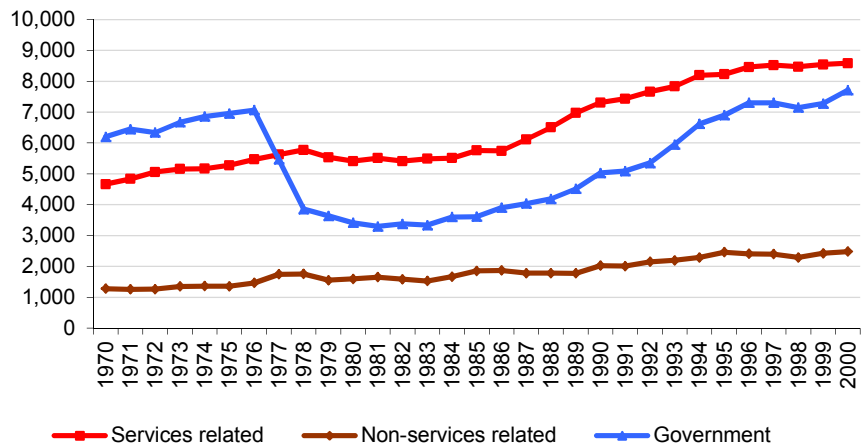
Industry Sectors

How has employment by industry changed historically?

This page describes historical employment trends by major industry category (non-services related, services related, and government) and by industry. Employment includes wage and salary jobs and proprietors. The employment data are organized according to the Standard Industrial Classification (SIC) system and reported by place of work.

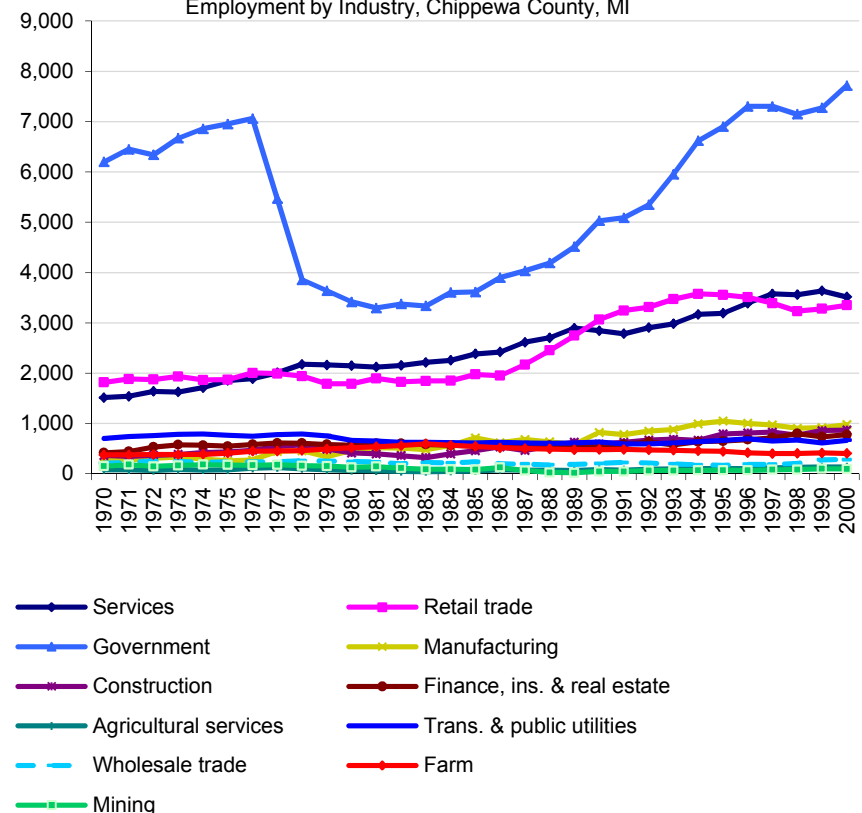
- From 1970 to 2000, jobs in services related industries grew from 4,664 to 8,585, a 84% increase.
- From 1970 to 2000, jobs in non-services related industries grew from 1,277 to 2,482, a 94% increase.
- From 1970 to 2000, jobs in government jobs grew from 6,199 to 7,715, a 24% increase.

Employment by Major Industry Category, Chippewa County, MI



- In 2000 the three industry sectors with the largest number of jobs were government (7,715 jobs), services (3,514 jobs), and retail trade (3,349 jobs).
- From 1970 to 2000, the three industry sectors that added the most new jobs were services (1,998 new jobs), retail trade (1,532 new jobs), and government (1,516 new jobs).

Employment by Industry, Chippewa County, MI



Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25.

Study Guide and Supplemental Information

How has employment by industry changed historically?

What do we measure on this page?

This page describes historical employment trends by major industry category (non-services related, services related, and government) and by industry. Employment includes wage and salary jobs and proprietors. The employment data are organized according to the Standard Industrial Classification (SIC) system and reported by place of work.

Non-Services Related: Consists of employment in industries such as farm, mining, and manufacturing.

Services Related: Consists of employment in industries such as retail trade, finance, insurance and real estate, and services.

Government: Consists of federal, military, state and local government employment, and government enterprise.

Why is it important?

Understanding which industries are responsible for most jobs and which sectors are growing or declining is key to grasping the type of economy that exists, how it has changed over time, and evolving competitive strengths.

Most new jobs created in the U.S. economy in the last thirty years have been in services related sectors, a category that includes a wide variety of high and low-wage occupations ranging from jobs in hotels and amusement parks to legal, health, business, and educational services. The section in this report titled "*How do wages compare across industries?*" shows the difference in wages between various services related industries and compared to non-services related sectors.

In many small rural communities, government employment (e.g., the Forest Service and Bureau of Land Management) represents an important component of the economy. In others there have been important changes in employment in mining (which includes fossil fuel energy development), manufacturing (which includes lumber and wood products), and construction.

Methods

The data end in 2000 because in 2001 the Bureau of Economic Analysis (BEA) switched to organizing industry-level information according to the newer North American Industrial Classification System (NAICS). More recent employment trends, organized by NAICS, are shown in subsequent sections of this report.

It is not normally appropriate to put SIC and NAICS data in the same tables and figures because of the difference in methods used to organize industry data. The SIC coding system organizes industries by the primary activity of the establishment. In NAICS, industries are organized according to the production process. See the Data Sources and Methods section of this report for more information on the shift from SIC to NAICS.

The terms non-services related and services related are not terms used by the U.S. Department of Commerce. They are used in these pages to help organize the information into easy-to-understand categories.

Additional Resources

For online SIC and NAICS manuals and definitions of industry codes, see: bls.gov/bls/NAICS.htm ⁽¹⁰⁾.

According to projections by the U.S. Department of Labor, from 2008 through 2018 "goods-producing" employment in the U.S. (e.g., mining, construction, and manufacturing) will not grow. By 2018, goods-producing sectors will account for 12.9 percent of all jobs, down from 14.2 percent in 2008. In contrast, "service-producing" sectors are expected to account for 96 percent of the growth in new jobs. The fastest growing are projected to be professional and business services, and health care and social assistance. See: Bartsch K. J. 2009. "The Employment Projections for 2008-18" Monthly Labor Review Online. 132(11): 3-10, available at: bls.gov/pub/mlr/2009/11 ⁽¹¹⁾.

For an overview of how historical changes in employment have affected rural America, see: Whitenar, L.A. and D.A. McGranahan. 2003. "Rural America: Opportunities and Challenges." Amber Waves. February, available at: ers.usda.gov/Amberwaves/Feb03/features/ruralamerica.htm ⁽¹³⁾.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps-hdt ⁽¹⁴⁾.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25.

Industry Sectors

How has employment by industry changed recently?

This page describes recent employment change by industry. Industries are organized according to three major categories: non-services related; services related; and government. Employment includes wage and salary jobs and proprietors. The employment data are organized according to the North American Industrial Classification System (NAICS) and reported by place of work.

Employment by Industry, 2001-2010

	2001	2010	Change 2001-2010
Total Employment (number of jobs)	18,370	17,863	-507
Non-services related	2,281	1,812	-469
Farm	410	381	-29
Forestry, fishing, & related activities	111	135	24
Mining (including fossil fuels)	95	140	45
Construction	902	639	-263
Manufacturing	763	517	-246
Services related	7,835	8,314	479
Utilities	118	108	-10
Wholesale trade	132	248	116
Retail trade	2,239	2,184	-55
Transportation and warehousing	389	275	-114
Information	256	197	-59
Finance and insurance	402	470	68
Real estate and rental and leasing	426	567	141
Professional and technical services	366	434	68
Management of companies and enterprises	na	na	na
Administrative and waste services	na	na	na
Educational services	115	186	71
Health care and social assistance	753	1,080	327
Arts, entertainment, and recreation	285	289	4
Accommodation and food services	1,500	1,352	-148
Other services, except public administration	854	924	70
Government	7,595	7,282	-313

Percent of Total

			% Change 2001-2010
Total Employment			-2.8%
Non-services related	12.4%	10.1%	-20.6%
Farm	2.2%	2.1%	-7.1%
Forestry, fishing, & related activities	0.6%	0.8%	21.6%
Mining (including fossil fuels)	0.5%	0.8%	47.4%
Construction	4.9%	3.6%	-29.2%
Manufacturing	4.2%	2.9%	-32.2%
Services related	42.7%	46.5%	6.1%
Utilities	0.6%	0.6%	-8.5%
Wholesale trade	0.7%	1.4%	87.9%
Retail trade	12.2%	12.2%	-2.5%
Transportation and warehousing	2.1%	1.5%	-29.3%
Information	1.4%	1.1%	-23.0%
Finance and insurance	2.2%	2.6%	16.9%
Real estate and rental and leasing	2.3%	3.2%	33.1%
Professional and technical services	2.0%	2.4%	18.6%
Management of companies and enterprises	na	na	na
Administrative and waste services	na	na	na
Educational services	0.6%	1.0%	62.3%
Health care and social assistance	4.1%	6.0%	43.4%
Arts, entertainment, and recreation	1.6%	1.6%	1.4%
Accommodation and food services	8.2%	7.6%	-9.9%
Other services, except public administration	4.6%	5.2%	8.2%
Government	41.3%	40.8%	-4.1%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25N.

Study Guide and Supplemental Information

How has employment by industry changed recently?

What do we measure on this page?

This page describes recent employment change by industry from 2001 to 2008. Industries are organized according to three major categories: non-services related, services related, and government. Employment includes wage and salary jobs and proprietors. The employment data are organized according to the North American Industrial Classification System (NAICS) and reported by place of work.

Non-Services Related: Consists of employment in industries such as farm, mining, and manufacturing.

Services Related: Consists of employment in industries such as retail trade, finance, insurance and real estate, and services.

Government: Consists of federal, military, state and local government employment, and government enterprise.

Why is it important?

Recent employment trends organized by NAICS offer more detail than the old Standard Industrial Classification (SIC) system, particularly with regard to services related industries. This is especially useful since in most geographies the majority of new job growth in recent years has taken place in services related industries.

Although NAICS captures much more detail on employment in services related sectors, these industries still encompass a wide variety of high and low-wage occupations ranging from jobs in accommodation and food services to professional and technical services. The section in this report titled "*How do wages compare across industries?*" shows the difference in wages between various services related industries and compared to non-services related sectors.

It can be useful to ask whether the historical employment trends shown earlier in this report continue more recently, and what factors are driving a shift in industry makeup and competitive position. It may be the case that the economic role and contribution of public lands have changed along with broader economic shifts in many geographies.

Methods

In 2001, the Bureau of Economic Analysis (BEA) switched to organizing industry-level information according to the newer North American Industrial Classification System (NAICS). An advantage of the NAICS method is the greater amount of detail to describe changes in the service related sectors.

It is not normally appropriate to put SIC and NAICS data in the same tables and figures because of the difference in methods used to organize industry data. The SIC coding system organizes industries by the primary activity of the establishment. In NAICS, industries are organized according to the production process. See the Data Sources and Methods section of this report for more information on the shift from SIC to NAICS.

The terms non-services related and services related are not terms used by the U.S. Department of Commerce. They are used in these pages to help organize the information into easy-to-understand categories.

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses supplemental data from the U.S. Department of Commerce to estimate these data gaps. These values are indicated with tildes (~).

Additional Resources

For online SIC and NAICS manuals and definitions of industry codes, see: bls.gov/bls/NAICS.htm ⁽¹⁰⁾.

For a review of the role of public lands amenities and transportation in economic development, see:

Rasker, R., P.H. Gude, J.A. Gude, J. van den Noort. 2009. "The Economic Importance of Air Travel in High-Amenity Rural Areas." *Journal of Rural Studies* 25: 343-353., available at: headwaterseconomics.com/3wests/Rasker_et_al_2009_Three_Wests.pdf ⁽¹⁵⁾.

For a review of the role of amenities in rural development, see the U.S. Department of Agriculture's Economic Research Service: McGranahan, D. 1999. "Natural Amenities Drive Rural Population Change." *Agricultural Economic Report No. (AER781)*, October. ers.usda.gov/publications/aer-agricultural-economic-report/aer781.aspx ⁽¹⁶⁾.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps-hdt ⁽¹⁴⁾.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25N.

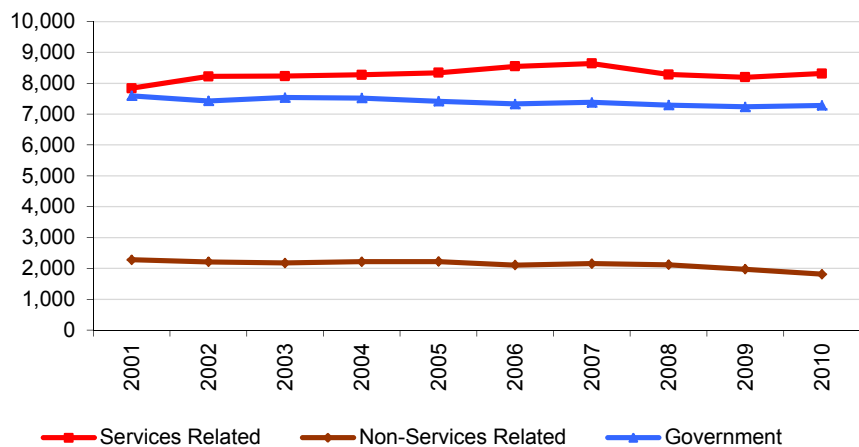
Industry Sectors

How has employment by industry changed recently?

This page describes recent employment trends by major industry category (non-services related, services related, and government) and by industry. Employment includes wage and salary jobs and proprietors. The employment data are organized according to the North American Industrial Classification System (NAICS) and reported by place of work.

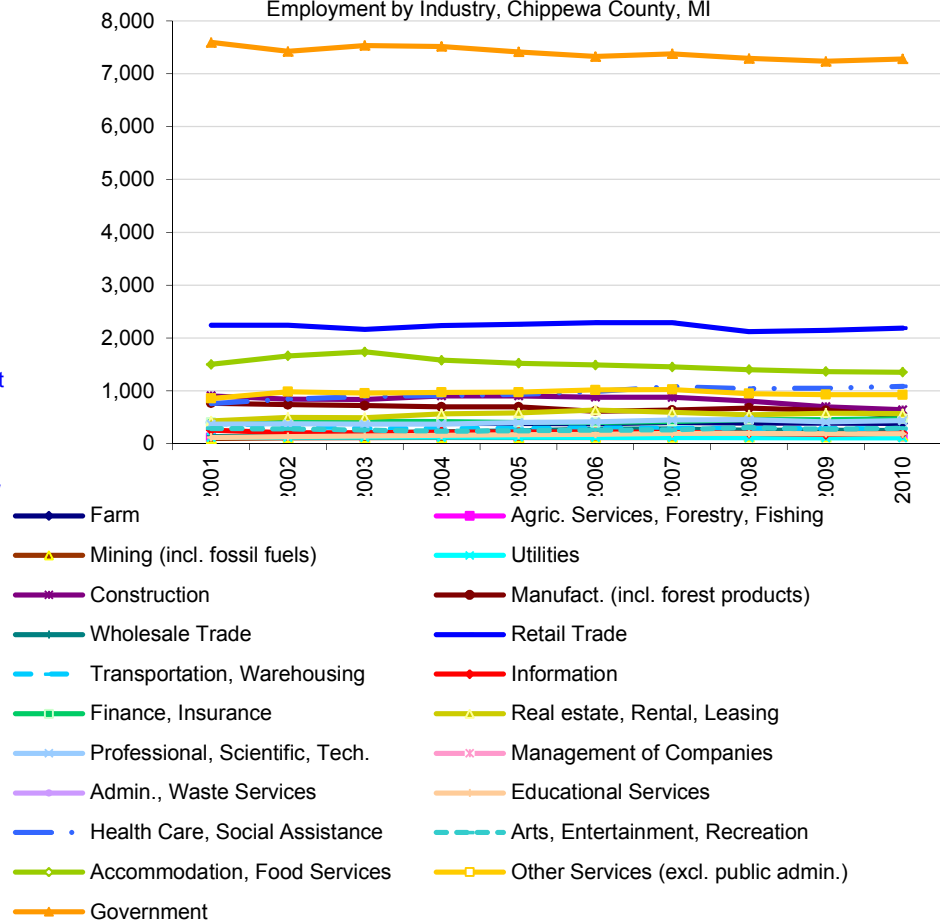
- From 2001 to 2010, jobs in services related industries grew from 7,835 to 8,314, a 6% increase.
- From 2001 to 2010, jobs in non-services related industries shrank from 2,281 to 1,812, a -21% decrease.
- From 2001 to 2010, jobs in government jobs shrank from 7,595 to 7,282, a -4% decrease.

Employment by Major Industry Category, Chippewa County, MI



- From 2001 to 2010, the three industry sectors that added the most new jobs were health care, social assistance (327 new jobs), real estate, rental, leasing (141 new jobs), and wholesale trade (116 new jobs).

Employment by Industry, Chippewa County, MI



Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25N.

Study Guide and Supplemental Information

How has employment by industry changed recently?

What do we measure on this page?

This page describes recent employment trends by major industry category (non-services related, services related, and government) and by industry. Employment includes wage and salary jobs and proprietors. The employment data are organized according to the North American Industrial Classification System (NAICS) and reported by place of work.

Non-Services Related: Consists of employment in industries such as farm, mining, and manufacturing.

Services Related: Consists of employment in industries such as retail trade, finance, insurance and real estate, and services.

Government: Consists of federal, military, state and local government employment, and government enterprise.

Why is it important?

Recent employment trends organized by NAICS offer more detail than the old Standard Industrial Classification (SIC) system, particularly with regard to services related industries. This is especially useful since in most geographies the majority of new job growth in recent years has taken place in services related industries.

It can be useful to ask whether the historical employment trends shown earlier in this report continue more recently, and what factors are driving a shift in industry makeup and competitive position. It may be the case that the economic role and contribution of public lands have changed along with broader economic shifts in many geographies.

Methods

In 2001, the Bureau of Economic Analysis (BEA) switched to organizing industry-level information according to the newer North American Industrial Classification System (NAICS). An advantage of the NAICS method is the greater amount of detail to describe changes in the service related sectors.

It is not normally appropriate to put SIC and NAICS data in the same tables and figures because of the difference in methods used to organize industry data. The SIC coding system organizes industries by the primary activity of the establishment. In NAICS, industries are organized according to the production process. See the Data Sources and Methods section of this report for more information on the shift from SIC to NAICS.

The terms non-services related and services related are not terms used by the U.S. Department of Commerce. They are used in these pages to help organize the information into easy-to-understand categories.

Additional Resources

For online SIC and NAICS manuals and definitions of industry codes, see: bls.gov/bls/NAICS.htm ⁽¹⁰⁾.

For a review of the role of public lands amenities and transportation in economic development, see:

Rasker, R., P.H. Gude, J.A. Gude, J. van den Noort. 2009. "The Economic Importance of Air Travel in High-Amenity Rural Areas." *Journal of Rural Studies* 25: 343-353., available at: headwaterseconomics.com/3wests/Rasker_et_al_2009_Three_Wests.pdf ⁽¹⁵⁾.

For a review of the role of amenities in rural development, see the U.S. Department of Agriculture's Economic Research Service: McGranahan, D. 1999. "Natural Amenities Drive Rural Population Change." *Agricultural Economic Report No. (AER781)*, October. ers.usda.gov/publications/aer-agricultural-economic-report/aer781.aspx ⁽¹⁶⁾.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps-hdt ⁽¹⁴⁾.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25N.

Industry Sectors

How has personal income by industry changed historically?

This page describes historical personal income change by industry (in real terms). Industries are organized according to three major categories: non-services related, services related, and government. The personal income data are organized according to the Standard Industrial Classification (SIC) system and reported by place of work.

Personal Income by Industry, 1970-2000 (Thousands of 2011 \$s)

	1970	1980	1990	2000	Change 1990-2000
Labor Earnings	465,120	364,139	476,056	672,642	196,586
Non-services related	42,999	48,807	54,457	86,381	31,924
Farm	3,977	592	-1,124	1,603	2,727
Agricultural services, forestry, fishing & other	2,290	2,146	1,277	1,969	692
Mining (including fossil fuels)	10,203	9,792	1,132	3,540	2,408
Construction	16,354	18,661	22,740	35,301	12,561
Manufacturing (including forest products)	10,174	17,616	30,431	43,969	13,538
Services related	140,233	153,646	179,133	219,890	40,756
Transportation & public utilities	36,645	39,801	30,800	33,993	3,194
Wholesale trade	10,134	9,109	8,975	10,859	1,884
Retail trade	47,765	41,054	61,253	66,473	5,220
Finance, insurance & real estate	10,777	11,419	10,419	16,782	6,363
Services	34,912	52,263	67,686	91,782	24,096
Government	281,887	161,686	242,466	366,371	123,905

Percent of Total

					% Change 1990-2000
Labor Earnings					41.3%
Non-services related	9.2%	13.4%	11.4%	12.8%	58.6%
Farm	0.9%	0.2%	-0.2%	0.2%	-242.6%
Agricultural services, forestry, fishing & other	0.5%	0.6%	0.3%	0.3%	54.2%
Mining (including fossil fuels)	2.2%	2.7%	0.2%	0.5%	212.6%
Construction	3.5%	5.1%	4.8%	5.2%	55.2%
Manufacturing (including forest products)	2.2%	4.8%	6.4%	6.5%	44.5%
Services related	30.1%	42.2%	37.6%	32.7%	22.8%
Transportation & public utilities	7.9%	10.9%	6.5%	5.1%	10.4%
Wholesale trade	2.2%	2.5%	1.9%	1.6%	21.0%
Retail trade	10.3%	11.3%	12.9%	9.9%	8.5%
Finance, insurance & real estate	2.3%	3.1%	2.2%	2.5%	61.1%
Services	7.5%	14.4%	14.2%	13.6%	35.6%
Government	60.6%	44.4%	50.9%	54.5%	51.1%

All income data are reported by place of work. Industry categories may not add to total because of adjustments made by the Bureau of Economic Analysis. Estimates for data that were not disclosed are indicated with tildes (~).

The personal income data above are organized according to the Standard Industrial Classification (SIC) system. The data end in 2000 because in 2001 the U.S. Department of Commerce switched to organizing industry-level information according to the newer North American Industrial Classification System (NAICS). More recent personal income trends, organized by NAICS, are shown in subsequent pages of this report.

Study Guide and Supplemental Information

How has personal income by industry changed historically?

What do we measure on this page?

This page describes historical personal income change by industry (in real terms). Industries are organized according to three major categories: non-services related, services related, and government. The personal income data are organized according to the Standard Industrial Classification (SIC) system and reported by place of work.

Non-Services Related: Consists of employment in industries such as farm, mining, and manufacturing.

Services Related: Consists of employment in industries such as retail trade, finance, insurance and real estate, and services.

Government: Consists of federal, military, state and local government employment, and government enterprise.

Why is it important?

Historical changes in personal income, by industry, show how the structure of the local economy has changed over time. Some of the trends are due to national and international factors, while other trends may reflect local conditions. The shifting sources of labor earnings can point to evolving weaknesses and strengths in the local or regional economy. It may be the case that the economic role and contribution of public lands have changed along with broader economic shifts in many geographies.

Most new jobs created in the U.S. economy in the last thirty years have been in services related sectors, a category that includes a wide variety of high and low-wage occupations ranging from jobs in hotels and amusement parks to legal, health, business, and educational services. The section in this report titled "*How do wages compare across industries?*" shows the difference in wages between various services related industries and compared to non-services related sectors.

In many small rural communities, government employment (e.g., the Forest Service and Bureau of Land Management) represents an important component of the economy. In others there have been important changes in employment in mining (which includes fossil fuel energy development), manufacturing (which includes lumber and wood products), and construction.

Methods

The personal income data are organized according to the Standard Industrial Classification (SIC) system. The data end in 2000 because in 2001 the Bureau of Economic Analysis switched to organizing industry-level information according to the newer North American Industrial Classification System (NAICS). More recent personal income trends, organized by NAICS, are shown in subsequent pages of this report.

It is not normally appropriate to put SIC and NAICS data in the same tables and figures because of the difference in methods used to organize industry data. The SIC coding system organizes industries by the primary activity of the establishment. In NAICS industries are organized according to the production process.

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses supplemental data from the U.S. Department of Commerce to estimate these data gaps. These values are indicated with tildes (~).

Additional Resources

For online SIC and NAICS manuals and definitions of industry codes, see: bls.gov/bls/NAICS.htm⁽¹⁰⁾ and census.gov/eos/www/naics⁽¹⁷⁾.

For an overview of how historical changes in employment and personal income have affected rural America, see: Whitenar, L.A. and D.A. McGranahan. 2003. "Rural America: Opportunities and Challenges." *Amber Waves*. February, available at: ers.usda.gov/Amberwaves/Feb03/features/ruralamerica.htm⁽¹³⁾.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps-hdt⁽¹⁴⁾.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA05.

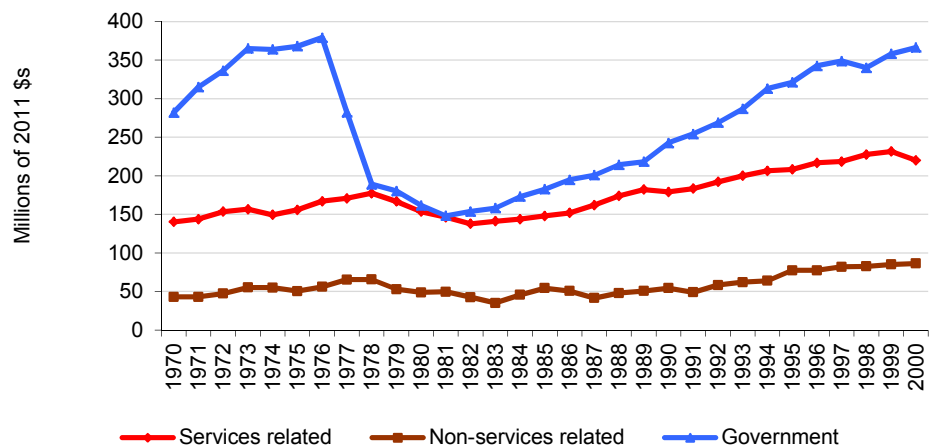
Industry Sectors

How has personal income by industry changed historically?

This page describes historical personal income trends by industry (in real terms). Industries are organized according to three major categories (non-services related, services related, and government) and using Standard Industry Classification categories. Data are reported by place of work.

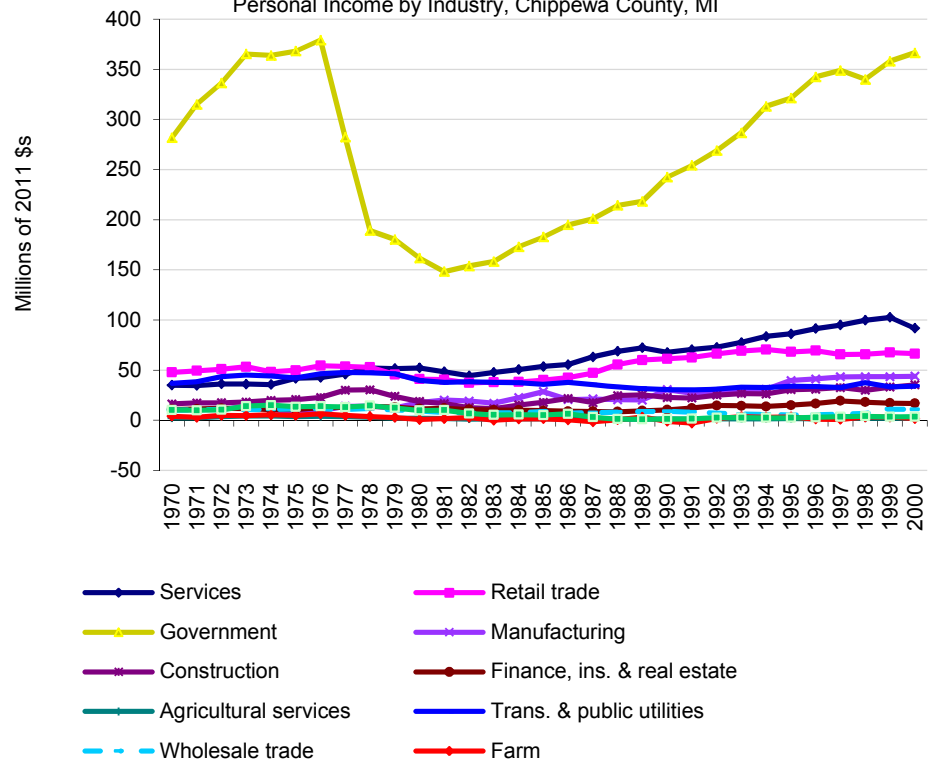
- From 1970 to 2000, personal income in services related industries grew from \$140.2 million to \$219.9 million (in real terms), a 57% increase.
- From 1970 to 2000, personal income in non-services related industries grew from \$140.2 million to \$86.4 million (in real terms), a 101% increase.
- From 1970 to 2000, personal income in government jobs grew from \$281.9 million to \$366.4 million (in real terms), a 30% increase.

Personal Income by Major Industry Category, Chippewa County, MI



- In 2000, the three industry sectors with the largest personal income were government (\$366.4 million), services (\$91.8 million), and retail trade (\$66.5 million).
- From 1970 to 2000 the three industry sectors that added the most new personal income (in real terms) were government (\$84.5 million), services (\$56.9 million), and manufacturing (\$33.8 million).

Personal Income by Industry, Chippewa County, MI



Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA05.

Study Guide and Supplemental Information

How has personal income by industry changed historically?

What do we measure on this page?

This page describes historical personal income trends by industry (in real terms). Industries are organized according to three major categories (non-services related; services related; and government) and using Standard Industry Classification categories. Data are reported by place of work.

Services Related: Consists of employment in industries such as retail trade, finance, insurance and real estate, and services.

Non-Services Related: Consists of employment in industries such as farm, mining, and manufacturing.

Government: Consists of federal, military, state and local government employment, and government enterprise.

Why is it important?

Historical trend data for personal income by major industry categories are useful for understanding how the economy has evolved. They are also useful to see how the economy performed in the past (growth vs. decline, response to recessions, etc.), and whether the relationship between sectors has changed. If there has been a shift from non-services related industries to services related industries over time, this could signal a change in the competitive position of the local or regional economy.

Methods

The personal income data are organized according to the Standard Industrial Classification (SIC) system. The data end in 2000 because in 2001 the Bureau of Economic Analysis switched to organizing industry-level information according to the newer North American Industrial Classification System (NAICS). More recent personal income trends, organized by NAICS, are shown in subsequent pages of this report.

It is not normally appropriate to put SIC and NAICS data in the same tables and figures because of the difference in methods used to organize industry data. The SIC coding system organizes industries by the primary activity of the establishment. In NAICS industries are organized according to the production process.

Additional Resources

For online SIC and NAICS manuals and definitions of industry codes, see: bls.gov/bls/NAICS.htm⁽¹⁰⁾ and census.gov/eos/www/naics⁽¹⁷⁾.

For an overview of how historical changes in employment and personal income have affected rural America, see: Whitenar, L.A. and D.A. McGranahan. 2003. "Rural America: Opportunities and Challenges." *Amber Waves*. February, available at: ers.usda.gov/Amberwaves/Feb03/features/ruralamerica.htm⁽¹³⁾.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps-hdt⁽¹⁴⁾.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA05.

Industry Sectors

How has personal income by industry changed recently?

This page describes recent personal income change (in real terms). Industries are organized according to three major categories: non-services related, services related, and government. The personal income data are organized according to the North American Industrial Classification System (NAICS) and reported by place of work.

Personal Income by Industry, 2001-2010 (Thousands of 2011 \$s)

	2001	2010	Change 2001-2010
Labor Earnings	672,412	679,490	7,078
Non-services related	69,785	45,500	-24,285
Farm	1,556	2,053	497
Forestry, fishing, & related activities	3,039	2,671	-369
Mining (including fossil fuels)	2,225	2,489	264
Construction	31,651	18,599	-13,052
Manufacturing	31,314	19,689	-11,625
Services related	~212,947	~213,334	387
Utilities	10,301	12,539	2,238
Wholesale trade	4,246	8,135	3,889
Retail trade	55,137	54,998	-139
Transportation and warehousing	17,906	10,528	-7,378
Information	7,646	5,159	-2,487
Finance and insurance	13,423	14,695	1,272
Real estate and rental and leasing	14,629	3,087	-11,542
Professional and technical services	9,235	9,552	317
Management of companies and enterprises	na	na	na
Administrative and waste services	na	na	na
Educational services	~2,893	4,292	1,399
Health care and social assistance	~24,608	39,640	15,032
Arts, entertainment, and recreation	6,359	4,378	-1,982
Accommodation and food services	22,129	20,259	-1,870
Other services, except public administration	24,433	26,071	1,638
Government	373,166	407,469	34,303

Percent of Total

			% Change 2001-2010
Labor Earnings			1.1%
Non-services related	10.4%	6.7%	-34.8%
Farm	0.2%	0.3%	31.9%
Forestry, fishing, & related activities	0.5%	0.4%	-12.1%
Mining (including fossil fuels)	0.3%	0.4%	11.9%
Construction	4.7%	2.7%	-41.2%
Manufacturing	4.7%	2.9%	-37.1%
Services related	~31.7%	~31.4%	0.2%
Utilities	1.5%	1.8%	21.7%
Wholesale trade	0.6%	1.2%	91.6%
Retail trade	8.2%	8.1%	-0.3%
Transportation and warehousing	2.7%	1.5%	-41.2%
Information	1.1%	0.8%	-32.5%
Finance and insurance	2.0%	2.2%	9.5%
Real estate and rental and leasing	2.2%	0.5%	-78.9%
Professional and technical services	1.4%	1.4%	3.4%
Management of companies and enterprises	na	na	na
Administrative and waste services	na	na	na
Educational services	~0.4%	0.6%	48.3%
Health care and social assistance	~3.7%	5.8%	61.1%
Arts, entertainment, and recreation	0.9%	0.6%	-31.2%
Accommodation and food services	3.3%	3.0%	-8.5%
Other services, except public administration	3.6%	3.8%	6.7%
Government	55.5%	60.0%	9.2%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA05N.

Study Guide and Supplemental Information

How has personal income by industry changed recently?

What do we measure on this page?

This page describes recent personal income change (in real terms). Industries are organized according to three major categories: non-services related, services related, and government. The personal income data are organized according to the North American Industrial Classification System (NAICS) and reported by place of work.

Services Related: Consists of employment in industries such as retail trade, finance, insurance and real estate, and services.

Non-Services Related: Consists of employment in industries such as farm, mining, and manufacturing.

Government: Consists of federal, military, state and local government employment, and government enterprise.

Why is it important?

Recent personal income trends organized by NAICS offer more detail than the old Standard Industrial Classification (SIC) system, particularly with regard to services related industries. This is especially useful since in many geographies the majority of new personal income growth in recent years has taken place in services related industries.

Although NAICS captures much more detail on personal income from services related sectors, these industries still encompass a wide variety of high and low-wage occupations ranging from jobs in accommodation and food services to professional and technical services. The section in this report titled "*How do wages compare across industries?*" shows the difference in wages between various services related industries and compared to non-services related sectors.

It can be useful to ask whether the historical employment trends shown earlier in this report continue more recently, and what factors are driving a shift in industry makeup and competitive position. It may be the case that the economic role and contribution of public lands have changed along with broader economic shifts in many geographies.

Methods

In 2001, the Bureau of Economic Analysis (BEA) switched to organizing industry-level information according to the newer North American Industrial Classification System (NAICS). An advantage of the NAICS method is the greater amount of detail to describe changes in the service related sectors.

It is not normally appropriate to put SIC and NAICS data in the same tables and figures because of the difference in methods used to organize industry data. The SIC coding system organizes industries by the primary activity of the establishment. In NAICS, industries are organized according to the production process. See the Data Sources and Methods section of this report for more information on the shift from SIC to NAICS.

The terms non-services related and services related are not terms used by the U.S. Department of Commerce. They are used in these pages to help organize the information into easy-to-understand categories.

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses supplemental data from the U.S. Department of Commerce to estimate these data gaps. These values are indicated with tildes (~).

Additional Resources

For online SIC and NAICS manuals and definitions of industry codes, see: bls.gov/bls/NAICS.htm ⁽¹⁰⁾.

For a review of the role of public lands amenities and transportation in economic development, see:

Rasker, R., P.H. Gude, J.A. Gude, J. van den Noort. 2009. "The Economic Importance of Air Travel in High-Amenity Rural Areas." *Journal of Rural Studies* 25: 343-353., available at: headwaterseconomics.com/3wests/Rasker_et_al_2009_Three_Wests.pdf ⁽¹⁵⁾.

For a review of the role of amenities in rural development, see the U.S. Department of Agriculture's Economic Research Service: McGranahan, D. 1999. "Natural Amenities Drive Rural Population Change." *Agricultural Economic Report No. (AER781)*, October. ers.usda.gov/publications/aer-agricultural-economic-report/aer781.aspx ⁽¹⁶⁾.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps-hdt ⁽¹⁴⁾.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA05N.

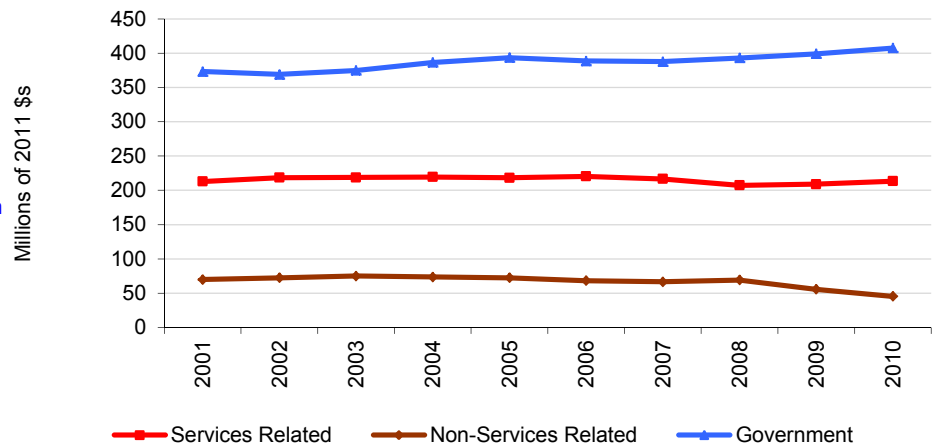
Industry Sectors

How has personal income by industry changed recently?

This page describes recent personal income trends (in real terms) by major industry category (non-services related, services related, and government) and by industry. The personal income data are organized according to the North American Industrial Classification System (NAICS) and reported by place of work.

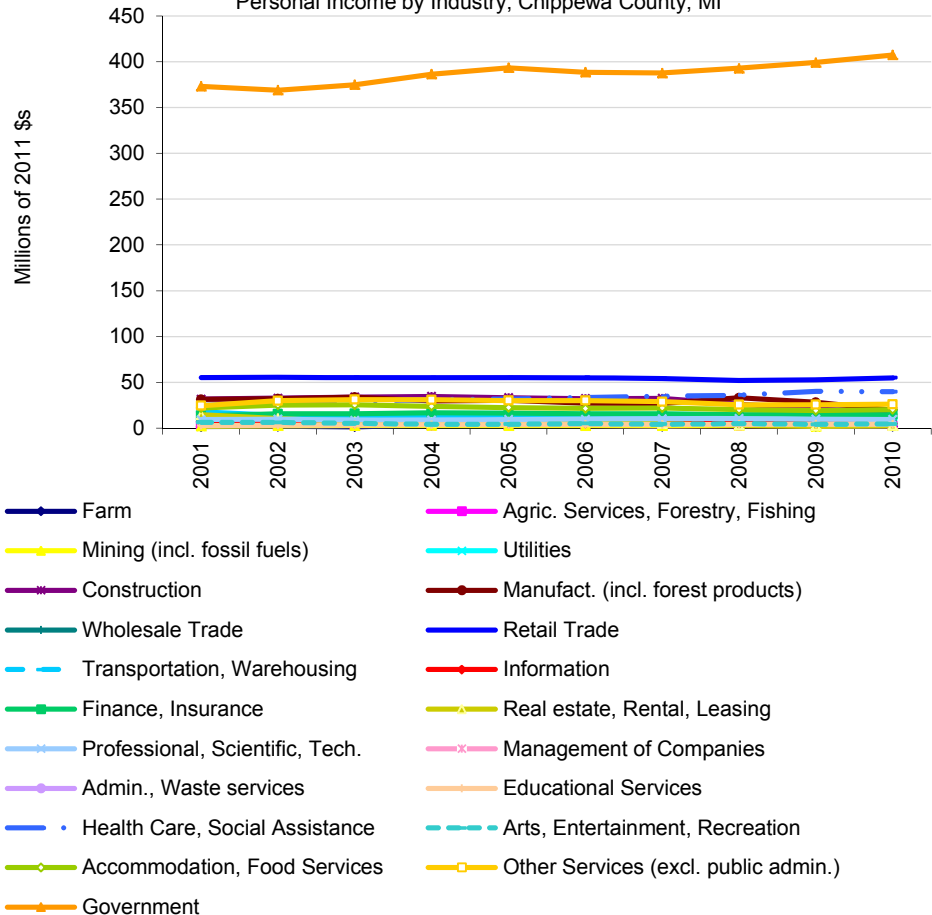
- From 2001 to 2010, personal income from services related industries shrank from \$213 million to \$213 million (in real terms), a % decrease.
- From 2001 to 2010, personal income from non-services related industries shrank from \$70 million to \$46 million (in real terms), a -34% decrease.
- From 2001 to 2010, personal income from government jobs grew from \$373 million to \$407 million (in real terms), a 9% increase.

Personal Income by Major Industry Category, Chippewa County, MI



- From 2001 to 2010, the three industry sectors that added the most new personal income (in real terms) were government (\$34.3 million), health care, social assistance (\$15.0 million), and wholesale trade (\$3.9 million).

Personal Income by Industry, Chippewa County, MI



Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA05N.

Study Guide and Supplemental Information

How has personal income by industry changed recently?

What do we measure on this page?

This page describes recent personal income trends (in real terms) by major industry category (non-services related, services related, and government) and by industry. The personal income data are organized according to the North American Industrial Classification System (NAICS) and reported by place of work.

Services Related: Consists of employment in industries such as retail trade, finance, insurance and real estate, and services.

Non-Services Related: Consists of employment in industries such as farm, mining, and manufacturing.

Government: Consists of federal, military, state and local government employment, and government enterprise.

Why is it important?

Recent employment trends organized by NAICS offer more detail than the old Standard Industrial Classification (SIC) system, particularly with regard to services related industries. This is especially useful since in most geographies the majority of new job growth in recent years has taken place in services related industries.

It can be useful to ask whether the historical employment trends shown earlier in this report continue more recently, and what factors are driving a shift in industry makeup and competitive position. It may be the case that the economic role and contribution of public lands have changed along with broader economic shifts in many geographies.

Methods

In 2001, the Bureau of Economic Analysis (BEA) switched to organizing industry-level information according to the newer North American Industrial Classification System (NAICS). An advantage of the NAICS method is the greater amount of detail to describe changes in the service related sectors.

It is not normally appropriate to put SIC and NAICS data in the same tables and figures because of the difference in methods used to organize industry data. The SIC coding system organizes industries by the primary activity of the establishment. In NAICS, industries are organized according to the production process. See the Data Sources and Methods section of this report for more information on the shift from SIC to NAICS.

The terms non-services related and services related are not terms used by the U.S. Department of Commerce. They are used in these pages to help organize the information into easy-to-understand categories.

Additional Resources

For online SIC and NAICS manuals and definitions of industry codes, see: bls.gov/bls/NAICS.htm ⁽¹⁰⁾.

For a review of the role of public lands amenities and transportation in economic development, see:

Rasker, R., P.H. Gude, J.A. Gude, J. van den Noort. 2009. "The Economic Importance of Air Travel in High-Amenity Rural Areas." *Journal of Rural Studies* 25: 343-353., available at: headwaterseconomics.com/3wests/Rasker_et_al_2009_Three_Wests.pdf ⁽¹⁵⁾.

For a review of the role of amenities in rural development, see the U.S. Department of Agriculture's Economic Research Service: McGranahan, D. 1999. "Natural Amenities Drive Rural Population Change." *Agricultural Economic Report No. (AER781)*, October. ers.usda.gov/publications/aer-agricultural-economic-report/aer781.aspx ⁽¹⁶⁾.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps-hdt ⁽¹⁴⁾.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA05N.

Performance

How have earnings per job and per capita income changed?

This page describes how average earnings per job and per capita income (in real terms) have changed over time.

Average Earnings Per Job: This is a measure of the compensation of the average job. It is total earnings divided by total employment. Full-time and part-time jobs are counted at equal weight. Employees, sole proprietors, and active partners are included.

Per Capita Income: This is a measure of income per person. It is total personal income (from labor and non-labor sources) divided by total population.

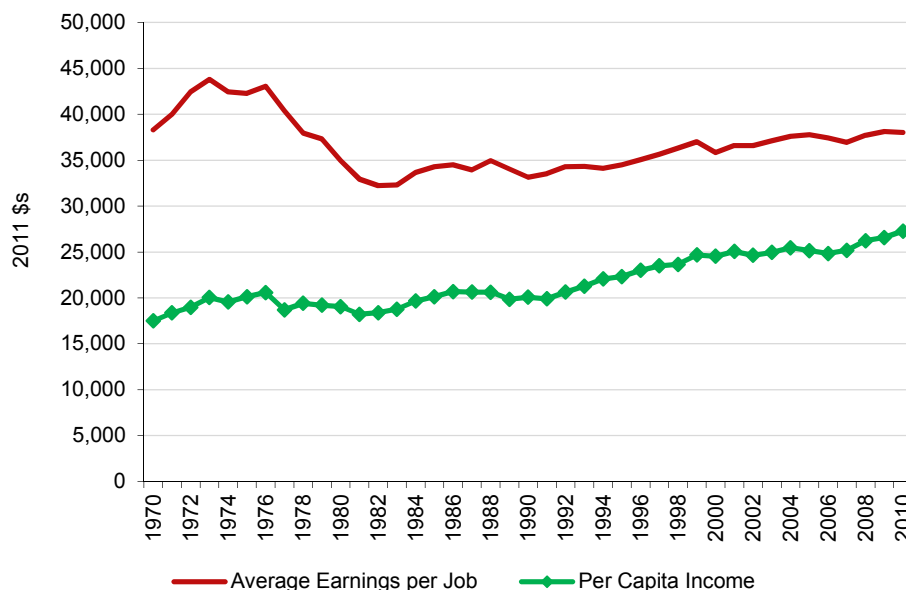
Average Earnings per Job & Per Capita Income, 1970-2010 (2011 \$s)

	1970	1980	1990	2000	2010	Change 2000-2010
Average Earnings per Job	\$38,313	\$34,949	\$33,149	\$35,813	\$38,039	\$2,226
Per Capita Income	\$17,496	\$19,040	\$20,071	\$24,532	\$27,281	\$2,749

	% Change 2000-2010
Average Earnings per Job	6.2%
Per Capita Income	11.2%

Average Earnings per Job & Per Capita Income, Chippewa County, MI

- From 1970 to 2010, average earnings per job shrank from \$38,313 to \$38,039 (in real terms), a -1% decrease.
- From 1970 to 2010, per capita income grew from \$17,496 to \$27,281 (in real terms), a 56% increase.



Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA30.

Study Guide and Supplemental Information

How have earnings per job and per capita income changed?

What do we measure on this page?

This page describes how average earnings per job and per capita income (in real terms) have changed over time.

Average Earnings per Job: This is a measure of the compensation of the average job. It is total earnings divided by total employment. Full-time and part-time jobs are counted at equal weight. Employees, sole proprietors, and active partners are included.

Per Capita Income: This is a measure of income per person. It is total personal income (from labor and non-labor sources) divided by total population.

Why is it important?

Average earnings per job is an indicator of the quality of local employment. A higher average earnings per job indicates that there are relatively more high-wage occupations. It can be useful to consider earnings against local cost of living indicators.

There are a number of reasons why average earnings per job may decline. These include: (1) more part-time and/or seasonal workers entering the workforce; (2) a rise in low-wage industries, such as tourism-related sectors; (3) a decline of high-wage industries, such as manufacturing; (4) more lower-paid workers entering the workforce; (5) the presence of a university with increasing an enrollment of relatively low-wage students; (6) an influx of workers with low education levels that are paid less; (7) the in-migration of semi-retired workers who work part-time and/or seasonally; and (8) an influx of people who move to an area for quality of life rather than profit-maximizing reasons.

Per capita income is considered one of the most important measures of economic well-being. However, this measure can be misleading. Per capita income is total personal income divided by population. Because total personal income includes non-labor income sources (dividends, interest, rent and transfer payments), it is possible for per capita income to be relatively high due to the presence of retirees and people with investment income. And because per capita income is calculated using total population and not the labor force as in average earnings per job, it is possible for per capita income to be relatively low when there are a disproportionate number of children and/or elderly people in the population.

Additional Resources

For an example of why average earnings per job may decline, one study has recently documented that workers would accept lower wages in order to live closer to environmental amenities. See: Schmidt, L. and P.N. Courant. 2006. "Sometimes Close is Good Enough: The Value of Nearby Environmental Amenities." *Journal of Regional Science*. 46(5): 931-951.

The Monthly Labor Review Online, published by the Bureau of Labor Statistics, contains several issues related to explaining earnings and wages, by industry, sex, and education achievement. See: bls.gov/opub/mlr/indexe.htm#Earnings_and_wages ⁽¹⁸⁾.

To see the possible impact of non-labor income sources on per capita income, see previous sections of this report that show the percent contribution of non-labor to total personal income, or run the EPS-HDT Non-Labor Income report.

For a glossary of terms used by the Bureau of Economic Analysis, see: bea.gov/glossary/glossary.cfm ⁽⁸⁾.

For a comprehensive cost of living index see: livingwage.geog.psu.edu/ ⁽¹⁹⁾.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA30.

Performance

How do wages compare across industries?

This page describes employment and average annual wages by industry. Industries are organized according to three major categories: non-services related, services related, and government.

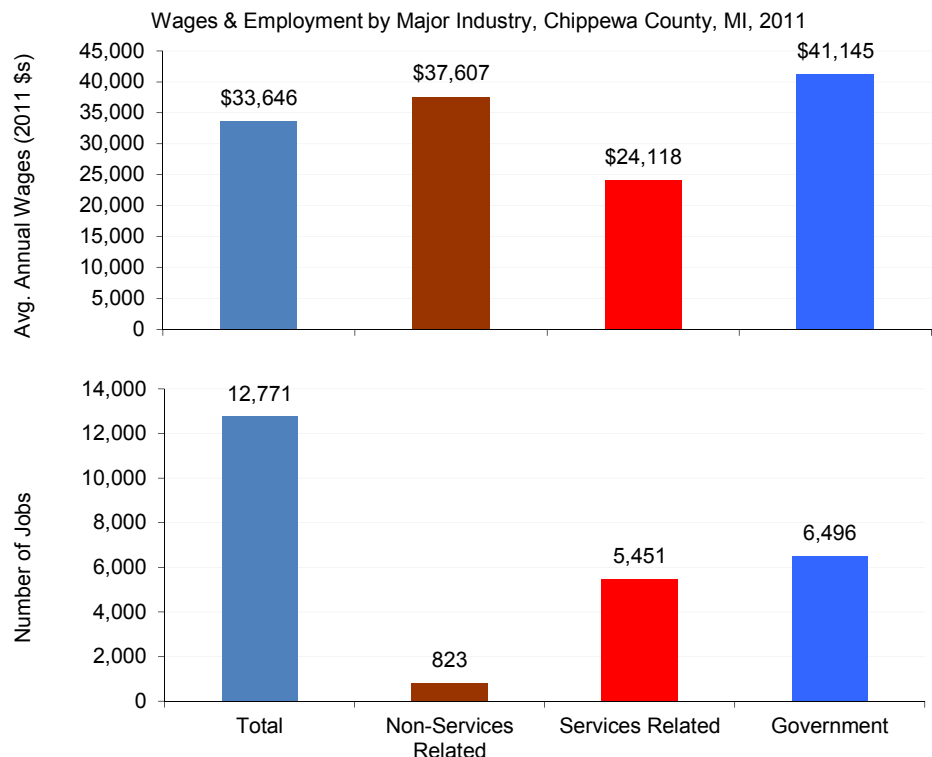
Employment & Wages by Industry, 2011 (2011 \$s)

	Employment	% of Total Employment	Avg. Annual Wages	% Above or Below Avg.
Total	12,771		\$33,646	0.0%
Private	6,274	49.1%	\$25,888	-23.1%
Non-Services Related	823	6.4%	\$37,607	11.8%
Natural Resources and Mining	77	0.6%	\$38,630	14.8%
Agriculture, forestry, fishing & hunting	48	0.4%	\$26,254	-22.0%
Mining (incl. fossil fuels)	29	0.2%	\$59,114	75.7%
Construction	296	2.3%	\$36,906	9.7%
Manufacturing (Incl. forest products)	450	3.5%	\$37,893	12.6%
Services Related	5,451	42.7%	\$24,118	-28.3%
Trade, Transportation, and Utilities	2,290	17.9%	\$26,733	-20.5%
Information	154	1.2%	\$26,652	-20.8%
Financial Activities	339	2.7%	\$32,667	-2.9%
Professional and Business Services	313	2.5%	\$24,301	-27.8%
Education and Health Services	864	6.8%	\$31,365	-6.8%
Leisure and Hospitality	1,221	9.6%	\$13,003	-61.4%
Other Services	272	2.1%	\$16,507	-50.9%
Unclassified	0	0.0%	na	na
Government	6,496	50.9%	\$41,145	22.3%
Federal Government	468	3.7%	\$71,126	111.4%
State Government	1,412	11.1%	\$53,306	58.4%
Local Government	4,616	36.1%	\$34,385	2.2%

This table shows wage data from the Bureau of Labor Statistics, which does not report data for proprietors or the value of benefits and uses slightly different industry categories than those shown on previous pages of this report.

- In 2011, government jobs paid the highest wages (\$41,145), and services related jobs paid the lowest (\$24,118).

- In 2011, government jobs employed the largest number of people (6,496) and non-services related employed the smallest (823 jobs).



Study Guide and Supplemental Information

How do wages compare across industries?

What do we measure on this page?

This page describes employment and average annual wages by industry. Industries are organized according to three major categories: non-services related, services related, and government.

The table compares level of employment and wages for all sectors of the economy, and shows (on the far right column) whether the sector's wages are above or below the average wage for all industries. The figures compare wages (top figure) by major category (non-services related, services related, and government) and the number of people employed in each category (bottom figure).

Average Annual Wages: This is total annual pay divided by total employment.

Why is it important?

It is often assumed that the only high-wage jobs in rural areas are in manufacturing and natural resource industries (e.g., timber, fossil fuel energy development, and mining). While these often provide the highest average wages, it is also possible for some components of services related industries to offer high wages (e.g., information, financial activities, and professional and business services). In addition, some places may have high average annual wages in a particular sector, but few people employed in that sector. Others may have low wages in a particular sector, and many people employed in that sector.

While nationally nearly all new jobs since 1990 have been in services related industries, they are not equally distributed across the country, and not all geographies are able to attract and retain the relatively high-wage services. Additional research would be needed to determine whether a geography has the elements that need to be in place to attract and keep high-wage services related workers. For example, those elements may include access to reliable transportation including airports, amenities, recreation opportunities, a trained workforce, and good schools. It is also worth investigating whether public lands play a role in attracting high-wage service workers.

In some geographies, the highest-paying jobs are in the public sector (e.g., in the Forest Service and Bureau of Land Management). During times of national recessions, a heavy reliance on government jobs may serve as an economic buffer against employment and earnings declines in the private sector.

Methods

Data are from the Bureau of Labor Statistics, which has the advantage of providing employment and wage data. However, the Bureau of Labor Statistics does not count the self-employed, so the employment numbers may differ from figures provided by other data sources used elsewhere in this report. As reported by the Bureau of Labor Statistics, wages include gross wages and salaries, bonuses, stock options, tips and other gratuities, and the value of meals and lodging.

Depending on the geographies selected, some data may not be available due to disclosure restrictions.

Average annual wages shown on this page is not the same as average earnings per job shown earlier in this report. Average annual wages are calculated from Bureau of Labor Statistics data, which do not include proprietors, and earnings per job are calculated from Bureau of Economic Analysis data, which include proprietors.

Additional Resources

For an overview of how the Bureau of Labor Statistics treats employment, see: bls.gov/bls/employment.htm ⁽²⁰⁾.

For an overview of how the Bureau of Labor Statistics treats pay and benefits, see: bls.gov/bls/wages.htm ⁽²¹⁾.

Employment and wage estimates are also available from the Bureau of Labor Statistics for over 800 occupations. Looking at services by occupation, rather than by sector or industry, is helpful since wages vary dramatically across occupations associated with different services. For more information, see: bls.gov/oes ⁽²²⁾.

For a peer-reviewed journal article and interactive web tool on the importance of transportation to attracting high-wage "knowledge-based" workers to areas with high amenities, see: Rasker, R., P.H. Gude, J.A. Gude, J. van den Noort. 2009. "The Economic Importance of Air Travel in High-Amenity Rural Areas." *Journal of Rural Studies* 25(2009): 343-353, available at: headwaterseconomics.org/3wests.php ⁽³⁾.

See also Knapp, T.A., and P.E. Graves. 1989. On the Role of Amenities in Models of Migration and Regional Development. *Journal of Regional Science* 29(1): 71-87. This article specifically captures the idea that amenity values are capitalized into wages.

Data Sources

U.S. Department of Labor. 2012. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Washington, D.C.

How has the unemployment rate changed?

This page describes the average annual unemployment rate and the seasonality of the unemployment rate over time.

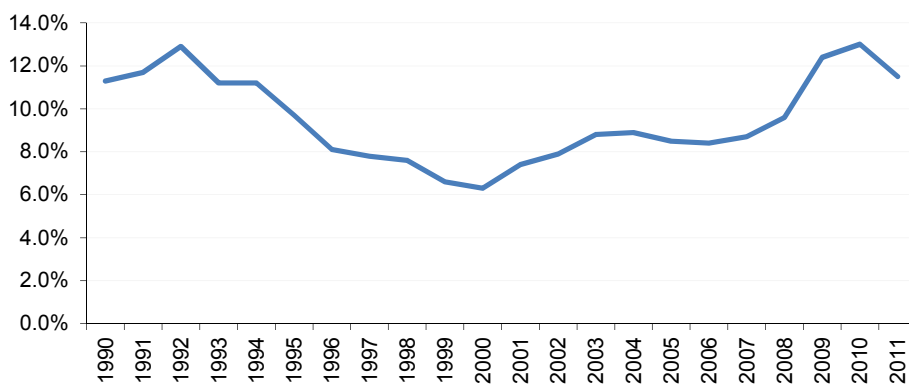
Unemployment Rate: The number of people who are jobless, looking for jobs, and available for work divided by the labor force.

Average Annual Unemployment Rate, 1990-2011

	1990	2000	2011	Change 2000-2011
Unemployment Rate	11.3%	6.3%	11.5%	5.2%

Average Annual Unemployment Rate, Chippewa County, MI

- Since 1990, the annual unemployment rate ranged from a low of 6.3% in 2000 to a high of 13% in 2010.

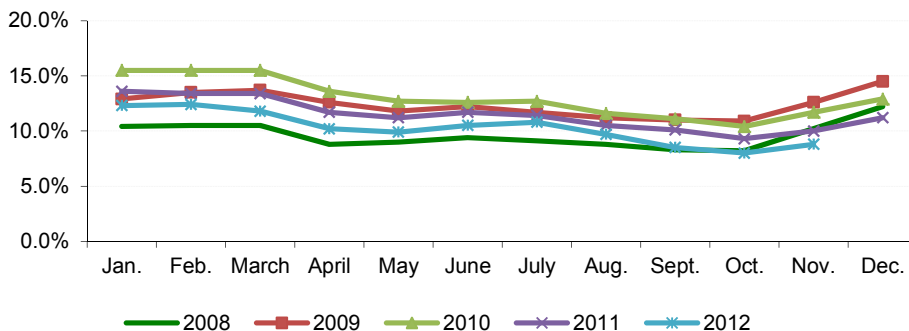


Seasonal Unemployment Rate, 2008-2012

Unemployment Rate (%)	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2008	10.4%	10.5%	10.5%	8.8%	9.0%	9.4%	9.1%	8.8%	8.3%	8.2%	10.2%	12.2%
2009	12.9%	13.5%	13.7%	12.6%	11.8%	12.2%	11.7%	11.2%	11.0%	10.9%	12.6%	14.5%
2010	15.5%	15.5%	15.5%	13.6%	12.7%	12.6%	12.7%	11.6%	11.1%	10.4%	11.7%	12.9%
2011	13.6%	13.4%	13.4%	11.7%	11.2%	11.7%	11.4%	10.5%	10.1%	9.3%	10.0%	11.2%
2012	12.3%	12.4%	11.8%	10.2%	9.9%	10.5%	10.8%	9.7%	8.5%	8.0%	8.8%	

Seasonal Unemployment Rate, Chippewa County, MI

- The lowest seasonal unemployment rate was Oct. of 2012. The highest seasonal unemployment rate was Jan. of 2010.



Data Sources: U.S. Department of Labor. 2012. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.

Study Guide and Supplemental Information

How has the unemployment rate changed?

What do we measure on this page?

This page describes the average annual unemployment rate and the seasonality of the unemployment rate over time.

The figure Average Annual Unemployment Rate shows the rate of unemployment since 1990. The figure Seasonal Unemployment Rate shows the rate of unemployment for the last five years, for each month of the year. This figure is useful to see if there are higher rates of unemployment during certain months of the year, and whether this has changed over time.

Unemployment Rate: The number of people who are jobless, looking for jobs, and available for work divided by the labor force.

Why is it important?

The rate of unemployment is an important indicator of economic well-being. This figure can go up during national recessions and/or when more localized economies are affected by area downturns. There can also be significant seasonal variations in unemployment.

It is important to know how the unemployment rate has changed over time, whether there are periods of the year where the rate is higher or lower, and if this seasonality of unemployment has changed over time. Geographies that are heavily dependent on the tourism industry, for example, may show higher rates of unemployment during Spring and Fall "shoulder seasons." Places that rely heavily on the construction industry, for example, may have lower unemployment rates during the non-winter months.

As the economy of a place diversifies, it can become more resilient and less affected by downturns and rising unemployment rates. This is particularly true of places that are able to attract in-migration, retain manufacturing, and support a high-tech economy.

Public land agencies sometimes provide seasonal employment and may have an effect on the local rate of unemployment.

Methods

Data begin in 1990 because prior to that the Bureau of Labor Statistics used a different method to calculate the unemployment rate.

Additional Resources

For more information on unemployment, see related Bureau of Labor Statistics resources, available at: bls.gov/cps/faq.htm#Ques3 ⁽²³⁾.

For more information on business cycles, see related National Bureau of Business Research, available at: nber.org ⁽²⁴⁾.

For research findings on economic resiliency, see: Chapple, K., and T. W. Lester. 2010. "The resilient regional labor market? The U.S. case." *Cambridge Journal of Regions, Economy and Society* 3:85-104.

Data Sources

U.S. Department of Labor. 2012. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.

What are the commuting patterns in the region?

This page describes the flow of earnings into the county by residents who work in neighboring counties (an "inflow" of earnings because they bring money home); the flow of earnings by residents from neighboring counties who commute into the county for work (an "outflow" of earnings because they take their earnings with them); and the difference between the two ("net residential adjustment").

Cross-County Earnings, 1990-2010

	1990	2000	2010	Change 2000-2010
Total Personal Income (2011 \$s)	698,213	946,747	1,053,369	106,623
Cross-County Commuting Flows				
Inflow of Earnings	14,988	27,915	25,670	-2,245
Outflow of Earnings	27,691	35,800	36,726	926
Net Residential Adjustment (Inflow - Outflow)	-12,703	-7,885	-11,056	-3,172

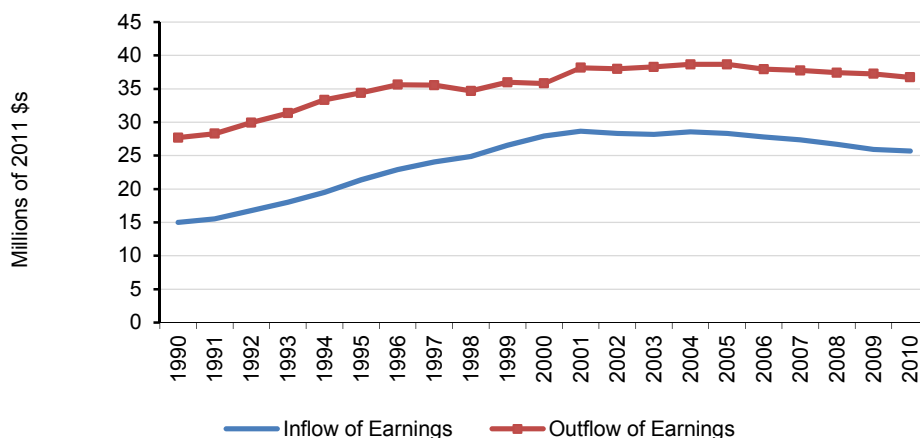
Percent of Total

				% Change 2000-2010
Net Residential Adjustment Share of Total Personal Income	-1.8%	-0.8%	-1.0%	-0.2%

Data are only available at the county level (i.e., this page will be blank for aggregated geographies, states, and the U.S.). Total personal income is reported by *place of residence*.

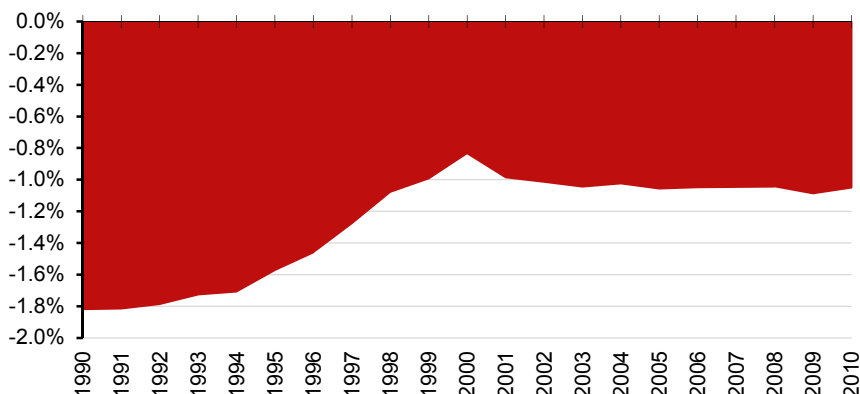
Inflow & Outflow of Earnings, Chippewa County, MI

- From 1990 to 2010, inflow of earnings grew from \$15.0 million to \$25.7 million (in real terms), a 71 percent increase.
- From 1990 to 2010, outflow of earnings grew from \$27.7 million to \$36.7 million (in real terms), a 33 percent increase.



Net Residential Adjustment as Share of Total Personal Income, Chippewa County, MI

- From 1990 to 2010, net residential adjustment (inflow - outflow) changed from -1.82 to -1.05 percent of total personal income.



Study Guide and Supplemental Information

What are the commuting patterns in the region?

What do we measure on this page?

This page describes the flow of earnings into the county by residents who work in neighboring counties ("inflow" of earnings because they bring money home); the flow of earnings by residents from neighboring counties who commute into the county for work ("outflow" of earnings because they take their earnings with them); and the difference between the two ("net residential adjustment").

If net residential adjustment is positive (inflow exceed outflow), it means county residents commute outside the county for work and bring in more personal income than leaves the county in net terms. If net residential adjustment is negative (outflow exceeds inflow), it means the economy of the county attracts workers from nearby counties and loses more personal income than it brings into the county in net terms.

Inflow of Earnings: These are the gross annual earnings of in-commuters; i.e., from people who work out of the county, and bring money home.

Outflow of Earnings: These are the gross annual earnings of out-commuters; i.e., from people who work in the county, but live elsewhere and take their earnings with them.

Net Residence Adjustment: This is the net inflow of labor earnings of inter-area commuters.

Note: Data are only available at the county level (i.e., this page will be blank for profiles of aggregated geographies, states, and the U.S.).

Why is it important?

One indicator of economic health for a county is whether it is able to attract workers from nearby counties. This could be the case if a county has a surplus of jobs and serves as a magnet for workers in adjacent counties and would be indicated by a negative net residential adjustment. Another possibility is that housing in the county has driven some workers to live in relatively more affordable neighboring counties that have become "bedroom communities."

Alternatively, it is possible that a county with a positive net residential adjustment is a more desirable place to live (people are willing to commute and/or telecommute to work in order to live there for quality of life reasons). Commuting and telecommuting workers may also contribute to the economy by spending their money in the local area (essentially exporting work and importing wages).

Long-term trends in inflow, outflow, and net residential adjustment help to describe the role that the county's economy has played over time in a multi-county area. For example, a net residential adjustment that was positive but is today negative indicates that county residents used to have to commute to neighboring counties for work but today the reverse is true and the county attracts workers from neighboring counties.

If net residential adjustment is a large share of earnings (e.g., 10% of higher) it may indicate that the appropriate unit of analysis is a multi-county area that encompasses the entire labor market.

Methods

Data begin in 1990 because that is the year the Bureau of Economic Analysis began reporting this data set.

According to the Bureau of Economic Analysis, "Estimates of gross commuters' earnings inflow and outflow are derived from the residence adjustment estimates, which are the estimates of the net inflow of the earnings of inter-area commuters. In the personal income accounts, the residence adjustment estimates are added to place-of-work earnings estimates to yield place-of-residence earnings estimates. This conversion process is an important part of the local area economic accounts because personal income is a place-of-residence measure, whereas the data used to estimate over 60 percent of personal income is reported on a place-of-work basis."

For a description of the methods used by the Bureau of Economic Analysis to estimate the flow of earnings across counties, see: bea.gov/regional/reis ⁽²⁵⁾. Select Table CA91 for any geography. When data are displayed, select the question mark icon for definitions and a brief description of methods.

Additional Resources

For a glossary of terms used by the Bureau of Economic Analysis with definitions, see: bea.gov/regional/definitions ⁽⁹⁾.

The Bureau of Economic Analysis also reports the number of workers commuting between counties. These data are limited to Decennial Census years (1970, 1980, 1990 and 2000); see: bea.gov/regional/reis/jtw ⁽²⁶⁾.

For an example of a study where a negative residential adjustment is considered a positive indicator, see Mack, E., T.H. Grubestic and E. Kessler. 2007. "Indices of Industrial Diversity and Regional Economic Composition." *Growth and Change* 38(3): 474-509.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Tables CA30 & CA91.

Do national recessions affect local employment?

This page describes long-term trends in employment during national recession and recovery periods.

Employment Change During National Recessions, 1976-2012

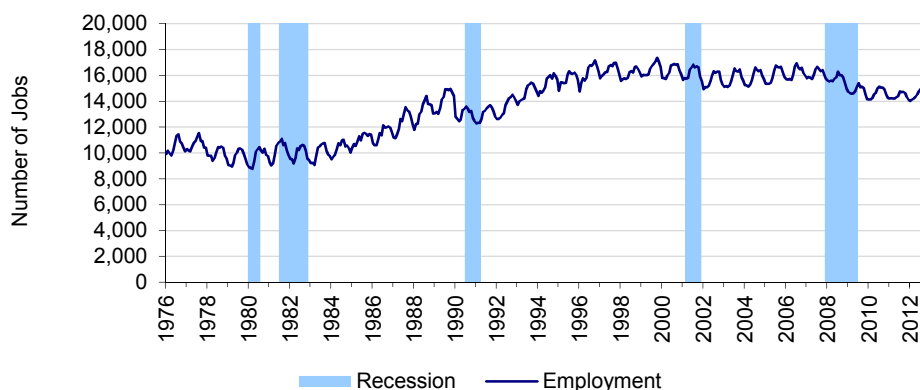
	Jan '80 - July '80	July '81 - Nov '82	July '90 - Mar '91	Mar '01 - Nov '01	Dec '07 - June '09
Employment Change (Net Jobs)	1,554	-1,324	-1,269	176	-620
Employment Change (Monthly % Change)	17.4%	-12.2%	-9.3%	1.1%	-3.9%

Employment Change During Recovery from National Recessions, 1976-2012

	Aug '80 - June '81	Dec '82 - June '90	Apr '91 - Feb '01	Dec '01 - Nov '07	July '09 - Nov. '12
Employment Change (Net Jobs)	581	3,966	3,162	549	-976
Employment Change (Monthly % Change)	5.7%	42.0%	25.0%	3.5%	-6.3%

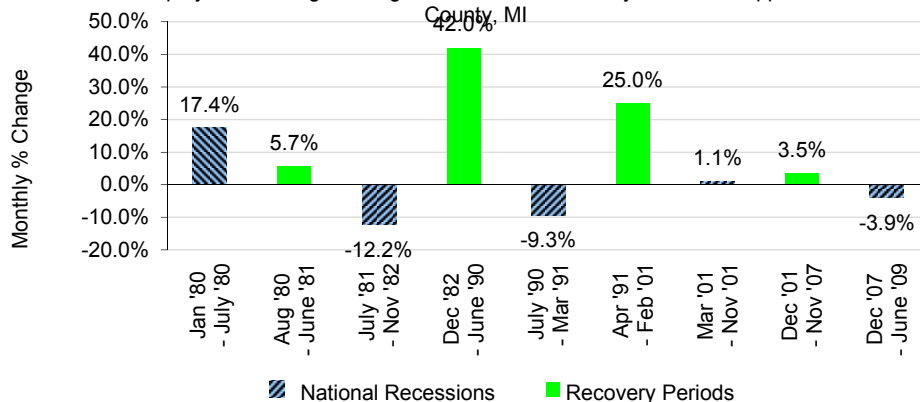
Employment & National Recessions, Chippewa County, MI

- From 1976 to 2012, employment grew from 9,928 to 14,414 jobs, a 45% increase.



Employment Change During Recessions & Recovery Periods, Chippewa County, MI

- In the recovery period (Dec '82-Jun '90) following the 1981-1982 recession, employment grew by 3,966 jobs, a 0.5% monthly increase.



Blue vertical bars in the figures above represent the last five recession periods: January 1980 to July 1980; July 1981 to November 1982; July 1990 to March 1991; March 2001 to November 2001; and December 2007 to June 2009. The green columns in the figure above represent the intervening recovery periods.

Study Guide and Supplemental Information

Do national recessions affect local employment?

What do we measure on this page?

This page describes long-term trends in employment during national recession and recovery periods.

The figure Employment and National Recessions shows long-term change in employment against periods of national recession (blue bars) and recovery. The figure Employment During Recessions and Recovery Periods shows the percent gain or loss in employment during periods of national recession (blue bars) and recovery (green bars).

Recession: According to the National Bureau of Economic Research: "A recession is a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales. A recession begins just after the economy reaches a peak of activity and ends as the economy reaches its trough. Between trough and peak, the economy is in an expansion."

Why is it important?

One measure of economic well-being is the resilience of the local economy during periods of national recession. It is a positive sign if local employment continues to grow (or does not decline) during a recession.

Another sign of economic well-being is how well the local economy recovers from a recession, measured as growth of employment from the trough (at the depth of the recession) to the peak (just before the next period of decline).

As the economy of a place diversifies, it can become more resilient and less affected by economic downturns. This is particularly true of places that are able to attract in-migration, retain manufacturing, and support a high-tech economy.

Government employment, including in public land agencies, can help to absorb some of the losses in private sector economic activity during a recession.

Additional Resources

For information regarding data collection and methodology for labor force statistics compiled by the Bureau of Labor Statistics, see bls.gov/lau/laumthd.htm ⁽²⁷⁾. Please note that Local Area Unemployment Statistics data prior to 1990 are no longer supported by the Bureau of Labor Statistics.

For a definition of a recession and recovery periods, see the National Bureau of Economic Research: nber.org/cycles/recessions.html ⁽²⁸⁾; and National Bureau of Economic Research, Inc. 2009. U.S. Business Cycle Expansions and Contractions, available at: nber.org/cycles/cyclesmain.html ⁽²⁹⁾.

For a list of national recessions and recovery periods, see: nber.org/cycles/cyclesmain.html ⁽²⁹⁾.

For research findings on economic resiliency, see: Chapple, K., and T. W. Lester. 2010. "The resilient regional labor market? The U.S. case." *Cambridge Journal of Regions, Economy and Society* 3:85-104.

Data Sources

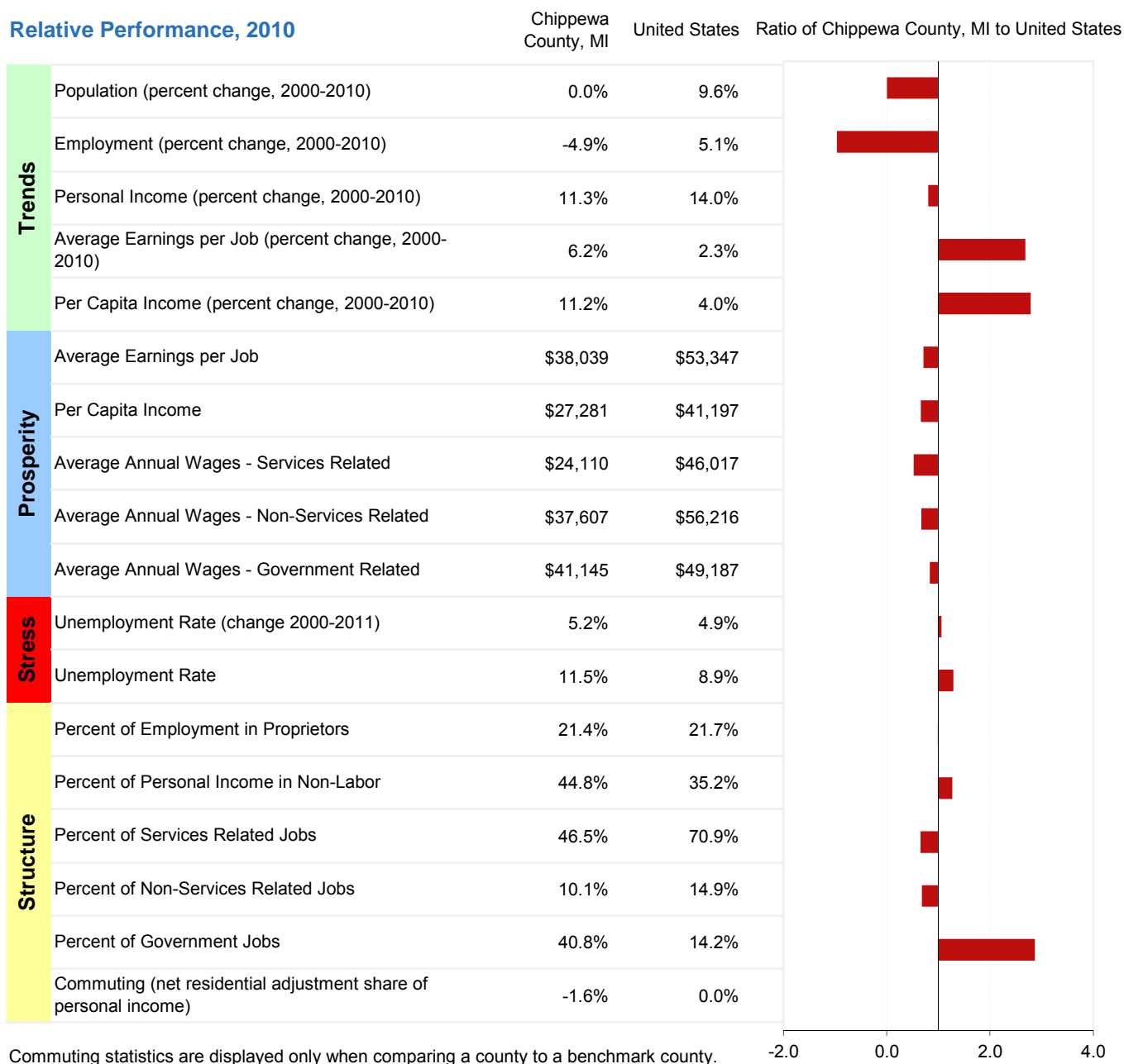
U.S. Department of Labor. 2012. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.; National Bureau of Economic Research. 2009. U.S. Business Cycle Expansions and Contractions, Cambridge, MA..

Benchmarks

How does performance compare to the benchmark?

This page describes key performance indicators for the selected geography and compares them to the selected benchmark area. (If no custom benchmark area was selected, EPS-HDT defaults to benchmarking against the U.S.) Performance indicators are organized by groups (trends, prosperity, stress, and structure) that highlight potential competitive strengths and weaknesses.

Relative Performance, 2010



Commuting statistics are displayed only when comparing a county to a benchmark county.

- Chippewa County, MI is most different from the benchmark in percent of government jobs, per capita income (percent change, 2000-2010), and average earnings per job (percent change, 2000-2010).

Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Tables CA05N, CA25N, CA30, & CA91; U.S. Department of Labor. 2012. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Washington, D.C.; U.S. Department of Labor. 2012. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.

Study Guide and Supplemental Information

How does performance compare to the benchmark?

What do we measure on this page?

This page describes key performance indicators for the selected geography and compares them to the selected benchmark area. (If no custom benchmark area was selected, EPS-HDT defaults to benchmarking against the U.S.) Performance indicators are organized by groups (trends, prosperity, stress, and structure) that highlight potential competitive strengths and weaknesses.

Some indicators require a judgment call to decide whether they represent a positive or negative indicator of well-being. For example, having a high percentage of personal income in a place in the form of non-labor income could mean that place has done a good job of attracting retirees and investment income. However, it could also mean there is very little labor income, so non-labor income is relatively larger.

The term "benchmark" in this report should not be construed as having the same meaning as in the National Forest Management Act (NFMA).

Why is it important?

A number of indicators determine the economic health of a place. No single indicator should be used by itself. Rather, a range of indicators should be analyzed together to get a comprehensive view of the economy.

When considering the benefits of growth, it is important to distinguish between standard of living (such as earnings per job and per capita income) and quality of life (such as leisure time, crime rate, and sense of well-being).

In some cases it may be appropriate to compare a local economy to the U.S. economy. In most cases, however, it will be more useful to compare county or regional economies with other similar county or regional economies. For example, if the county being analyzed is small and rural, it should be compared to similar counties because comparing against the U.S. will include data from large metropolitan areas.

Additional Resources

Additional information for a range of geographies and measures can be obtained by running other EPS-HDT reports.

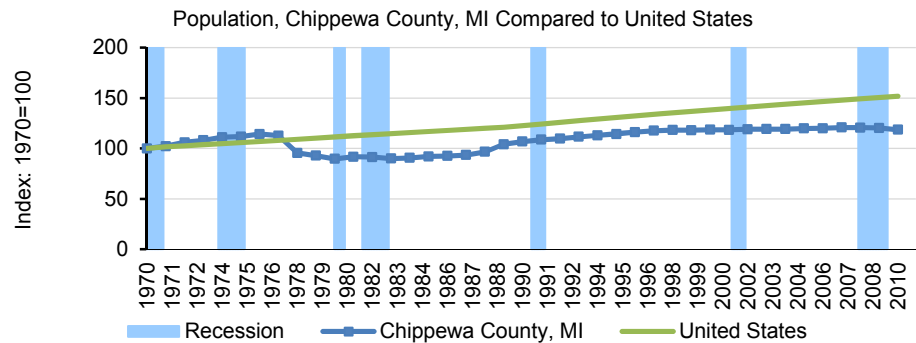
Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Tables CA05N, CA25N, CA30, & CA91; U.S. Department of Labor. 2012. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Washington, D.C.; U.S. Department of Labor. 2012. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.

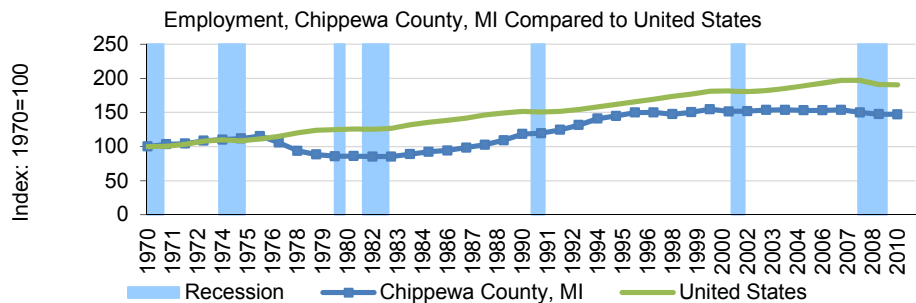
How does performance compare to the benchmark?

This page describes trends in key performance indicators (change in population, employment, real personal income, and the unemployment rate) for the selected geography and compares them to the selected benchmark area. Blue vertical bars indicate periods of national recession.

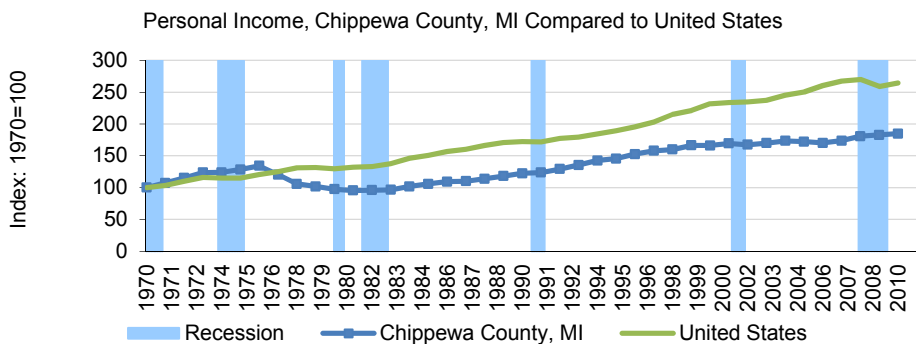
- From 1970 to 2010, population in Chippewa County, MI grew by 19% compared to 52% for the United States.



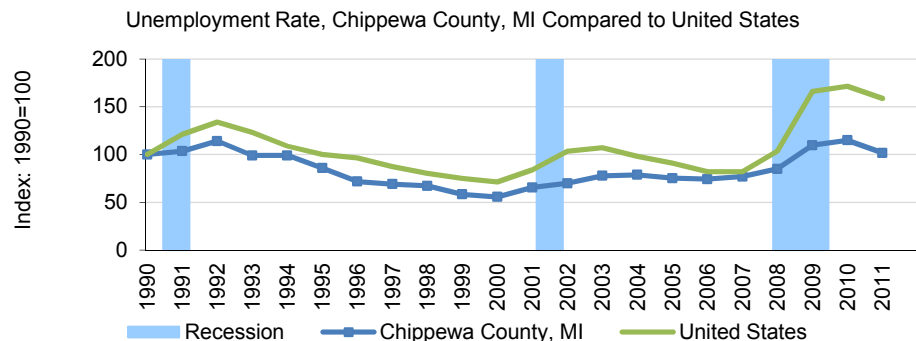
- From 1970 to 2010, employment in Chippewa County, MI grew by 47% compared to 90% for the United States.



- From 1970 to 2010, personal income in Chippewa County, MI grew by 85% compared to 164% for the United States.



- In 2011 the unemployment rate in Chippewa County, MI was 11.5%, compared to 8.9% for the United States.



Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA30; U.S. Department of Labor. 2012. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C..

Study Guide and Supplemental Information

How does performance compare to the benchmark?

What do we measure on this page?

This page describes trends in key performance indicators (change in population, employment, real personal income, and the unemployment rate) for the selected geography and compares them to the selected benchmark area. Blue vertical bars indicate periods of national recession.

Population, employment, and real personal income indicators are indexed to 1970 so that data from geographies of different sizes can be compared on the same figure. The unemployment rate is shown as a percent. The figures are most useful for showing the relative difference in the rate of change for each indicator.

The term "benchmark" in this report should not be construed as having the same meaning as in the National Forest Management Act (NFMA).

Why is it important?

This page offers an at-a-glance view of long-term economic performance. It allows the user to see if the selected geography performs differently than a selected benchmark area and how it is subject to national business cycles.

Additional Resources

Additional information for a range of geographies and measures can be obtained by running other EPS-HDT reports.

Data Sources

U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA30;
U.S. Department of Labor. 2012. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C..

Data Sources & Methods

Data Sources

The EPS-HDT Measures report uses published statistics from government sources that are available to the public and cover the entire country. All data used in EPS-HDT can be readily verified by going to the original source. The contact information for databases used in this profile is:

- **County Business Patterns**
Census Bureau, U.S. Department of Commerce
<http://www.census.gov/epcd/cbp/view/cbpview.html>
Tel. 301-763-2580
- **Local Area Unemployment Statistics**
Bureau of Labor Statistics, U.S. Department of Labor
<http://www.bls.gov/lau>
Tel. 202-691-6392
- **Quarterly Census of Employment and Wages**
Bureau of Labor Statistics, U.S. Department of Labor
<http://www.bls.gov/cew>
Tel. 202-691-6567
- **Regional Economic Information System**
Bureau of Economic Analysis, U.S. Department of Commerce
<http://bea.gov/bea/regional/data.htm>
Tel. 202-606-9600
- **Population Division**
Census Bureau, U.S. Department of Commerce.
<http://www.census.gov/population/www/>
Tel. 866-758-1060
- **National Bureau of Economic Research**
<http://www.nber.org/cycles/recessions.html>
Tel. 617-868-3900

Methods

EPS-HDT core approaches

EPS-HDT is designed to focus on long-term trends across a range of important measures. Trend analysis provides a more comprehensive view of changes than spot data for select years. We encourage users to focus on major trends rather than absolute numbers.

EPS-HDT displays detailed industry-level data to show changes in the composition of the economy over time and the mix of industries at points in time.

EPS-HDT employs cross-sectional benchmarking, comparing smaller geographies such as counties to larger regions, states, and the nation, to give a sense of relative performance.

EPS-HDT allows users to aggregate data for multiple geographies, such as multi-county regions, to accommodate a flexible range of user-defined areas of interest and to allow for more sophisticated cross-sectional comparisons.

SIC to NAICS

For over sixty years, starting in the 1930s, the Standard Industrial Classification (SIC) system has served as the structure for the collection, aggregation, presentation, and analysis of the U.S. economy. Under SIC, which employed a four-digit coding structure, an industry consists of a group of establishments primarily engaged in producing or handling the same product or group of products or in rendering the same services. As the U.S. economy shifted from a primary emphasis on manufacturing to a more complex services economy, SIC became less useful as a tool for describing the economy's changing industrial composition.

The North American Industry Classification System (NAICS), developed using a production-oriented conceptual framework, groups establishments into industries based on the activity in which they are primarily engaged. NAICS uses a six-digit hierarchical coding system to classify all economic activity into twenty industry sectors. Five sectors are mainly goods-producing sectors and fifteen are entirely services-producing sectors.

County Business Patterns started organizing their data using NAICS in 1998, Census in 2000, and Bureau of Economic Analysis's Regional Economic Information System in 2001. Because the methods underlying SIC and NAICS are fundamentally different (what was sold vs. how it was produced), NAICS is not backward compatible with SIC. There are a few circumstances where it is acceptable to show uninterrupted trends across the SIC-NAICS discontinuity. Total personal income, total labor income, and non-labor income can all be plotted continuously without a problem. In addition, a few industries can also be plotted without a break, though this is not the case for services.

Adjusting dollar figures for inflation

Because a dollar in the past was worth more than a dollar today, data reported in current dollar terms should be adjusted for inflation. The U.S. Department of Commerce reports personal income figures in terms of current dollars. All income data in EPS-HDT are adjusted to real (or constant) dollars using the Consumer Price Index. Figures are adjusted to the latest date for which the annual Consumer Price Index is available.

Data gaps and estimation

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses supplemental data from the U.S. Department of Commerce to estimate these data gaps. These are indicated in *italics* in tables.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at www.headwaterseconomics.org/eps-hdt.

Links to Additional Resources

For more information about EPS-HDT see:

www.headwaterseconomics.org/eps-hdt

Web pages listed under Additional Resources include:

Throughout this report, references to on-line resources are indicated by superscripts in parentheses. These resources are provided as hyperlinks here.

- 1 www.bea.gov/SCB/PDF/2004/11November/1104Econ-Areas.pdf
- 2 www.ers.usda.gov/Briefing/Rurality/Typology
- 3 www.headwaterseconomics.org/3wests.php
- 4 www.bea.gov/regional/docs/econlist.cfm
- 5 www.census.gov/popest/about/terms.html
- 6 www.census.gov/popest/methodology/index.html
- 7 www.bea.gov/regional/definitions/nextpage.cfm?key=Proprietors%20employment
- 8 www.bea.gov/glossary/glossary.cfm
- 9 www.bea.gov/regional/definitions
- 10 www.bls.gov/bls/NAICS.htm
- 11 www.bls.gov/opub/mlr/2009/11
- 12 www.bls.gov/opub/mlr/2012/01/art1full.pdf
- 13 www.ers.usda.gov/Amberwaves/Feb03/features/ruralamerica.htm
- 14 www.headwaterseconomics.org/eps-hdt
- 15 www.headwaterseconomics.com/3wests/Rasker_et_al_2009_Three_Wests.pdf
- 16 www.ers.usda.gov/publications/aer-agricultural-economic-report/aer781.aspx
- 17 www.census.gov/eos/www/naics
- 18 www.bls.gov/opub/mlr/indexe.htm#Earnings_and_wages
- 19 www.livingwage.geog.psu.edu/
- 20 www.bls.gov/bls/employment.htm
- 21 www.bls.gov/bls/wages.htm
- 22 www.bls.gov/oes
- 23 www.bls.gov/cps/faq.htm#Ques3
- 24 www.nber.org
- 25 www.bea.gov/regional/reis
- 26 www.bea.gov/regional/reis/jtw
- 27 www.bls.gov/lau/laumthd.htm
- 28 www.nber.org/cycles/recessions.html
- 29 www.nber.org/cycles/cyclesmain.html