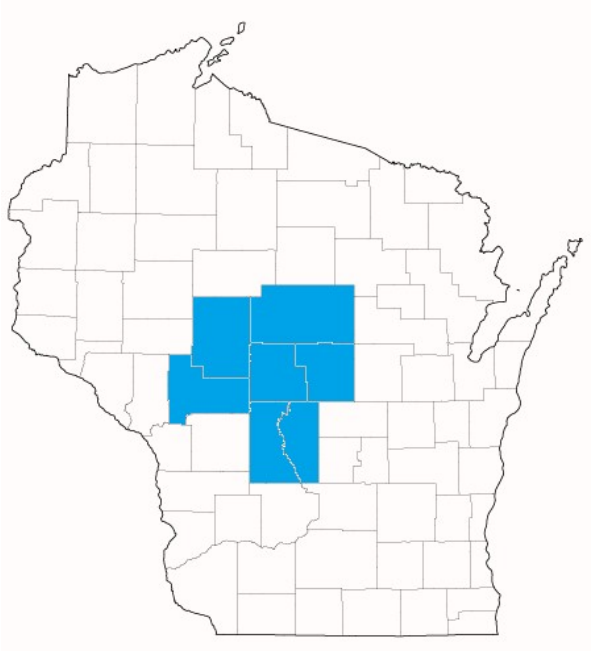
EMSI Impact Scenario

Paper (except Newsprint) Mills in Wood County Commute
Lost if not Retained 915 positions
Emsi Q2 2020 Data Set
June 2020



Wisconsin Economic Development Corporation

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Madison,Wisconsin 53701
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Parameters

Regions

Code	Description	Code	Description
55001	Adams County, WI	55073	Marathon County, WI
55019	Clark County, WI	55097	Portage County, WI
55053	Jackson County, WI	55141	Wood County, WI
55057	Juneau County, WI		

Industry Scenario

Code	Description	Change Type	Change Value
322121	Paper (except Newsprint) Mills	Jobs	-915

Model Type

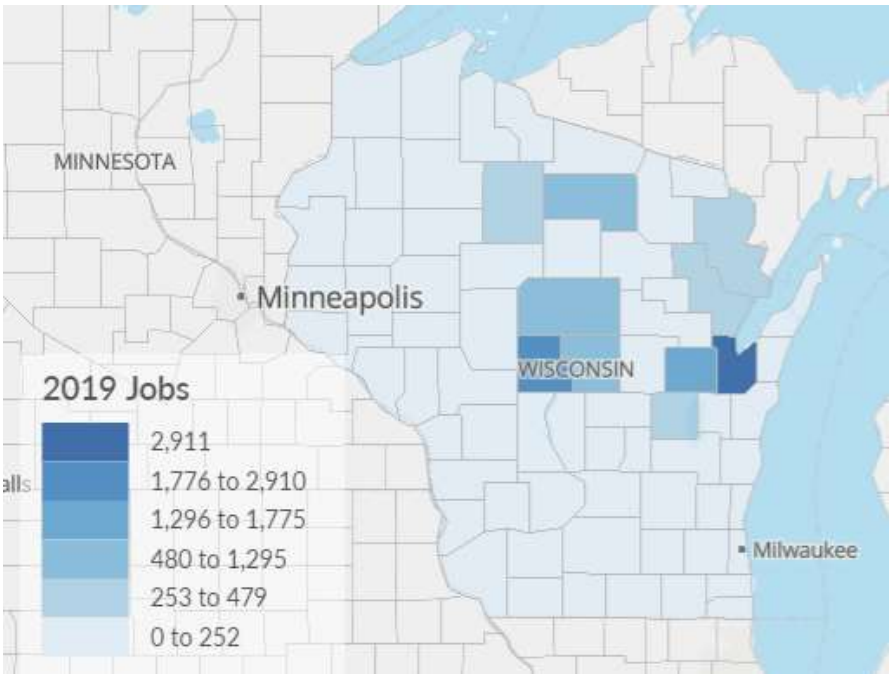
Type Emsi

Input-Output Year

2019

NAICS 322121

Name	Value
Current Jobs (6-Digit NAICS Industry in the Region)	3011
Current Jobs (2-Digit NAICS Sector in Region)	35,327
Current Jobs (Region)	178,472
Region Unemployed	26,407
2-Digit NAICS Sector in Region Unemployed	4,726
Payrolled Business Locations	7
Current Location Quotient 6-Digit NAICS in Region	46,.58
6-Digit NAICS Industry Mix Effect	(493)
6-Digit NAICS National Growth Effect	177
6-Digit NAICS Expected Change	(316)
6-Digit NAICS in Region Competitive Effect	277
Current Wages, Salaries, & Proprietor Earnings (6-Digit NAICS Region)	72,626
Current Supplements (6-Digit NAICS Region)	16,808
Current Average Earnings (6-Digit NAICS Region)	89,433
Current Average Earnings (6-Digit NAICS Nation)	99,258
Current Average Earnings (Region)	57,197
Current GDP (Region)	18,317,621,012
Current GDP (2-Digit NAICS in Region)	4,145,147,599
Current GDP (6-Digit NAICS in Region)	612,847,611
Current In-Region Purchases (6-digit NAICS)	61,505,006



Changes to Paper (except Newsprint) Mills using Type Emsi Model

-$142,580,904	-2,195	$89,433
Change in Earnings	**Change in Jobs**	**Average Earnings per Applicant's Initial Job Created**
1.74 Multiplier	2.40 Multiplier	

* The parenthetical number represents the applicant's initial job change plus direct, indirect, and induced modeled impacts.

Effect on jobs

-915	-464	-132	-684
Initial	**Direct**	**Indirect**	**Induced**
1.00 Multiplier	0.51 Multiplier	0.14 Multiplier	0.75 Multiplier

* The applicant intends to create the parenthetical number of initial jobs; based upon earnings modeling, these jobs compensate differently than the average Initial Starting Earnings per Job for that regional industry. The number of initial jobs originally estimated by the Emsi Impact Scenario has been retained to preserve the mathematical integrity of the Jobs Multiplier.

Effect on earnings

-$81.8M	-$25.3M	-$5.7M	-$29.7M
Initial	**Direct**	**Indirect**	**Induced**
1.00 Multiplier	0.31 Multiplier	0.07 Multiplier	0.36 Multiplier

Impact on Wisconsin

$2,572,980	$335,063	$2,908,043
Unemployment Benefits Amount	State Income Tax Loss	Loss if not Retained

Appendix - Data Sources and Calculations

Input-Output Data: The input-output model in this report is EMSI's gravitational flows multi-regional social account matrix model (MR-SAM). It is based on data from the Census Bureau's Current Population Survey and American Community Survey; as well as the Bureau of Economic Analysis' National Income and Product Accounts, Input-Output Make and Use Tables, and Gross State Product data. In addition, several EMSI in-house data sets are used, as well as data from Oak Ridge National Labs on the cost of transportation between counties.

State Data Sources: This report uses state data from the following agencies: Wisconsin Department of Workforce Development, Bureau of Workforce Information.

Dataset Version: This explains what quarter the dataset is from.

Time frame: The time frame for the data covered.

Dataset Category: EMSI's past method of delivering datasets, soon to be deprecated. “EMSI Covered” is roughly equal to the “QCEW Employees” and “Non-QCEW Employees” datasets, while “EMSI Complete” is a combination of all four datasets. EMSI recommends using Class of Worker data for most analysis for performance reasons.

Region Name: The name of the region created in the EMSI Database by the researcher for reference purposes.

6-Digit NAICS Industry and 2-Digit NAICS Sector
The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for collecting, analyzing, and publishing statistical data related to the U.S. business economy. NAICS is a 2- through 6-digit hierarchical classification system, offering five levels of detail. Each digit in the code is part of a series of progressively narrower categories, and the more digits in the code signify greater classification detail. The first two digits designate the economic sector, the third digit designates the subsector, the fourth digit designates the industry group, the fifth digit designates the NAICS industry, and the sixth digit designates the national industry. The 5-digit NAICS code is the level at which there is comparability in code and definitions for most of the NAICS sectors across the three countries participating in NAICS (the United States, Canada, and Mexico). A complete and valid NAICS code contains six digits.

Jobs: The total number of full- and part-time jobs. *Source: Emsi data based primarily on the Quarterly Census of Employment and Wages (QCEW) from the Bureau of Labor Statistics (BLS) and the Bureau of Economic Analysis (BEA).*

Unemployed: The unemployment data in this report comes from the Bureau of Labor Statistics' Local Area Unemployment Statistics and is updated every two months.

Industry Mix Effect: The industrial mix effect represents the change in regional industry that can be attributed to national trends in each particular industry. It is used to gage the performance of a regional industry when compared to the overall national industry. It asks a "what if" question: what would the change in employment in a particular industry in the region be if it grew at the average national rate for private employment in that industry? This number is derived by subtracting the national growth effect from the regional variable had it changed at the same rate (percentage) as the industry nationwide. In explaining the industrial mix effect.

National Growth Effect: The national growth effect explains how much of the change in regional industry is attributed to the overall growth of the national economy. You would generally expect industry trends in local regions to follow that of the nation's overall economy. This effect shows how much the region deviates from nation. It asks a "what if" question: what would the change in employment in a particular industry in the region be if it grew at the average national rate for private employment? The number identified by the national growth effect is equal to the change in the regional variable had it changed at same rate as the national economy. An example of what one could say when describing the national growth effect would be:

- The _____ (industry) deviates from the change in employment of the national economy by _____ (amount).
- If _____ (industry) in _____ (region) followed national trends, the change would be _____ (amount).

Expected Change: This is simply expected change in employment of a particular industry at the national level. It can also be thought of as the sum of the industrial mix effect and the national growth effect in shift share analysis. Additionally, any change above or below this level is credited to the regions competitive effect.

Competitive Effect: The regional competitive effect calculates the change that can be attributed to an industry's unique competitive advantage or competitive disadvantage that is possessed by the region. This is because the regional influences cannot be explained by national trends in that industry or the economy as a whole. A positive competitive effect would mean that a regional industry is outperforming national trends. Whereas, a negative competitive effect would indicate that a regional industry is underperforming when compared to national trends. As a special note, this effect can be opposite (positive or negative) of what is shown in the regional employment of that industry. For example, the regional decline of employment of a particular can be slower than the national rate of decline for that same industry, thus yielding a positive competitive effect. The actual change minus the expected change equals the competitive effect. The regional competitive effect can be explained by stating:

- The _____ (region) has a competitive _____ (advantage or disadvantage) in the _____ (industry).
- The _____ (industry) is _____ (outperforming or underperforming) in the _____ (region) when compared to national trends.

Location Quotient: The location quotient is used to quantify the density of a particular industry, cluster, occupation, or demographic group in a region when compared to the nation. It is used to identify the uniqueness of a specific region from a comparative point of view. For example, if a particular industry makes up 10 percent of the jobs in a region but 1 percent of the jobs nationally, this region's particular industry has a location quotient of 10. This means that his particular industry is 10 times larger than that of the industry nationally, thus having a larger share of the total jobs for the industry. When describing location quotient, one could say the following:

- The _____ (industry) is more concentrated in _____ (region) when compared to the rest of the nation (or larger economic area).
- _____ (industry) is _____ (number of times more or less) dense than the rest of the nation.

Average Earnings: Total annual earnings of existing jobs (wages, salaries, profits, benefits, and other compensation) divided by the number of jobs in the industry.
Source: Emsi data based primarily on the Quarterly Census of Employment and Wages (QCEW) from the Bureau of Labor Statistics (BLS) and the Bureau of Economic Analysis (BEA).

GDP: GDP for the region. Measures the final market value of all goods and services produced in a region.
Source: Emsi data based primarily on data from the Bureau of Economic Analysis (BEA) and the Quarterly Census of Employment and Wages (QCEW) from the Bureau of Labor Statistics (BLS).

In-Region Purchases: In-Region Purchases by the 6-Digit NAICS Industry within the Region

Average Starting Earnings Initial Job Created (20XX): Total starting annual earnings of the 6-Digit NAICS Industry in the Region. (wages, salaries, profits, benefits, and other compensation) divided by the number of jobs in the industry. *Source: Emsi data based primarily on the Quarterly Census of Employment and Wages (QCEW) from the Bureau of Labor Statistics (BLS) and the Bureau of Economic Analysis (BEA).*

Changes to [Industry of Input/Output] Changes in Earnings: This number represents total change in earnings resulting from the initial, user-made change. This figure includes the initial change. The change in earnings figure is dependent upon the multiplier listed below. *Source: EMSI data based primarily on the Quarterly Census of Employment and Wages (QCEW) from the Bureau of Labor Statistics (BLS) and the Bureau of Economic Analysis (BEA).*

Changes to [Industry of Input/Output] Changes in Jobs: The total number of jobs changed, including the initial change. The figure is dependent upon the multiplier listed below. *Source: EMSI's model, incorporating data from the Bureau of Economic Analysis (BEA).*

Initial: This is the change the industry/company would experience.

Direct: The effect of new input/change by the Initial changed industries. This is the first round of impacts This change is due to inter-industry effects. *Source: Emsi's model, incorporating data from the Bureau of Economic Analysis (BEA).*

Indirect: The subsequent ripple effect in further supply chains resulting from the direct change. In more awkward terms, this shows the sales change in the supply chains of the supply chain, as a result of the direct change. This is the second round of impacts (see "Direct"). This change is due to inter-industry effects. *Source: Emsi's model, incorporating data from the Bureau of Economic Analysis (BEA).*

Induced: These earnings enter the economy as employees spend their paychecks in the region on food, clothing, and other goods and services. In other words, this figure represents the income effects on inter-industry trade. *Source: Emsi's model, incorporating data from the Bureau of Economic Analysis (BEA).*

Impact on Wisconsin / Return on Investment Analysis Definitions

Initial Annual State Income Tax Impact: This is a calculation based upon the EMSI changes to earnings and the most current average effective tax rate from the Department of Revenue. It is an estimate of the additional annual personal state income tax revenue generated by the change in industry. Only accounts for Initial Jobs to be Created.

Total Annual State Income Tax Impact: This is a calculation based upon the EMSI changes to earnings and the most current average effective tax rate from the Department of Revenue. It is an estimate of the additional annual personal state income tax revenue generated by the change in industry. Accounts for the Total Jobs to be Created through industry multipliers.

Unemployment Benefits Amount: This is a calculation based upon Wisconsin Department of Workforce Development data for the total Unemployment Compensation paid out over the previous quarter's average time experienced on Unemployment Compensation. Only accounts for Initial Loss if Not Retained Positions.

State Income Tax Loss
This is a calculation based upon current Wisconsin Department of Revenue tax information. Only accounts for Initial Loss if Not Retained Positions.

Loss if not Retained
This is a calculation of Total Unemployment Benefits Amount added to the State Income Tax Loss.