

ECONOMIC EMERGENCY PROGRAM

Waseca Printing Plant Closure

On October 25, 2017, Quad Graphics announced the closure of its printing plant in Waseca, Minnesota. The plant currently employs 365 people. Of those, 30 will remain on staff once the plant closes at the end of this year.

The plant closure will have implications for Waseca's economy. The loss of a major employer affects not only those at the plant but also many community members. To respond to this major economic change, decision makers in Waseca and Waseca County need information regarding the potential economic impact of the closure. University of Minnesota Extension prepared this economic emergency report with support from the EDA Center at the University of Minnesota-Crookston.



SUMMARY OF FINDINGS

The loss of 335 jobs at the printing plant will affect an estimated 445 jobs in Waseca County. Beyond jobs at the plant, workers at Main Street businesses—restaurants, grocery stores, and general merchandise retailers—will see their jobs affected as printing plant workers have less disposable income to spend in the community. Businesses supplying the printing plant, such as wholesalers, trucking companies, and other printing companies will also be affected.

The loss of 335 jobs is predicted to cause a decline in economic output of an estimated \$70.1 million in Waseca County. This includes an estimated \$23.7 million of lost labor income in the county. **These figures are based on an average printing plant.**

On a positive note, the current tight labor market provides an opportunity for Quad Graphic employees to obtain new employment. As this happens, the effects of lost income should dissipate relatively quickly. The lost business-to-business transactions, however, may linger as suppliers adjust.

The data, analysis, and findings described in this report are specific to the geography, time frame, and project requirements of Waseca County. Findings are not transferable to other jurisdictions. Extension neither approves nor endorses the use or application of findings and other contents in this report by other jurisdictions.

WHAT IS AN ECONOMIC EMERGENCY?

Communities often face a sudden and unanticipated change in their local economy. A major employer announces it is reducing its workforce, a fire destroys an operating facility, or a flood damages downtown. In these situations, community leaders often need to make quick, but important, decisions about how to react. They work closely with the local business(es) affected and work to help the business(es) and community recover. The University of Minnesota Extension's economic emergency program provides community leaders with information to assist in making decisions regarding the community's future.

There are a few important things to note related to this analysis and the tool used. Information from the IMPLAN (MIG, Inc.) model is used in this analysis. In the IMPLAN model, one job is one job, regardless of whether the job is full-time, part-time, or seasonal. This should be considered when interpreting the results related to employment in this report. Further, core IMPLAN data is gathered from a variety of government sources. When data is incomplete or missing, econometric techniques are implemented to fill in gaps.

This analysis relies on the default IMPLAN data for the printing industry in Waseca County.

HISTORY OF PRINTING AND QUAD GRAPHICS IN WASECA COUNTY

Wayne (Bumps) Brown established Brown Printing Company in his hometown of Waseca, Minnesota in 1957. Wayne was continuing a family tradition of entrepreneurship. His father was owner and editor of the *Waseca Daily Journal*. His mother owned a local restaurant, and his grandfather owned a dry goods store with locations in Waseca and Rochester.

Brown Printing grew out of the family's ownership of the *Waseca Daily Journal*. Wayne purchased the commercial printing end of the journal's operation and founded Brown Printing. He expanded the company's business, producing catalogs and publications on flatbed letterpresses. From there, the company expanded both its operations (into color, offset printing) and its facilities in Waseca.

By 1969, Brown Printing grew to sales of more than \$7 million. This attracted attention from other companies. A Minneapolis-based manufacturer of packaging products purchased the company, but Brown Printing remained a wholly owned subsidiary with Wayne as company president.

During the 1970s, Brown Printing continued to grow. In the early 1970s, the Waseca plant expanded multiple times and added new products and divisions. Brown Printing also branched outside of Minnesota for the first time in 1978.

Through the 1980s, Brown Printing continued as a major player in the printing industry. According to *Printing Impression* magazine's 1987 list of U.S. printing companies, Brown Printing ranked 28th with sales of \$300 million. Brown Printing reinforced the printing industry as a strength in Minnesota—15 Minnesota companies made the top 500 companies in U.S. printing.¹

¹ History of Brown Printing drawn from Funding Universe. Retrieved from <http://www.fundinguniverse.com/company-histories/brown-printing-company-history/>.

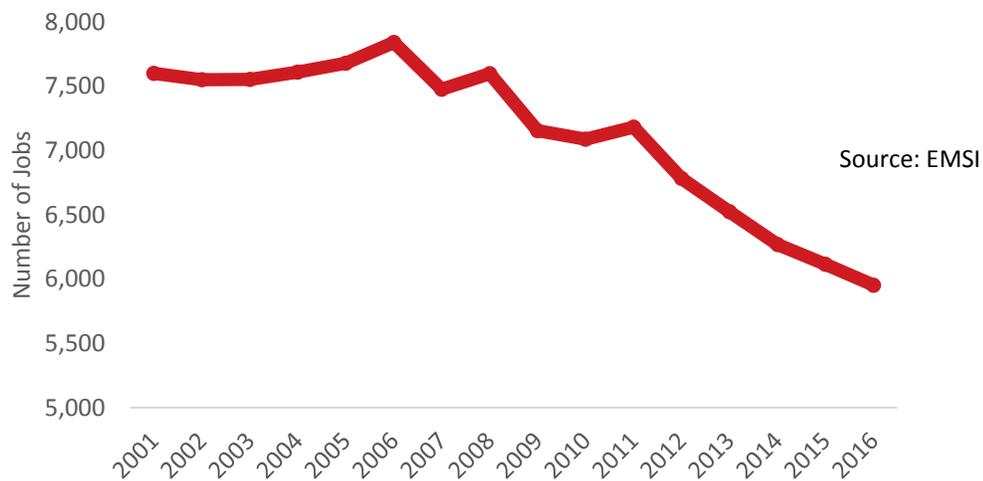
The printing industry, due to changing consumer demand, has undergone major changes since the 1980s. In 2014, Quad Graphics, a Wisconsin-based company, purchased Brown Printing for \$100 million. The facility in Waseca employed 750 people. Since then, employment at the facility has decreased to 365.

THE ROLE OF PRINTING IN WASECA'S ECONOMY

As a national and global printing company, Brown Printing (now Quad Graphics) has heavily influenced Waseca's economy. In 2016, printing companies in the Waseca zip code employed 480 people. The concentration of printing jobs was high—Waseca's location quotient for printing was 37. That means there were 37 times more jobs in printing in Waseca than the average U.S. city.

The number of jobs in Waseca's zip code declined during the past 15 years (Chart 1). In 2001, Waseca businesses employed 7,600 workers. By 2016, the number of jobs fell to 5,900, a 22 percent decline.²

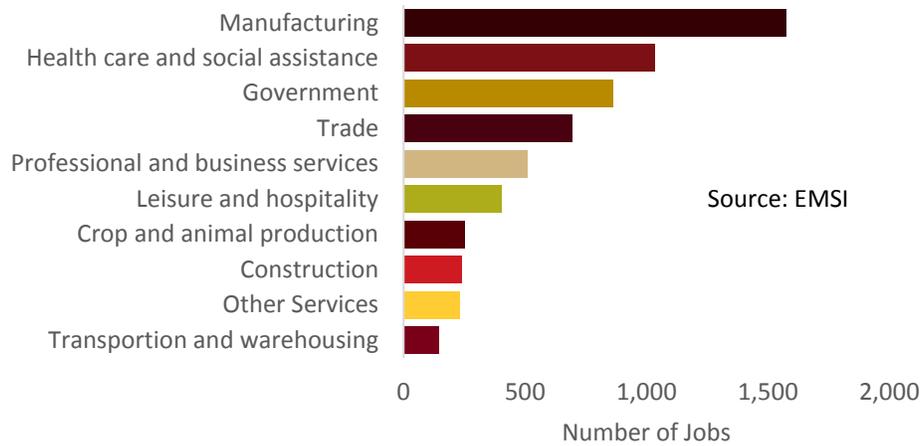
Chart 1: Employment, Waseca Zip Code, 2001-2016



Manufacturers employ the highest share of workers in the Waseca zip code (Chart 2). In 2016, manufacturers employed 1,575 people, or 26 percent of workers. Other major industries in Waseca include health care and social assistance, government, and trade.

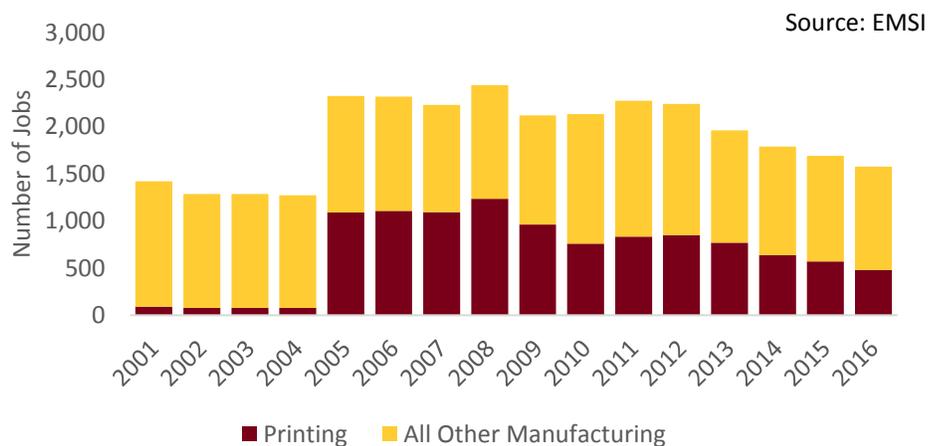
² For the data provided in this section, the city of Waseca includes all businesses within the 56093 zip code. Data is from the EMSI database, www.economicmodeling.com.

Chart 2: Employment by Industry, Waseca Zip Code, 2016



Printing is a significant component of Waseca’s manufacturing industry (Chart 3). In 2008, at its highest point between 2001 and 2016, printing employed 1,200 workers in the zip code. Printing, at the time, accounted for 51 percent of all manufacturing jobs. The decline in printing jobs corresponds to a decline in manufacturing jobs in the zip code. By 2016, printing employment had fallen to 480 jobs and accounted for 30 percent of all manufacturing jobs.

Chart 3: Employment, Printing and Manufacturing, Waseca Zip Code, 2001-2016



Minnesota’s economy steadily added jobs since the end of the 2008-2009 Great Recession. Job growth has led to increasingly lower unemployment rates in the state. The unemployment rate in

Waseca is currently 3.1 percent.³ Unemployment rates in neighboring communities and counties are also low. The unemployment rate is 2.6 percent in Mankato, 2.6 percent in Owatonna, and 3.2 percent in Faribault. Anecdotal evidence indicates competition for manufacturing employees is strong. Low unemployment rates suggest laid off Quad Graphics employees may find employment with retraining assistance, but the job may be outside of Waseca.

ECONOMIC IMPACT OF A PRINTING PLANT CLOSURE

Quad Graphics in Waseca, Minnesota currently employs 365 employees. The company will lay off 335 workers when the plant closes by the end of 2017. The remaining 30 employees will remain on the job. The loss of these jobs at the plant, and the corresponding decrease in sales, will affect other businesses in Waseca County. This section of the report describes the impacts of a printing plant closing in Waseca County. **The analysis presented is for an average printing plant in the county.**⁴

According to the IMPLAN model, 335 employees in the printing industry in Waseca County produce an estimated \$56.4 million in economic activity annually. These employees, based on averages for printing facilities, earn an estimated \$19.5 million in salaries, wages, and benefits. This is the direct impact shown in Table 1.

A printing plant generates additional economic activity in the county as the business makes purchases in the local economy. When a business makes purchases of inputs and supplies in the local economy, this creates indirect or business-to-business impacts. When the business' employees make purchases in the local economy, this creates induced or consumer-to-business impacts. If these purchases decrease, the corresponding local purchases will also decrease, causing a ripple of economic loss in the local community.

The loss of 335 jobs at a printing plant in Waseca County will have direct, indirect, and induced economic impacts on the county (Table 1). When 335 employees are laid off, an additional estimated 110 jobs in industries that serve the printing plant and its employees will be affected. In this situation, a total of 445 jobs in the county will be affected.

The plant closure will result in a total loss of \$70.1 million in output (sales) in the county. This includes an estimated \$56.4 million less in output from the printing plant itself and an estimated loss of \$13.7 million in indirect and induced sales. The total loss of labor income will be an estimated \$23.7 million—\$19.5 million in direct impact from wages from the plant spending and about \$3.2 million in wages for employees of businesses affected by the closure.

³ Unemployment rates as of September 2017 (not seasonally adjusted). Retrieved from <https://mn.gov/deed/data/data-tools/laus/>.

⁴ The job layoff figure is a given number. The IMPLAN model estimates the associated output and labor income losses based on an average printing plant. The numbers presented here are meant to be instructive for a conversation. They may differ slightly from actual output and labor income for Quad Graphics.

On a positive note, the current tight labor market provides an opportunity for Quad Graphics employees to obtain new employment. As this happens, the effects of lost income (induced effects) should dissipate relatively quickly. The lost business-to-business transactions, however, may linger longer as suppliers adjust.

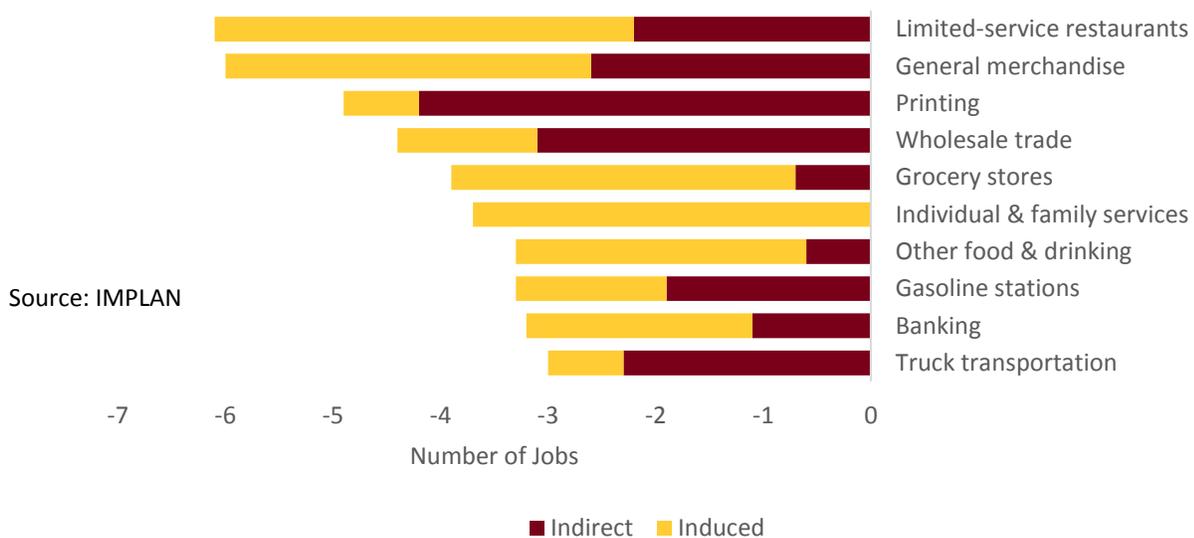
Table 1: Economic Impact of Printing Plant Closure With 335 Jobs Lost: Waseca, Minnesota

	Direct	Indirect	Induced	Total
	At Printing Plant	Business-Business	Consumer-Business	
Output (millions)	-\$56.4	-\$5.9	-\$7.8	-\$70.1
Employment	-335	-50	-60	-445
Labor Income (millions)	-\$19.5	-\$2.2	-\$2.0	-\$23.7

Estimates by the Extension Center for Community Vitality

Of the total 445 jobs affected by the plant closure, 110 are at businesses other than the printing plant. Chart 4 shows the top industries impacted. Industries expected to have the highest number of jobs affected include restaurants, general merchandise stores, other printing companies (suppliers), wholesale trade, and grocery stores. The top industries affected reflect both the impacts of reduced spending by employees (induced) and by the plant (indirect).

Chart 4: Top Industries Impacted, Loss of 335 Printing Jobs in Waseca Minnesota



Between 2014 and 2016, the number of jobs in printing declined steadily in Waseca County. In 2014, the Quad Graphic plant employed 750 individuals. By mid-2017, employment had fallen to 365 people. With the plant closure, employment will drop to 30.

Leaders in Waseca are developing strategies to adjust to the loss of 335 employees by the end of the year. However, the economy is still adjusting to the loss of 385 jobs in the period leading up to the plant closure. Thus, it is instructive to look at the impact of the entire number of job losses on the economy.

Table 2 details the impacts of the loss of 720 printing jobs in Waseca County. A loss of 720 printing jobs is predicted to affect 965 jobs in the county. The job losses equate to a loss of an estimated \$150.7 million in output, including \$50.9 million in labor income.

Table 2: Economic Impact of 720 Lost Printing Plant Jobs: Waseca County, Minnesota

	Direct	Indirect	Induced	Total
	At Printing Plant	Business-Business	Consumer-Business	
Output (millions)	-\$121.2	-\$12.7	-\$16.8	-\$150.7
Employment	-720	-110	-135	-965
Labor Income (millions)	-\$42.0	-\$4.7	-\$4.2	-\$50.9

Estimates by the Extension Center for Community Vitality

The results in this table are annual, but the effects will dissipate over time. As workers obtain new employment, their spending will return, offsetting the induced effects. Businesses that supplied the plant will adjust to new levels of output or find new customers. Longer-term trends, however, will require monitoring.

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DATE

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APPENDIX: ASSUMPTIONS AND TERMS

Economic impact analysis is based on several critical assumptions. An understanding of these assumptions ensures the results are interpreted properly. Here are the key assumptions made in the analysis for Waseca County.

First, there are assumptions that are standard for all economic impact analyses using the IMPLAN model. They are:

- One job is one job, regardless if the job is full-time, part-time, or seasonal. The jobs considered here are not full-time equivalents. Therefore, it is not unusual for industries with high levels of part-time employment to experience higher employment impacts.
- The model is linear. A one unit change in output or employment will have a fixed unit change in the other measures.
- The model assumes all employees of the facility live in the county. It does make adjustments for where their incomes are spent. If the regional hub is located in a nearby county, it will adjust to assume employees spend some of their wages and salaries in the nearby county. This may be an issue here, as Waseca County is located near Mankato, a regional economic hub.
- The database is built on publicly available data. When data is not available for a specific industry, say due to data disclosure issues, econometric models are used to create estimates for the industry.

Second, there is an assumption unique to the analysis in Waseca County.

- The number of employees at Quad Graphics was taken from published news reports. The IMPLAN model estimated the amount of output and labor income created by those employees, based on national and state benchmarks for the industry.

The following are a few key terms used in economic impact analysis.

Output

Output is measured in dollars and is equivalent to total sales. The output measure can include significant double counting. For example, think of corn. The value of the corn is counted when it is sold to the mill, again when it is sold to the dairy farmer, again as part of the price of fluid milk, and then yet again when it is sold as cheese. The value of the corn is built into the price of each of these items and then the sales of each of these items are added up to get total sales (or output).

Employment

Employment includes full- and part-time workers and is measured in annual average jobs. Total wage and salaried employees, as well as the self-employed, are included in employment estimates in IMPLAN. Because employment is measured in jobs and not in dollar values, it tends to be a very stable metric.

In the model, one job is one job, regardless if the job is full-time, part-time, and seasonal.

Labor Income

Labor income measures the value that is added to the product by the labor component. For example, in the corn example, when the corn is sold, a certain percentage of the sale goes to the farmer for his/her labor. Then when the mill sells the corn as feed to the dairy farmer, it includes a markup for its labor costs in the price. When the dairy farmer sells the milk to the cheese manufacturer, he/she includes a value for his/her labor. These individual value increments for labor can be measured. This is labor income. Labor income does not include double counting.

Direct Impact

The direct impact is equivalent to the initial change in the economy.

Indirect Impact

The indirect impact is the summation of changes in the local economy that occur due to **spending for inputs** (goods and services) by the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, this implies a corresponding increase in output by the plant. As the plant increases output, it must also purchase more of its inputs, such as electricity, steel, and equipment. As it increases its purchase of these items, its suppliers must also increase its production, and so forth. As these ripples move through the economy, they can be captured and measured. Ripples related to the purchase of goods and services are indirect impacts.

Induced Impact

The induced impact is the summation of changes in the local economy that occur due to **spending by labor** by the employees in the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, the new employees will have more money to spend to purchase housing, buy groceries, and go out to dinner. As they spend their new income, more activity occurs in the local economy. This can be quantified and is called the induced impact.

Total Impact

The total impact is the summation of the direct, indirect, and induced impacts.