



ECONOMIC EMERGENCY PROGRAM

Economic Impact of a Beef Packing Plant Closure in Windom, Minnesota

INTRODUCTION

On Monday, October 12, 2015, the management of *PM Beef Holding LLC* in Windom, Minnesota announced its intention to cease operations at its facility. The plant will close on December 11, 2015 and management expects the action to be permanent. This came as a surprise to the Windom community, as accentuated by one of the employees, - “it is disappointing to lose it as a source, even though it was not a major player as far as the local commercial herds”.¹ *PM Beef Holding LLC* was started in the 1990s. The company is a processor and supplier of meat products to consumers, retailers, and foodservice operations.

As the City of Windom absorbs this announcement, city and county leaders will need to consider implications for the future of their community. That future will affect on the economy of Windom and Cottonwood County. In response, University of Minnesota Extension has prepared this economic emergency report. This report is presented in partnership with EDA Center at the University of Minnesota-Crookston.²

The company employs 260 workers and its closure will result in the layoff of these employees. In summary, the loss of 260 beef packing plant jobs in Cottonwood County will result in the loss of an estimated \$151.3 million in economic activity in the county, including an estimated \$14.1 million in lost labor income. An estimated 409 jobs will be affected by the closure. Industries most affected include beef cattle production, wholesale trade, and truck transportation. In addition to losses in Cottonwood County, neighboring counties will lose \$24.7 million in economic activity.

In addition, the closure will have an impact on city revenues. According to the City Administrator of Windom, the company accounted for 39 percent of the city’s wastewater revenues and 23 percent of its sewer revenues in 2014¹. The company also accounted for approximately 4.6 percent of the city’s net tax capacity in 2013¹. The closure of the company means that this revenue source would no longer be available to the city.

¹ Daily Global and Forum Communications company, 2015. Window’s PM Beef to Close, <http://www.dglobe.com/news/3859328-windoms-pm-beef-close>

² www.edacenter.org

WHAT IS AN ECONOMIC EMERGENCY?

Communities can 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, communities 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 economic emergency program is designed to provide community leaders with information to assist in making decisions regarding the community's future.

This analysis predicts the impact of a change in the economy of Cottonwood County (data are not available at the city level). Information from the IMPLAN (MIG, Inc.) input-output model is used in this analysis.³ There are a few important things to note related to this analysis and the tool used. Please see the section on assumptions and terms in the appendix to understand these factors.

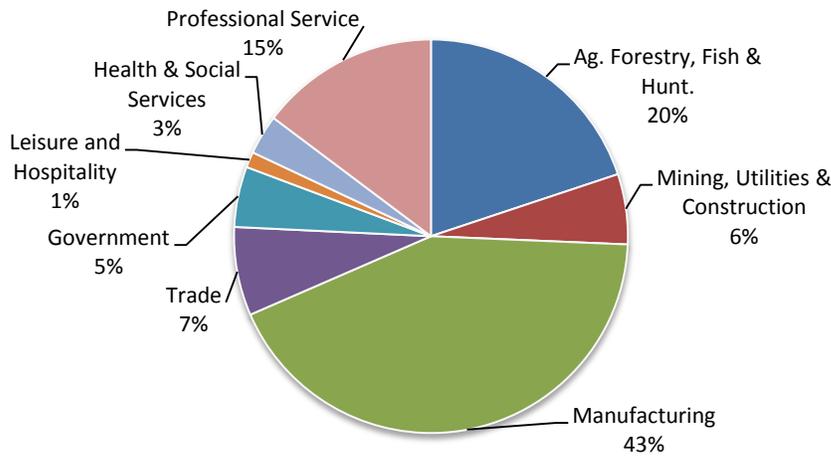
OVERVIEW OF THE ECONOMY

The businesses and enterprises in Cottonwood County produced \$1.6 billion of goods and services (measured as output) in 2013. Manufacturers produced \$710 million (43 percent) of the output (chart 1). The food processing industry, in turn, produced 41 percent of manufacturing output in 2013, almost all of it in the meat processing sector. This makes it the second largest sector in the manufacturing industry in Cottonwood County. *PM Beef Holding LLC* (Windom) represents one of the key food processing industries in the county. The 260 jobs that would be lost as a result of the closure constitute more than half of food manufacturing jobs in the county. The other major manufacturing sector in Cottonwood County is machinery (farm, lawn, and garden) manufacturing which employs approximately 50 percent of manufacturing workers in the county.

The agriculture, forestry, fishing and hunting industry produced \$330 million of output (20 percent) to Cottonwood County in 2013. The largest sectors in the industry are crop farming; livestock farming; and agriculture and forestry support services (listed in order of value of output). The livestock sector provides critical inputs to the beef processing industry in Cottonwood County.

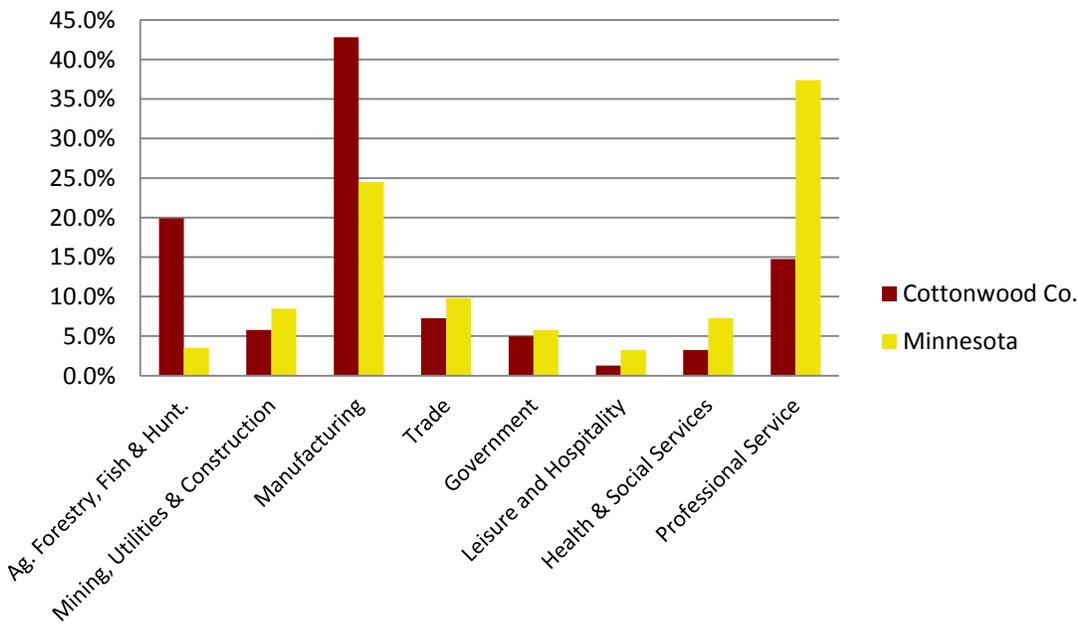
³ IMPLAN, Inc. www.implan.com. The 2013 data is the latest year available for analysis.

Chart 1: Output by Industries, Cottonwood County, 2013



Cottonwood County has been significantly stronger in the manufacturing industry as compared to Minnesota (chart 2). In 2013, manufacturing accounted for nearly 25 percent of Minnesota’s output (compared to Cottonwood County’s 43 percent). The trade-off is that Cottonwood County has a smaller percentage of its output derived from the professional services industry. In other respects, Cottonwood County closely mirrors the state.

Chart 2: Percent of Output by Industry, Cottonwood County Versus Minnesota, 2013



According to the IMPLAN database, the average wage/salary (including the value of any benefits provided) for all jobs in Cottonwood County is \$25,033. The average wage of the manufacturing

industry is \$41,827. In Minnesota, the average wage for all jobs is \$55,100. The average wage of the manufacturing industry in Minnesota is \$76,300 which includes any benefits provided.

ECONOMIC IMPACT OF LOST BEEF PROCESSING JOBS

On October 12, the *PM Beef Holding LLC*, a beef processing facility, announced it would cease operations by December 11th. The closure of the plant will result, not only in the loss of jobs and sales at the facility, but also in industries that support the facility and its employees. The effects on other industries can be quantified by an input-output model, in this case IMPLAN. While the IMPLAN database does not have specific information regarding the *PM Beef Holding LLC* facility, IMPLAN can make predictions about the economic impact of lost beef processing jobs in Cottonwood County.

Directly, the closure of the beef packing facility will result in 260 jobs lost in Cottonwood County (direct effect in table 1). According to IMPLAN, 260 beef processing employees create an estimated \$121.8 million worth of output and generate an estimated \$10.6 million in labor income (salaries, wages, and benefits).⁴

In running the analysis, labor income was cut to \$6.3 million, since a significant number of workers commute to the facility from outside Cottonwood County. This was necessary to minimize the tendency to either understate or overstate the labor income that would be impacted in Cottonwood County due to the closure of the plant. The decision about the amount by which to decrease labor income was based on conversations with Windom city officials.

Beef processing generates additional economic activity as a result of the facility making purchases in the local economy. When the facility makes purchases of inputs and supplies in the local economy, this creates indirect or business-to-business impacts. When the facilities' employees make purchases in the local economy, this creates induced or consumer-to-business impacts. If these purchases decrease, as a result of the facility closing or decreasing production, the corresponding local purchases will also decrease, causing a ripple of economic loss in the local community.

The loss of 260 beef processing jobs will have impacts on Cottonwood County, as displayed in table 1. In addition to the 260 jobs that will be lost due to the closure of the beef processing facility, an estimated 149 jobs that serve the beef processing plant and its employees will be affected. In total, 409 jobs in Cottonwood County are predicted to be affected by the closure of the plant. There are nearly 8,300 jobs in Cottonwood County, thus, the closure is expected to affect about 5 percent of the total workforce in the county.

⁴ Note: Labor income is estimated by the model for an average meat processing facility. *PM Beef Holding LLC*'s actual payments for labor may be different.

Table 1: Economic Impact of Lost Beef Processing Jobs: Cottonwood County, Minnesota

	Direct	Indirect	Induced	Total
Output (millions)	\$121.8	\$24.7	\$4.8	\$151.3
Employment	260	105	44	409
Labor Income (millions)	\$6.3	\$6.6	\$1.2	\$14.1

Estimates by University of Minnesota Extension

In addition to lost jobs, the closure of the beef processing facility will also affect output and labor income in the county. With the closure of the facility, food manufacturing companies in the county will produce an estimated \$121.8 million less in output, which will contribute to a total loss of an estimated \$151.3 million in output (sales). This lost output equates to approximately 9 percent of output in the county.

Labor income will also drop in Cottonwood County. Lost jobs at the processing plant will directly cause an estimated decrease in labor income of \$6.3 million for employees at the facility. The combination of lost spending of employee wages and declines in spending by the processing facility for supplies, will decrease total labor income in the county by a total of \$14.1 million.

Note: Management expects the facility to be closed permanently. If the facility were to resume operations, perhaps with new ownership, the impacts of the loss will dissipate as the facility returns to full operation.

Top Industries Impacted

The IMPLAN model can also provide estimates of the sectors in Cottonwood County that will feel the largest magnitude of impacts from the closure of the beef processing plant. In terms of employment, the largest indirect and induced impacts will be in the beef cattle farming; wholesale trade; and trucking industries (chart 3).

Chart 3: Top Industries Impacted by the Loss of Beef Processing Jobs, Cottonwood County

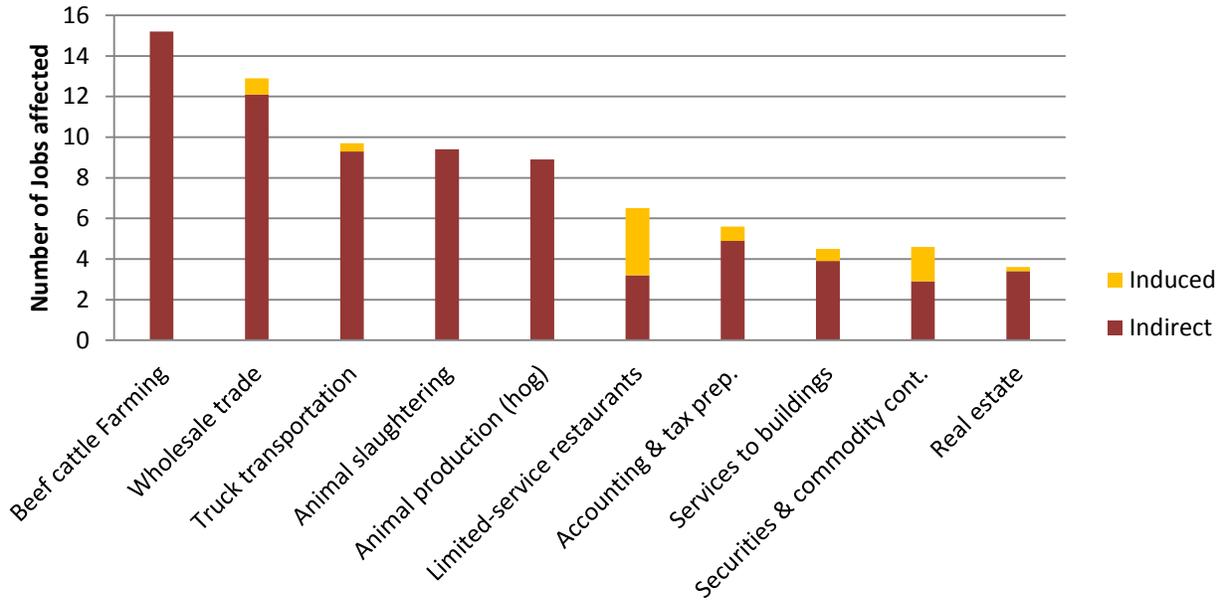


Chart 3 can help decision makers understand the other sectors in Cottonwood County that will be affected by the closure of the beef processing plant. Of the predicted 149 jobs lost in sectors beyond beef processing, an estimated 15 jobs will be affected in Cottonwood County’s beef cattle farming sector and 13 jobs will be affected in Cottonwood County’s wholesale trade. Note, the model is not predicting 15 fewer cattle farmers, rather indicating the 15 cattle farms will be affected by the closure. It’s probable the farms will find other buyers for their cattle.

IMPACTS ON NEIGHBORING COUNTIES

The beef processing facility (Windom) imports beef cattle needed for the plant from neighboring counties (Redwood, Brown, Murray, Martin, Nobles, Jackson and Watonwan counties). Also indications are a significant number of the workers commute to the facility from outside Cottonwood County. This indicates that the closure of the beef processing facility would also impact these neighboring counties. An analysis of Cottonwood County alone could not capture these leaked impacts, indicating the need perform a multi-regional input-output analysis with the neighboring counties.

Table 2 shows that, in addition to the loss of 409 jobs in Cottonwood County due to the closure of the beef processing plant, an estimated 92 jobs in the neighboring counties would also be affected. Also it is predicted that the supporting businesses of the beef processing plant in the neighboring counties would produce \$24.7 million less due to the closure of the beef processing plant. In addition to these impacts, an estimated \$6.4 million labor income would also be lost in the neighboring counties when the beef processing facility closes its doors.

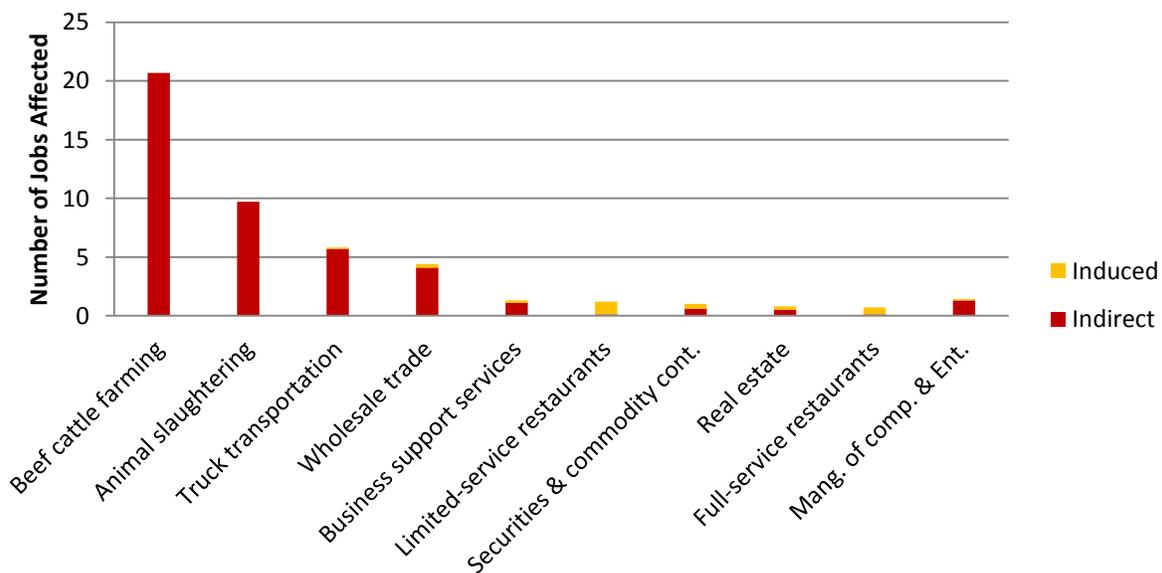
Table 2: Economic Impact of Lost Beef Processing Jobs in Cottonwood County on Brown, Jackson, Martin, Murray, Nobles, Redwood, and Watonwan Counties

	Indirect	Induced	Total
Output (millions)	\$22.4	\$2.3	\$24.7
Employment	72	20	92
Labor Income (millions)	\$5.8	\$0.58	\$6.4

Estimates by University of Minnesota Extension

The top industries in the neighboring counties that would be impacted due to the closure of the plant mirror that of the Cottonwood County. Chart 4 indicates, that in terms of employment, the largest indirect and induced impacts in the neighboring counties will be in the beef cattle farming, animal slaughtering, trucking, and wholesale trade. Out of the estimated 92 jobs that will be affected in the neighboring counties, 21 jobs will be in the beef farming sector, 10 jobs in the animal slaughtering sector and 6 in the truck transportation sector.

Chart 4: Top Industries Impacted in Brown, Jackson, Martin, Murray, Nobles, Redwood and Watonwan by the Loss of Meat Processing Jobs in Cottonwood County



PREPARED BY UNIVERSITY OF MINNESOTA EXTENSION

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ASSUMPTIONS AND TERMS

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

- One job is one job, regardless if the job is full-time, part-time, or seasonal, in the IMPLAN database. The jobs considered here are not full-time equivalents. Therefore, it isn't unusual for industries with high levels of part-time employment to experience higher employment impacts.
- The model is linear. Changes in output or employment can be modeled in a linear fashion. For example, if only half of the employees are permanently laid off, the economic impact numbers can be divided in half.
- The database is built on data available publicly. 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.

KEY TERMS

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 in the price some markup for its labor costs. 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.

Labor income is comprised of employee compensation (wages, salaries, and benefits) and proprietor income. Proprietor income includes income for the self-employed, which is how many agricultural producers register their income.

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** -- 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.