

**ECONOMIC
IMPACT
ANALYSIS**

**An Extension
Community
Economics Program**

**Rice County:
Economic Futures Workshop
Final Report**

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November 2009

UNIVERSITY OF MINNESOTA
EXTENSION

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Introduction

The Economic Futures Workshop has been designed by University of Minnesota Extension to assist communities in making informed economic development decisions. The Futures Workshop features the *QuickTake 100* which highlights the economic impact in a designated county of 100 jobs in a selected industry. Along with the *QuickTake 100*, the Futures Workshop also provides an overview of the current economic structure of the county.

This report features the QuickTake 100 results and the economic structure of Rice County, Minnesota.

A Primer of Terms

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.

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.

Property Income

Property income is a computation of the value that accrues due to ownership of property. This includes payments for rents, royalties, and dividends.

Direct Impact

The direct impact is equivalent to the initial change in the economy. For the QuickTake 100, the direct impact is 100 jobs.

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

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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.

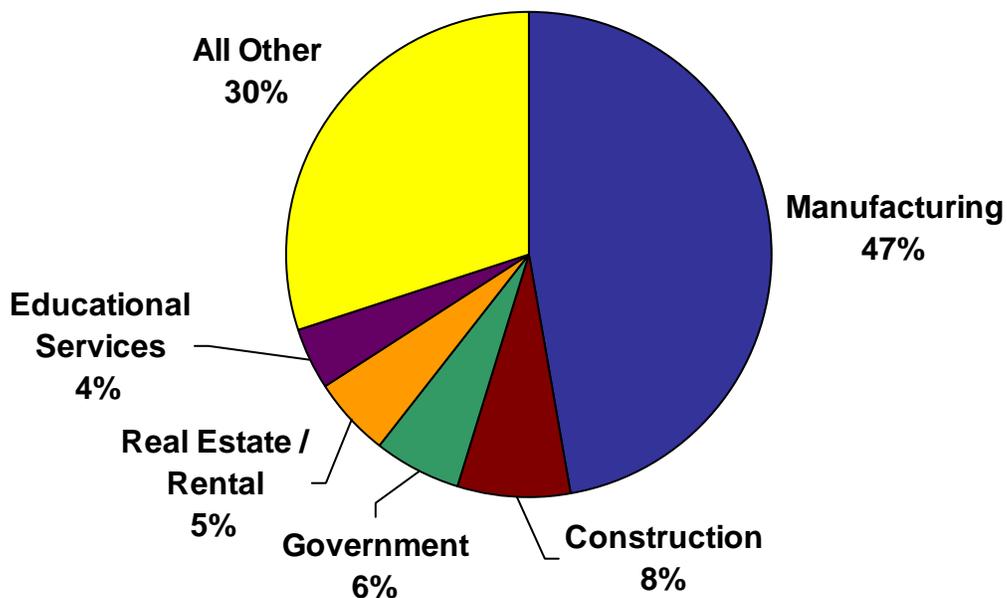
Total Impact

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

Rice County Model

The following pie chart shows the percent each major industry in Rice County contributed to the overall total output of the county in 2007. Manufacturers in the county produced nearly one-half of the county's output; compared to the average non-metro county where manufacturing provided only thirty percent of total output. Included in "All Other" are all other industries sectors in Rice County including, but not limited to: agriculture, health and social services, and retail trade. Since output is measured in dollar values and the price of agricultural commodities fluctuates widely from year-to-year, agriculture's percent of total output can also vary widely by year.

Output by Major Industry Category, Rice County 2007

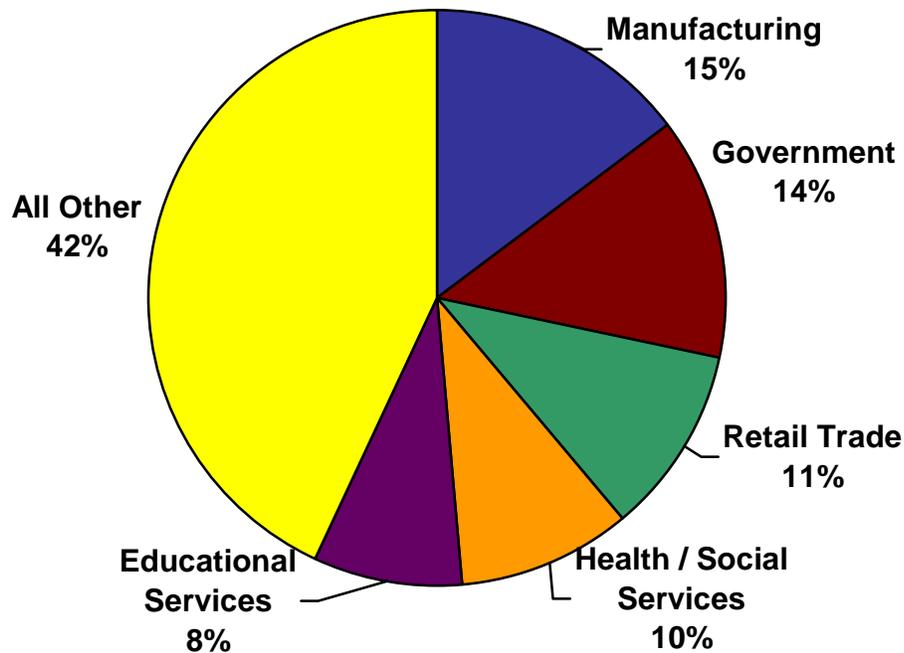


Definition Note: The educational services industry includes private schools (K-12), private colleges and universities and professional schools (dance studios, beauty schools, etc). Public schools (K-12), and public colleges and universities are included in the government sector.

Rice County Model

The following chart depicts total employment in Rice County by major industrial classification. Manufacturers employ the largest percentage of workers in Rice County, followed closely by governmental units and retail trade establishments. Health and social services businesses, which were not in the top five in terms of output creation, are in the top five for employment. The “All Other” category includes all the other major industry classifications including, but not limited to: agriculture, health and social services, and professional services.

Employment by Major Industry, Rice County 2007

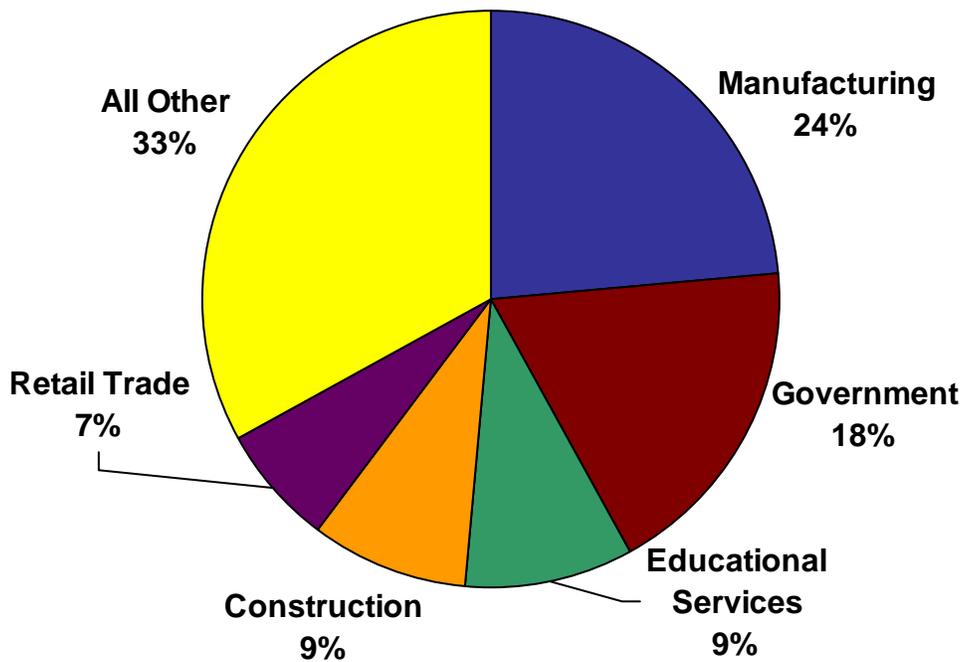


Definition Note: Remember that employment measures both full-time and part-time jobs and accounts for them equally.

Rice County Model

The following chart shows how each industry classification contributed to labor income in Rice County in 2007. Manufacturers contributed nearly one-quarter of Rice County's total labor income with fifteen percent of the workforce. This implies a relatively higher wage for manufacturing workers. Concurrently, health and social services businesses employed ten percent of the workforce, but contributed only seven percent of labor income. This implies a relatively lower wage. The "All Other" category includes all the other major industry classifications including, but not limited to: agriculture, health and social services, and professional services.

Labor Income by Major Industry, Rice County 2007



Definition Note: Government includes federal, state and local governmental units. It also includes government activities for educational purposes (public K-12 and public colleges and universities) and non-educational purposes (county and city governments, for example).

Rice County Model

The following table contains the data to support the previous three pie charts. It shows output, employment, and employee compensation for each of the major industry classifications. Output and employee compensation are reported in millions of dollars.

Industry	Output*	Employment	Labor Income*
Agriculture, Forestry, Fishing and Hunting	158.1	1,831	25.0
Mining	5.2	30	2.0
Utilities	24.4	95	5.0
Construction	329.1	2,607	101.8
Manufacturing	2,066.7	4,608	270.0
Wholesale Trade	176.9	1,124	67.6
Retail Trade	183.5	3,335	77.5
Transportation and Warehousing	70.9	686	24.8
Information	57.7	220	10.8
Finance and Insurance	132.3	550	26.3
Real Estate and Rental	233.8	656	12.6
Professional - Scientific and Technical - Services	63.8	660	30.3
Management of Companies	15.8	127	4.2
Administrative and Waste Services	47.9	543	15.4
Educational Services	190.1	2,607	106.5
Health and Social Services	148.6	3,007	76.3
Arts - Entertainment and Recreation	12.5	348	5.4
Accommodation and Food Services	108.2	2,052	33.8
Other Services	106.2	1,957	36.6
Government and non-NAICS	254.2	4,253	209.7
Totals	4,385.9	31,294	1,141.7

*Millions of dollars

Rice County Model

The following tables show the top ten industries, as reported by IMPLAN, for Rice County in 2007. This data is reflective of a fixed point in time and may have changed significantly due to changes in the economy since 2007.

Top 10 Industries (Output)	2007 Total Output	Percent of Total Output
Breakfast Cereal Manufacturing	\$537,883,000	12.3%
Air Conditioning – Refrigeration – and Warm Air Heating Equipment Manufacturing	\$352,876,000	8.0%
Fruit and Vegetable Canning – Picking – and Drying	\$271,630,000	6.2%
Wholesale Trade Businesses	\$176,879,000	4.0%
Imputed Rental Activity for Owner-Occupied Dwellings	\$169,331,000	3.9%
Private Junior Colleges – Colleges – Universities and Professional Schools	\$166,521,000	3.8%
Poultry Processing	\$132,849,000	3.0%
State and Local Government – Non-Education	\$109,161,000	2.4%
Construction – New Residential	\$99,700,000	2.3%
State and Local Government – Education	\$95,260,000	2.2%
Top 10 Total	\$2,112,090,000	48.2%
All Industries Total	\$4,385,940,000	100.0%

Definition Note: The imputed rental activity for owner-occupied dwellings industry sector is an estimate of what owner/occupants would pay in rent if they rented rather than owned their home. It is included in the model to ensure consistency in the flow of funds, particularly for the maintenance and upkeep of the home.

Top 10 Industries (Employment)	2007 Total Employment	Percent of Total Output
Private Junior Colleges – Colleges – Universities and Professional Schools	2,026	6.5%
State and Local Government – Non-Education	1,952	6.2%
State and Local Government – Education	1,782	5.7%
Food Services and Drinking Places	1,778	5.7%
Nursing and Residential Care Facilities	1,293	4.1%
Wholesale Trade Businesses	1,124	3.6%
Construction – New Non-residential, Commercial	821	2.6%
Offices of Physicians, Dentists, and Other Health Practitioners	755	2.4%
Breakfast Cereal Manufacturing	713	2.3%
Civic – Social – Professional and Other Similar Organizations	711	2.3%
Top 10 Total	12,955	41.4%
All Industries Total	31,294	100.0%

Definition Note: Civic-Social-Professional and Other Similar Organizations include a very wide range of activities including: girl scouts, fraternities, civic groups, alumni associations, Chambers of Commerce, business associations, farmers associations, and unions.

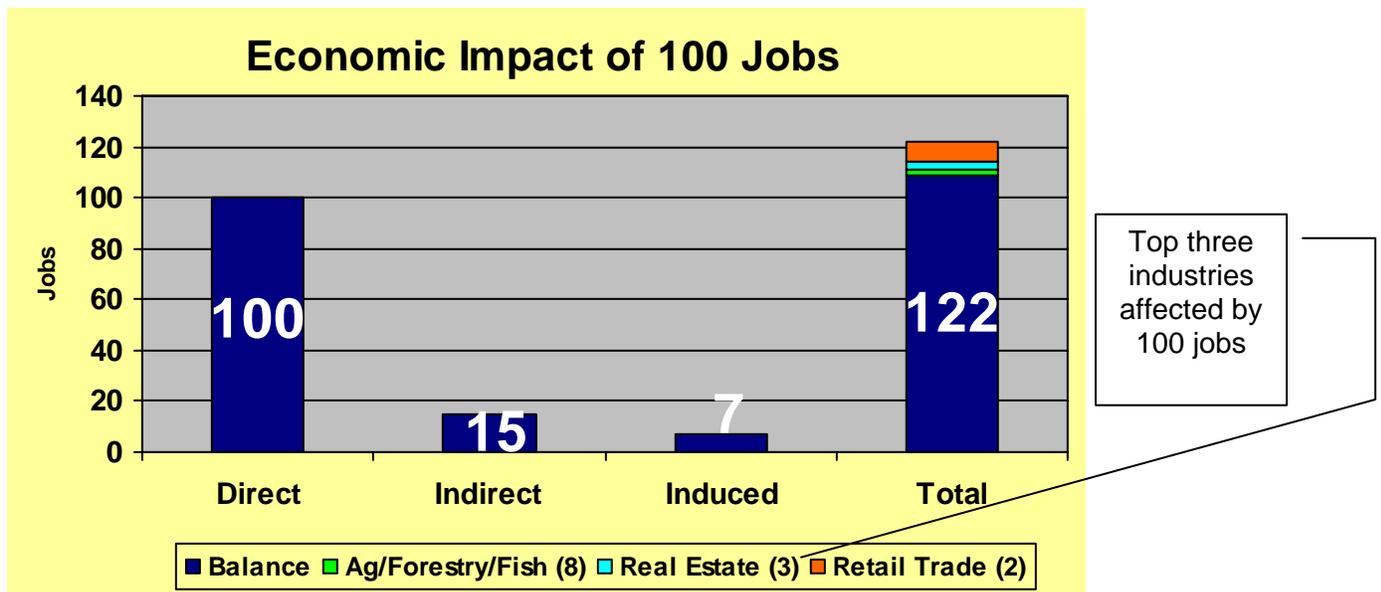
Selected Industries

The Rice County model provided background for the current state of the Rice County economy. With this in mind, it is now possible to look at the economic impact of 100 jobs in a specific industry. On July 20, 2009, economic development professionals representing each city within Rice County gathered to select industries that they wished to study. In the end, eighteen industries were selected. Those industries are listed below.

- | | |
|---|---------------------------------|
| Glass Manufacturing | Surgical/Medical Manufacturing |
| Wind Component Manufacturing | Food Manufacturing |
| Circuitry Manufacturing | Fabricated Metal Manufacturing |
| Veterinary Pharmaceutical Manufacturing | Computer Data Warehousing |
| Computer Software Development | Trucking |
| Wholesale Trade | Construction |
| Agriculture | Agricultural Support Activities |
| Retail Trade – General | Retail Trade – Specialized |
| Health Care | Health Care Support Activities |

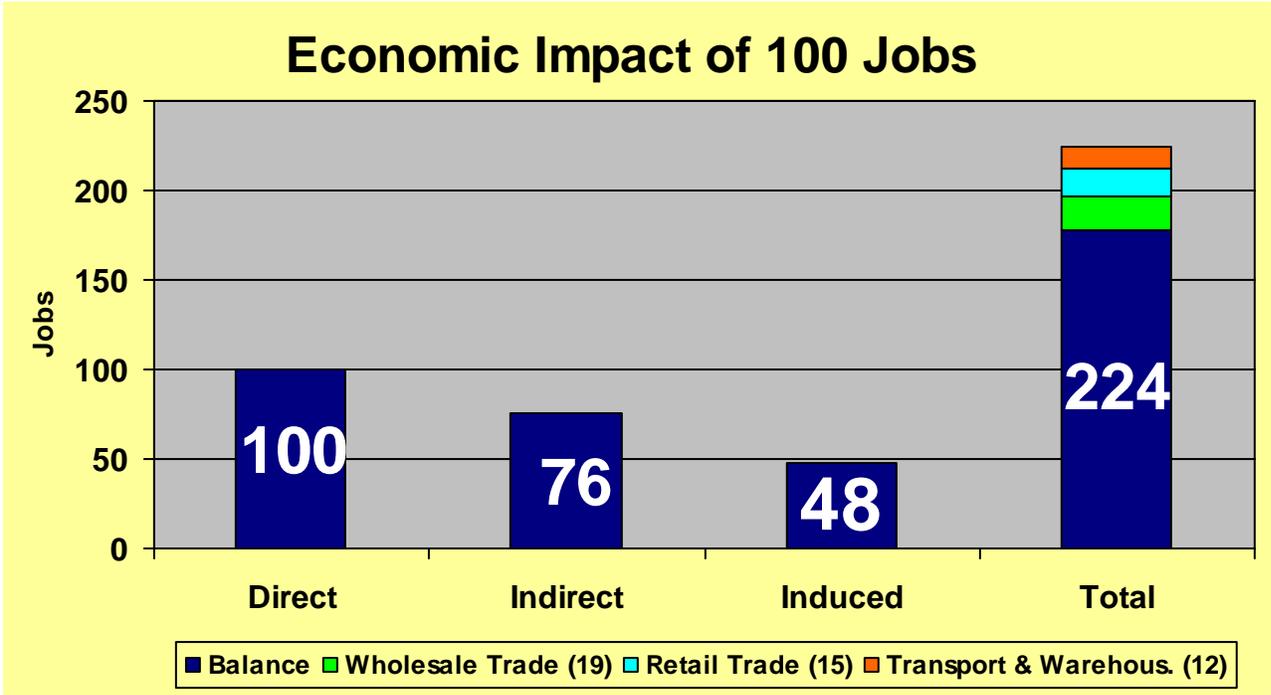
How to Interpret the Results

The next eighteen pages will detail how 100 jobs in each of the selected industries impacts the Rice County economy. Each page features a bar chart highlighting the direct impact of 100 jobs, the indirect and induced impacts created by those 100 jobs, and the top three other industries affected. The number in parenthesis is the number of jobs created by the 100 direct jobs.



In addition, each page will feature an important note about the industry and its impacts on the local economy. Each page will also report how much output and labor income is associated with 100 jobs in that industry. Finally, each page will have a bar chart that shows how many jobs in the industry currently exist in the county and illustrates how 100 jobs will change overall industry employment.

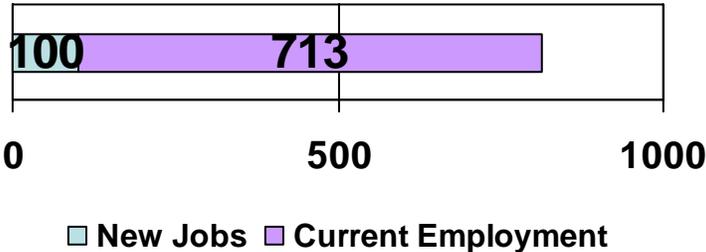
Breakfast Cereal Manufacturing



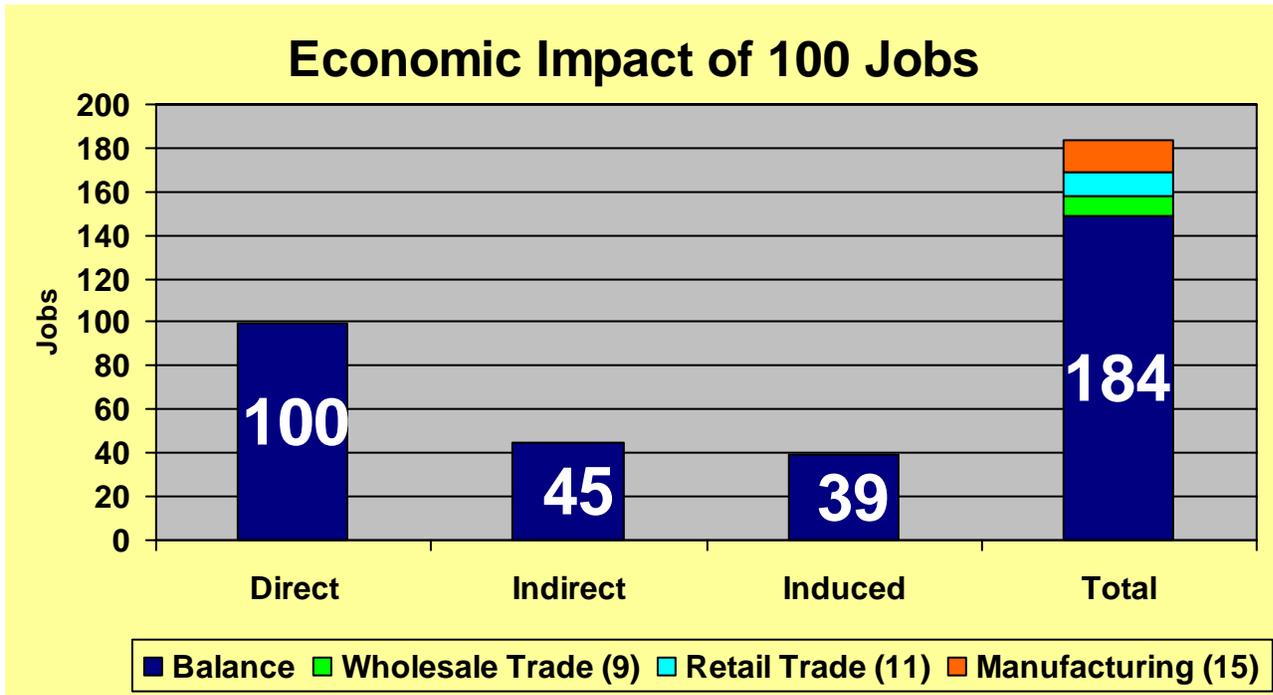
Cereal manufacturing has the largest impact of all the industries selected. This is a large, established industry. Looking at the top three industries impacted, it is clear that supporting industries have developed around the industry. In other words, supplies are available locally.

100 Jobs in Breakfast Cereal Man. =	
Employment	224
Output	\$89,280,000
Labor Income	\$12,440,000
Other Property Income	\$13,900,000

Employment: Breakfast Cereal Manufacturing



Glass Manufacturing

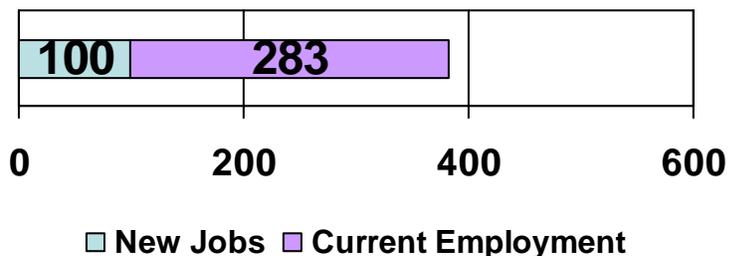


Glass manufacturing demands both inputs and labor. The relatively high indirect inputs imply that some inputs are available locally.

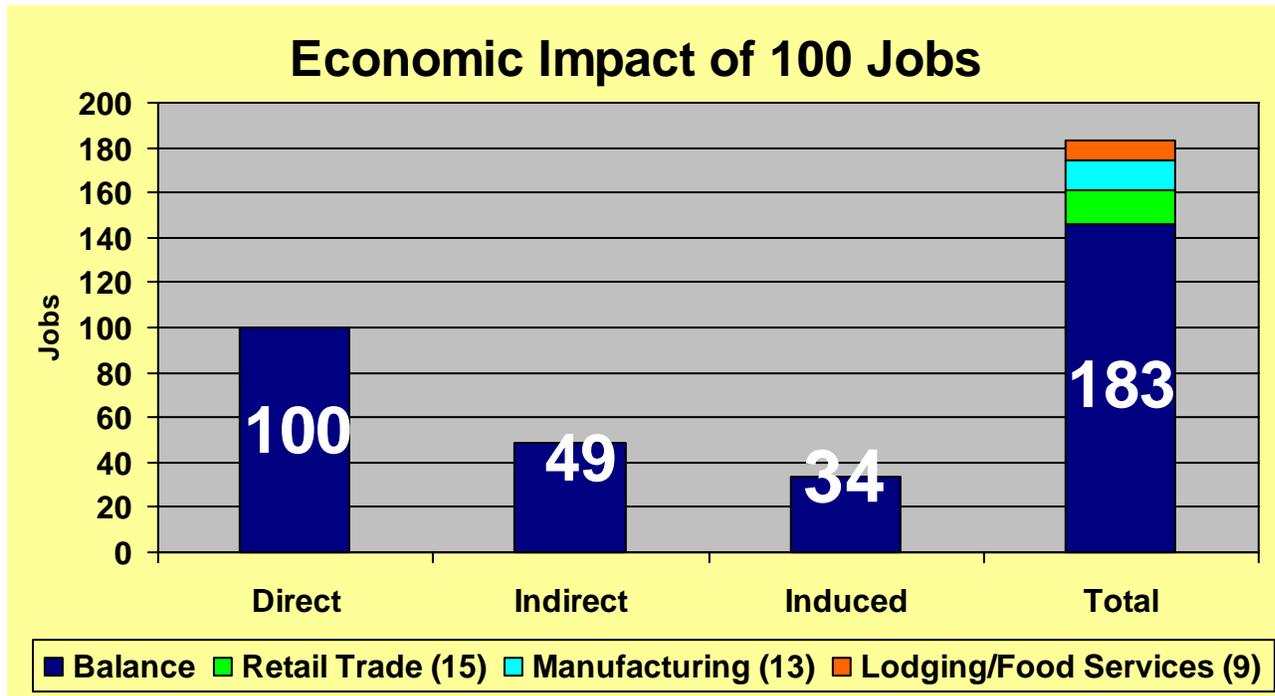
100 Jobs in Glass Manufacturing =

Employment	184
Output	\$24,900,000
Labor Income	\$6,900,000
Other Property Income	\$4,850,000

Employment: Glass Manufacturing



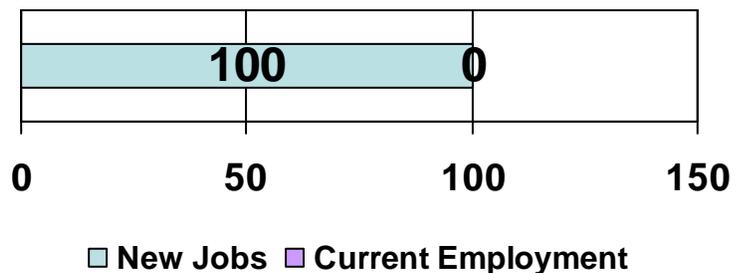
Surgical/Medical Manufacturing



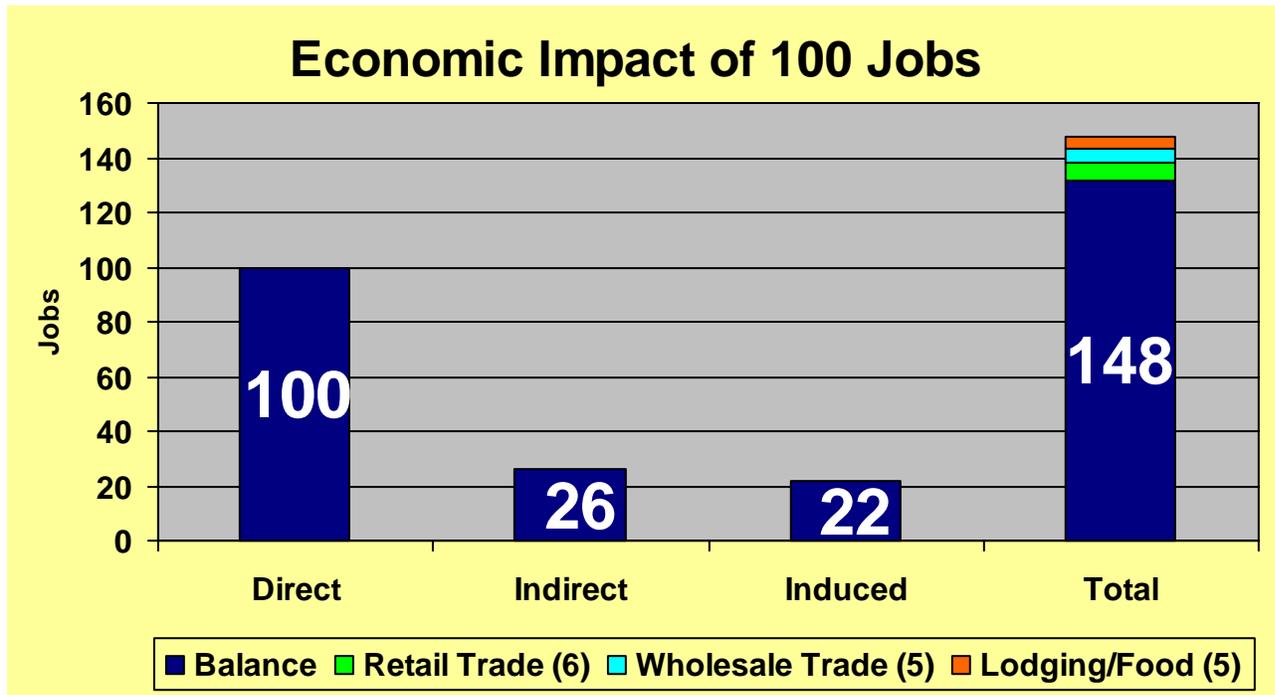
This industry does not currently exist in Rice County, therefore, the indirect effects may be slightly larger than could be expected initially.

100 Jobs in Surgical/Medical Manuf. =	
Employment	183
Output	\$33,910,000
Labor Income	\$8,850,000
Other Property Income	\$3,300,000

Employment: Surgical/ Medical Manufacturing



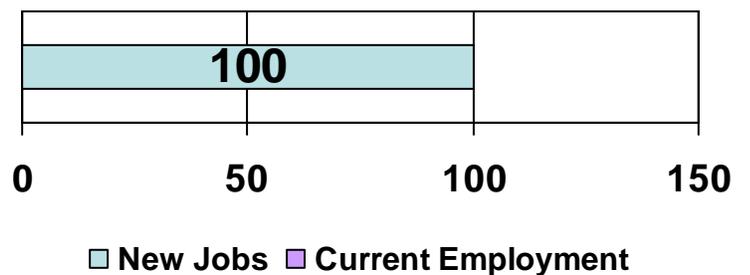
Wind Component Manufacturing



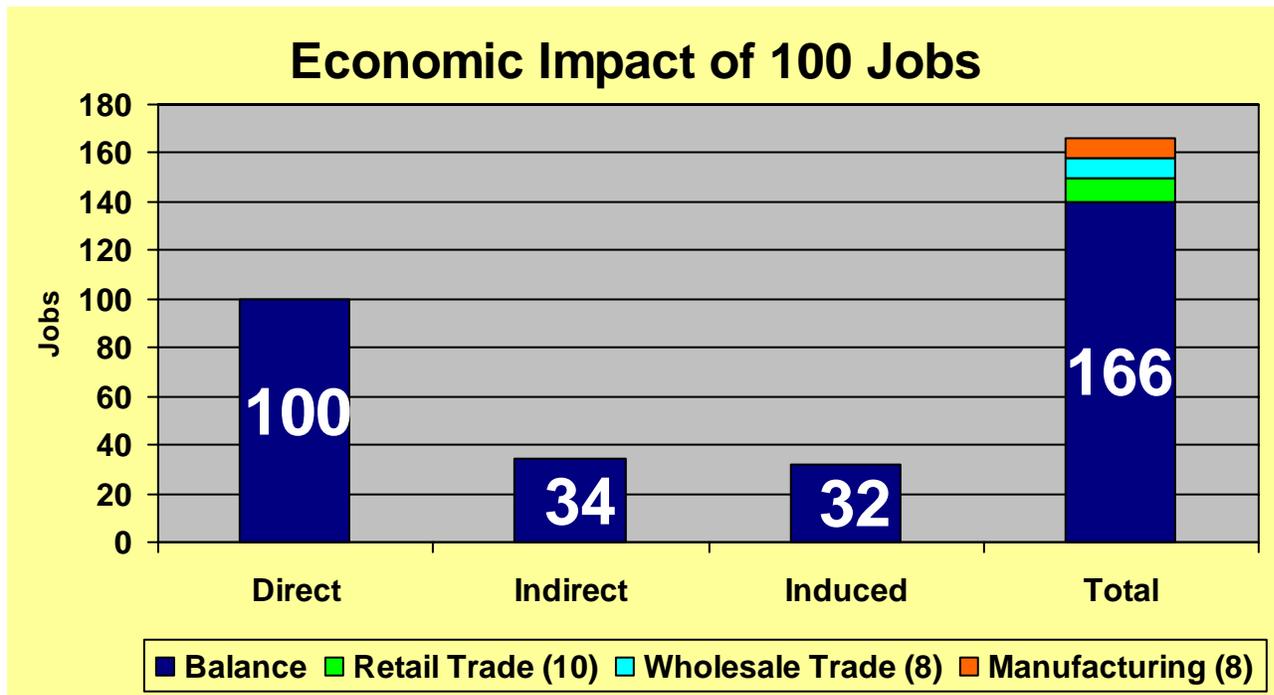
Wind Components are not currently manufactured in Rice County.

100 Jobs in Wind Component Manuf. =	
Employment	148
Output	\$24,240,000
Labor Income	\$5,600,000
Other Property Income	\$1,660,000

Employment: Wind Component Manufacturing



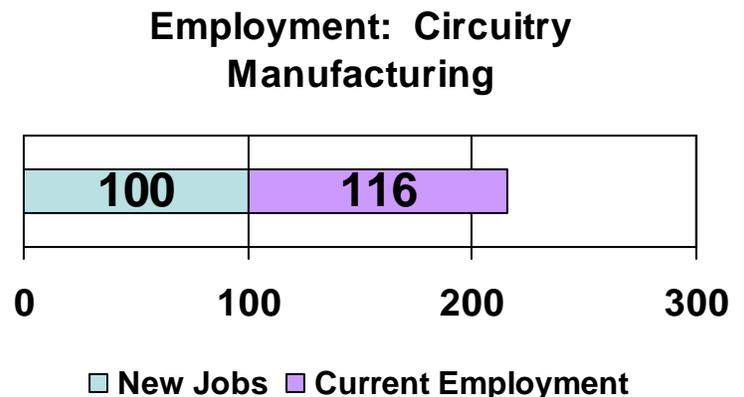
Circuitry Manufacturing



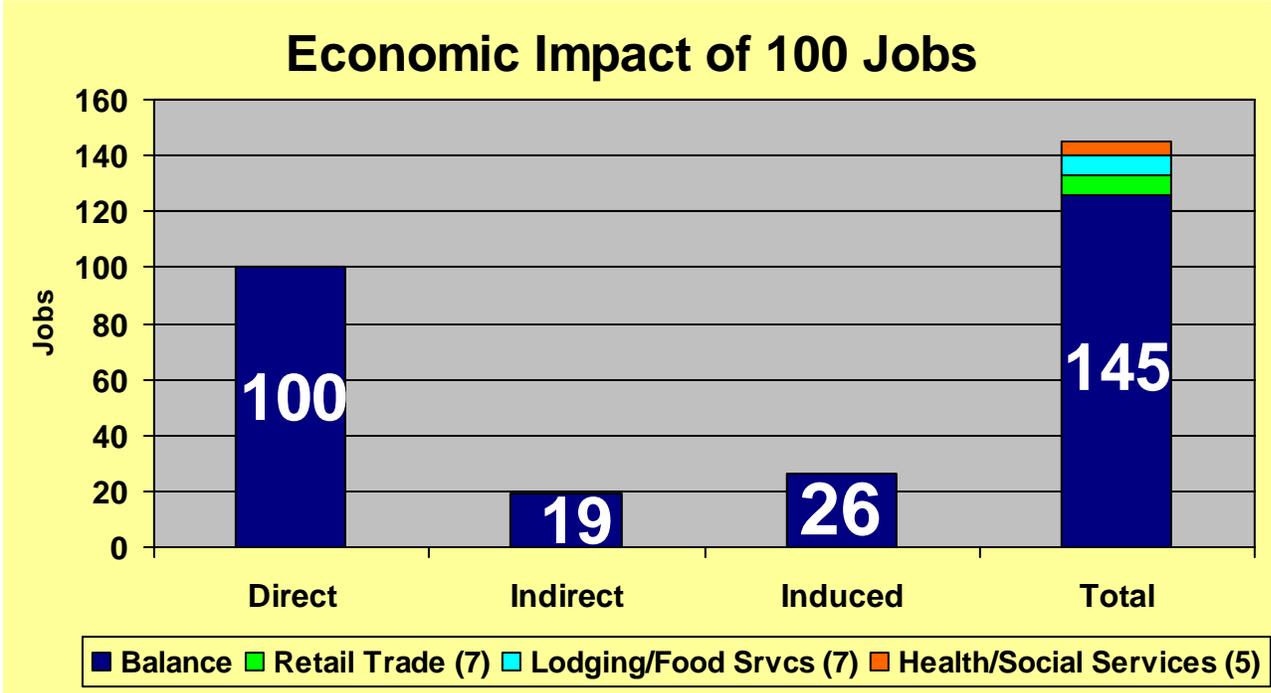
Circuitry Manufacturing has impacts similar to Glass Manufacturing, especially in the top three industries impacted.

100 Jobs in Circuitry Manuf. =

Employment	166
Output	\$26,950,000
Labor Income	\$8,280,000
Other Property Income	\$1,100,000



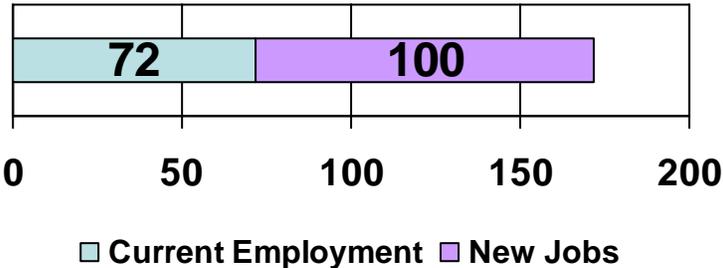
Fabricated Metal Manufacturing



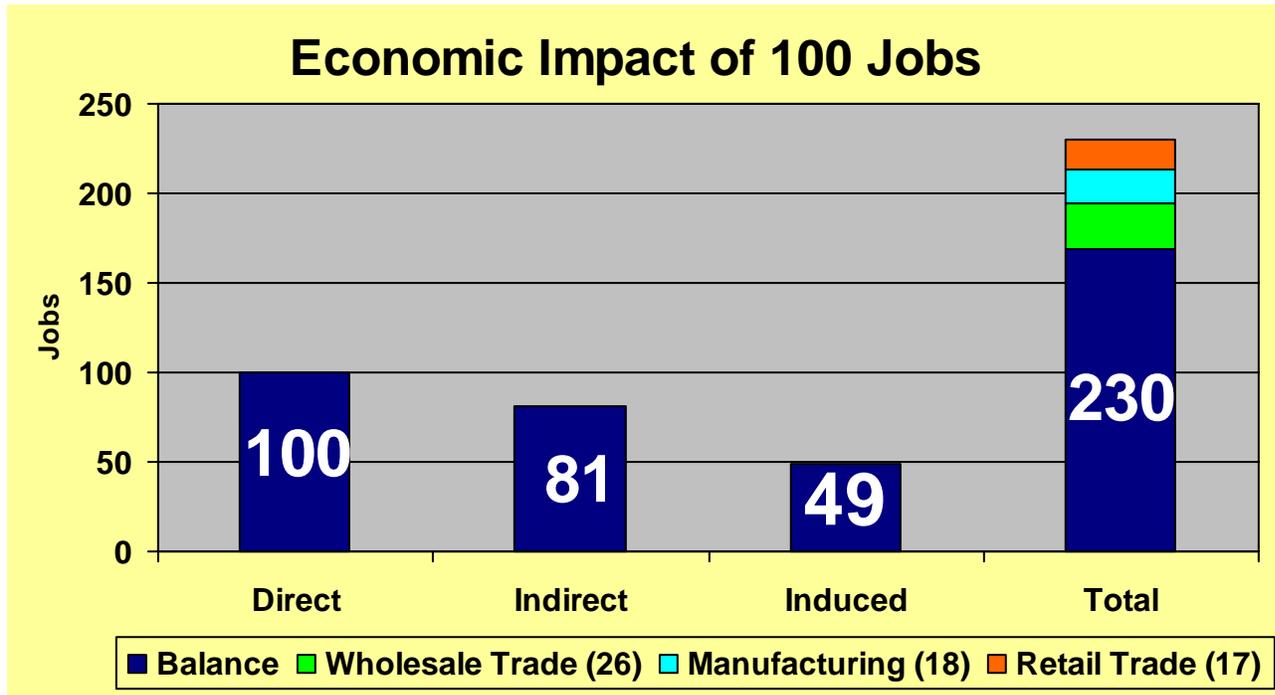
Induced impacts are higher than indirect, which is different than other manufacturing thus far. This may be because core supplies to this industry are not available locally.

100 Jobs in Fabricated Metal Manuf. =	
Employment	145
Output	\$18,630,000
Labor Income	\$6,830,000
Other Property Income	\$1,690,000

Employment: Fabricated Metal Manufacturing



Veterinary Pharmaceutical Manufacturing

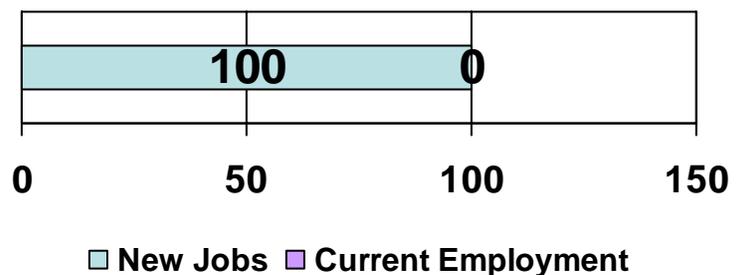


This industry does not currently exist in Rice County. The indirect effects here could be overestimated, especially initially.

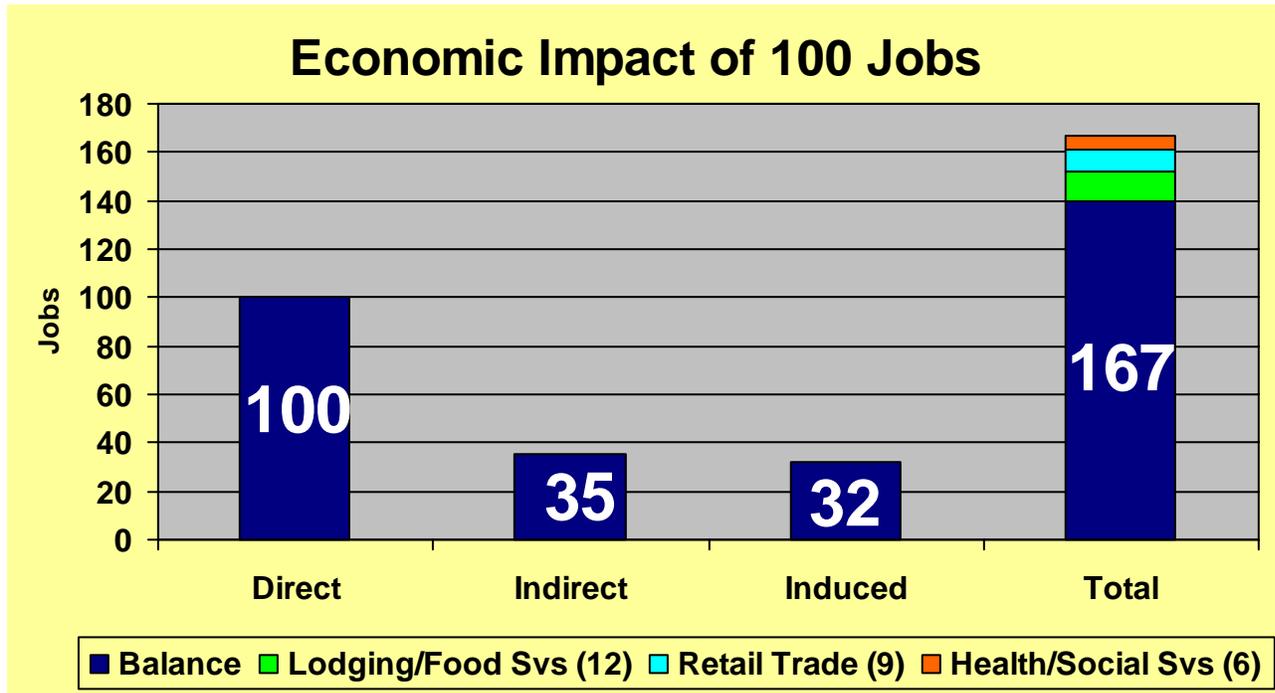
100 Jobs in Veterinary Pharm. Manuf. =

Employment	230
Output	\$60,400,000
Labor Income	\$12,300,000
Other Property Income	\$6,000,000

Employment: Veterinary Pharmaceutical Manufacturing



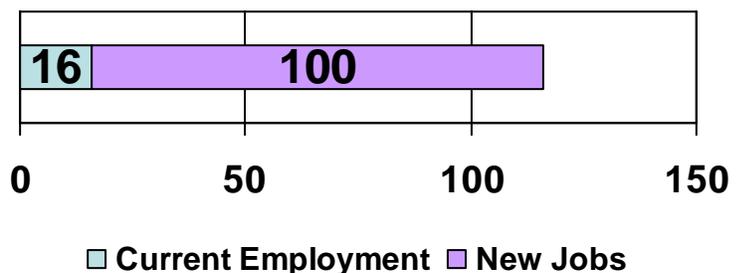
Computer Data Warehousing



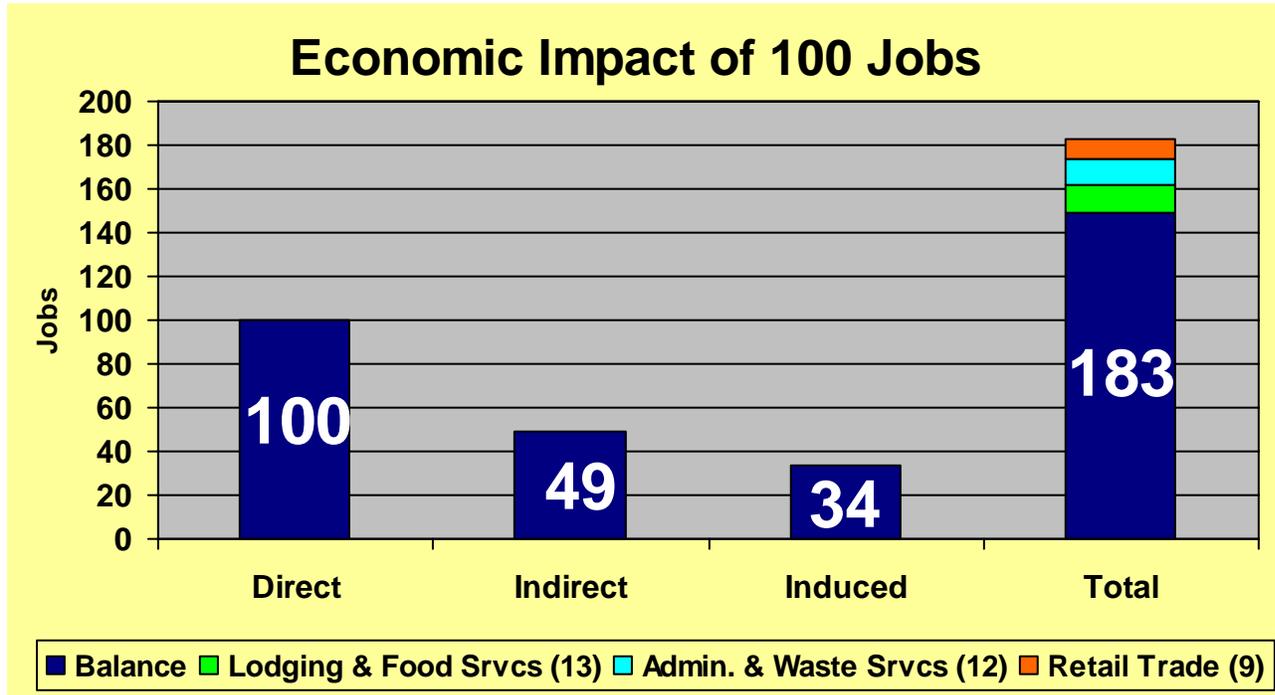
Although Computer Data Warehousing has a similar overall impact as Circuitry Manufacturing, the distribution of the impacts is very different.

100 Jobs in Computer Data Ware. =	
Employment	167
Output	\$26,760,000
Labor Income	\$8,360,000
Other Property Income	\$2,890,000

Employment: Computer Data Warehousing



Computer Software Development

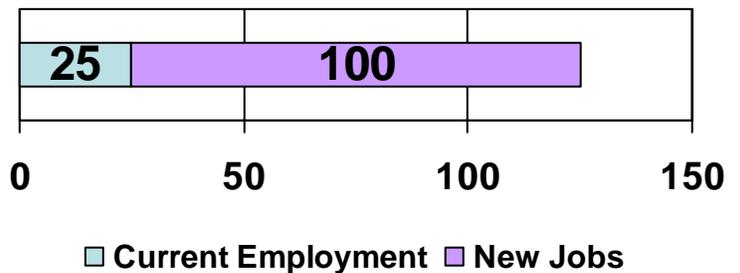


Computer Software Development has higher ratio of output to labor income than Computer Data Warehousing. It also demands more local inputs, particularly in Administrative and Waste Services.

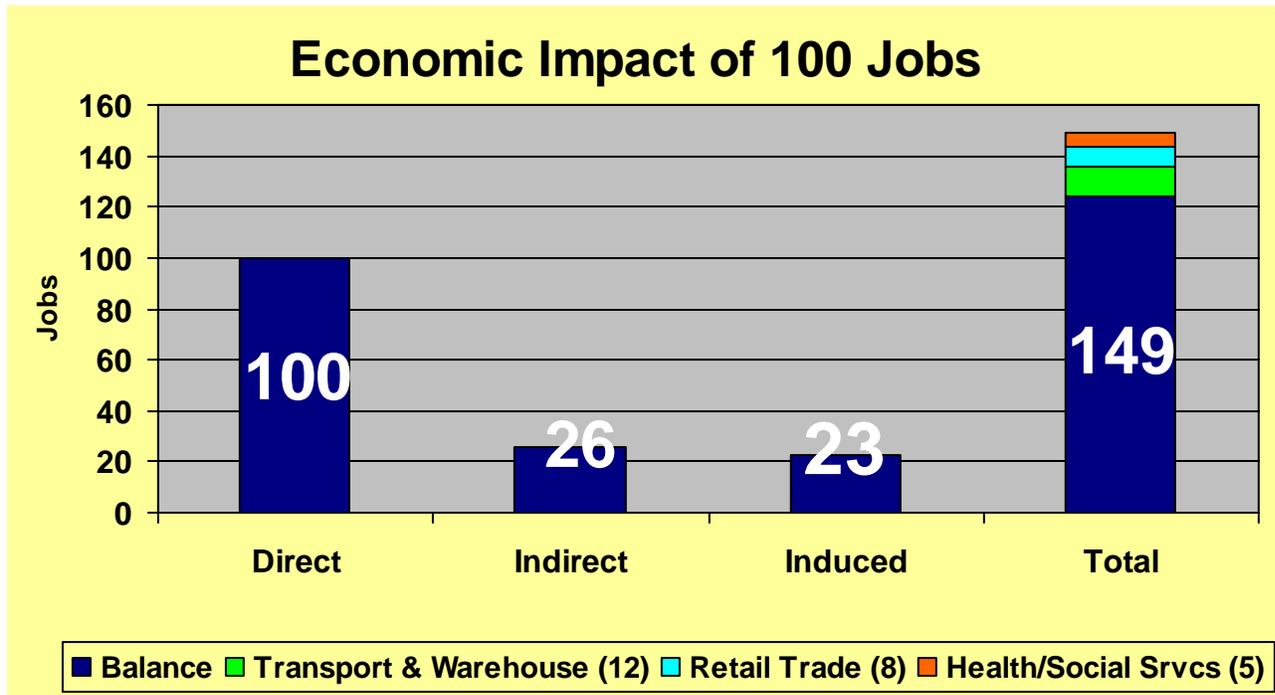
100 Jobs in Computer Software Dev't.=

Employment	183
Output	\$32,500,000
Labor Income	\$8,730,000
Other Property Income	\$6,320,000

Employment: Computer Software Development



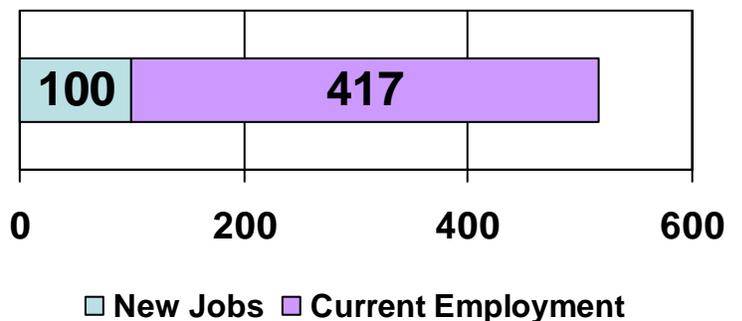
Truck Transportation



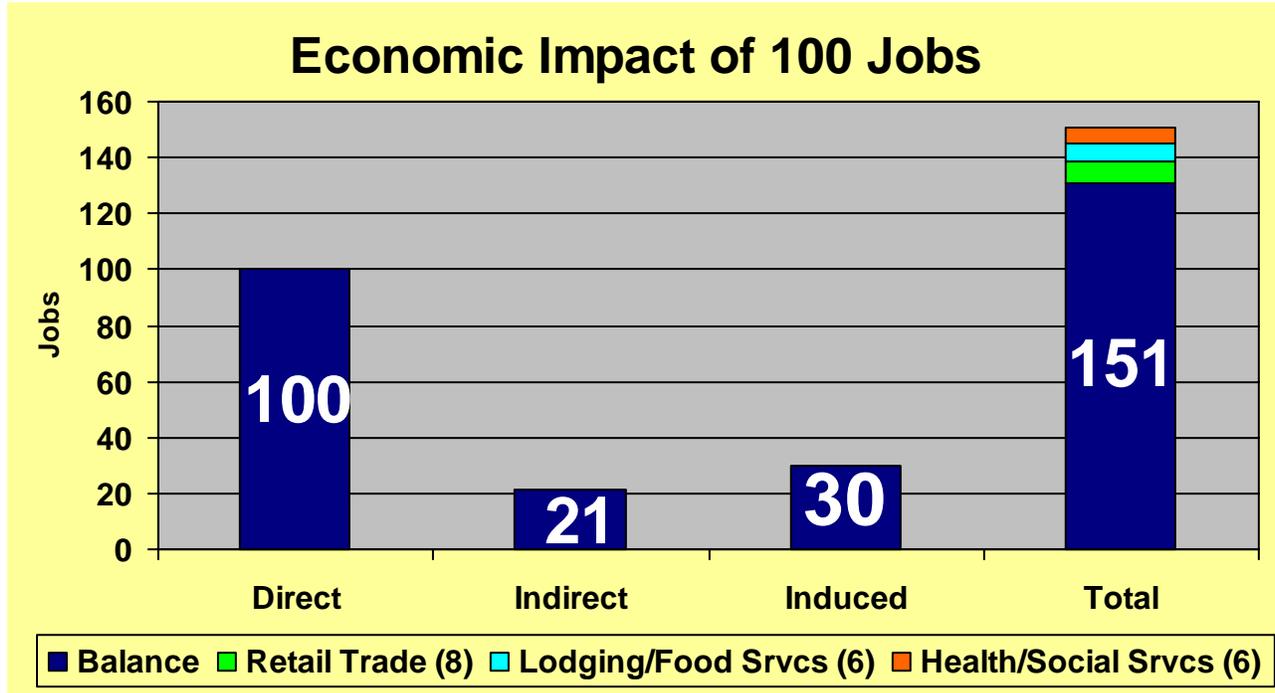
Truck transportation has impacts that are fairly evenly spread between indirect and induced. Impacts in 2008, due to higher fuel prices, could be significantly different.

100 Jobs in Trucking=	
Employment	149
Output	\$16,930,000
Labor Income	\$5,810,000
Other Property Income	\$2,050,000

Employment: Trucking



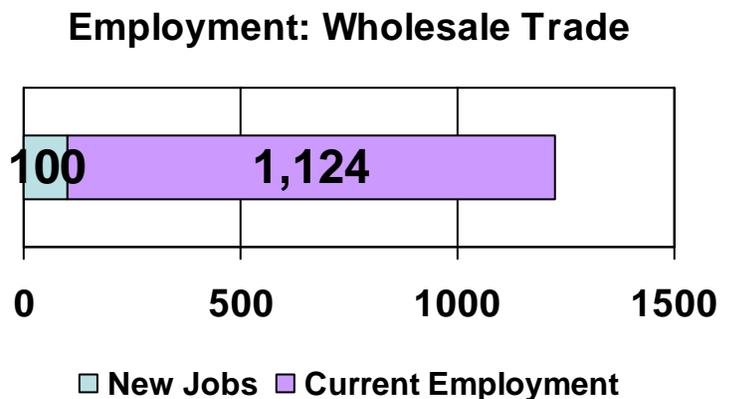
Wholesale Trade



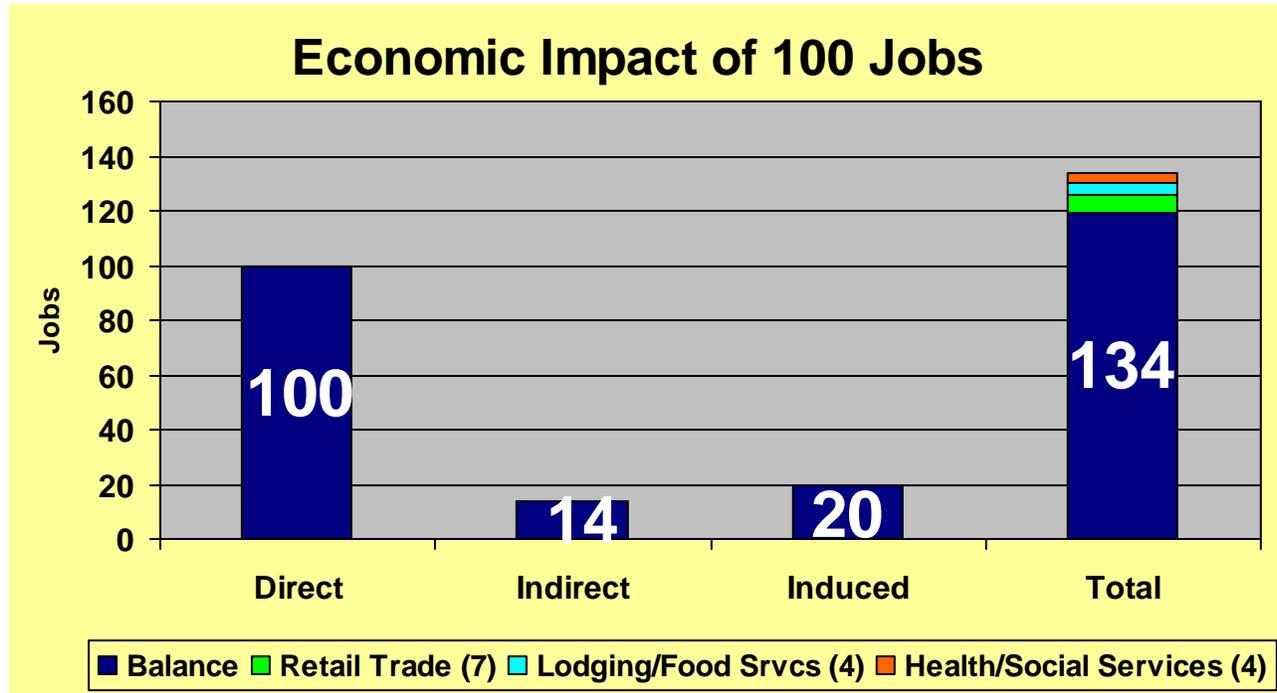
Wholesale trade is one of the largest employment sectors in Rice County. Relatively higher induced impacts are probably due to labor needs.

100 Jobs in Wholesale Trade=

Employment	151
Output	\$20,760,000
Labor Income	\$7,620,000
Other Property Income	\$2,810,000



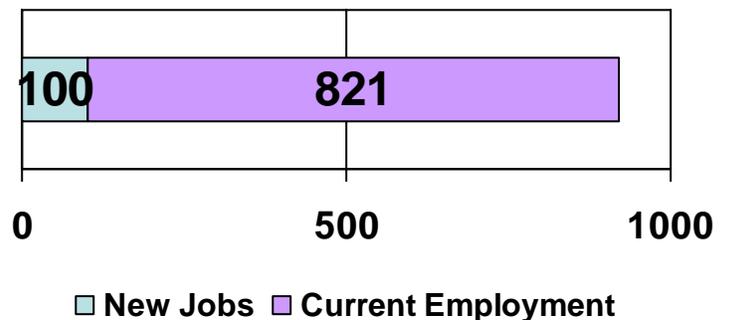
Construction of New Nonresidential Commercial Structures



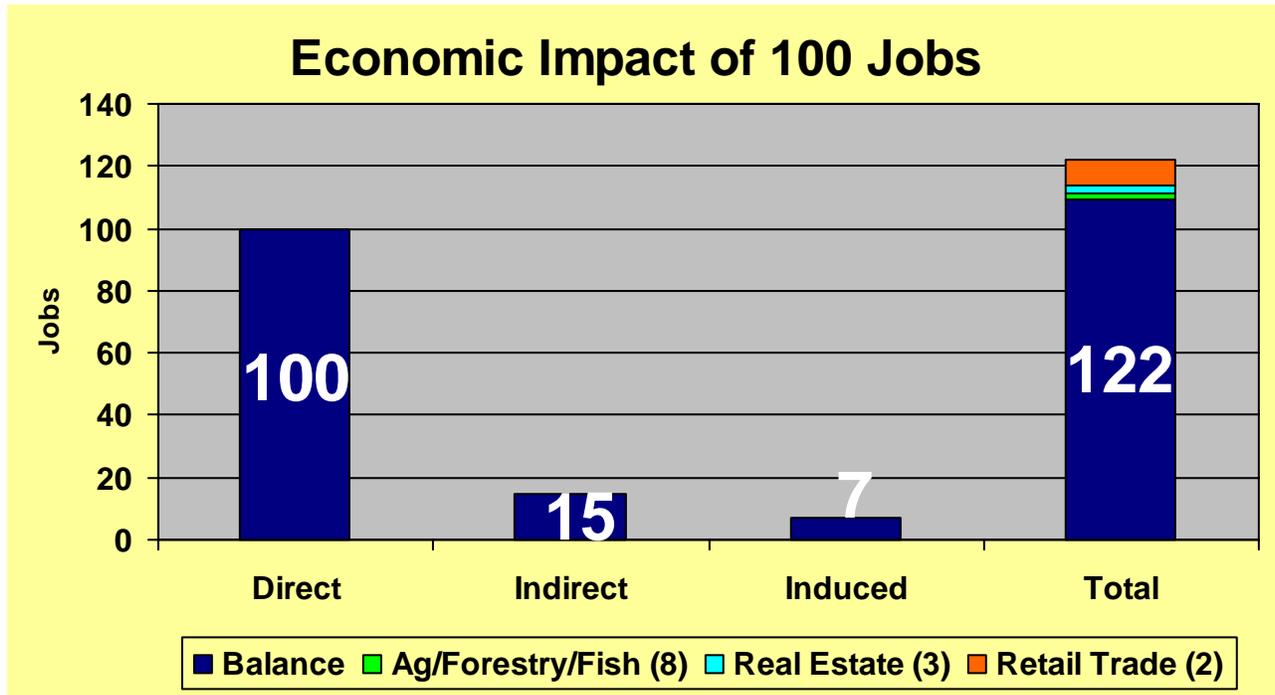
Construction industries require a lot of labor, therefore, the induced impacts are greater than the indirect. Indirect are still high because of the need for building supplies.

100 Jobs in Construction=	
Employment	134
Output	\$14,550,000
Labor Income	\$5,000,000
Other Property Income	\$940,000

Employment: Construction



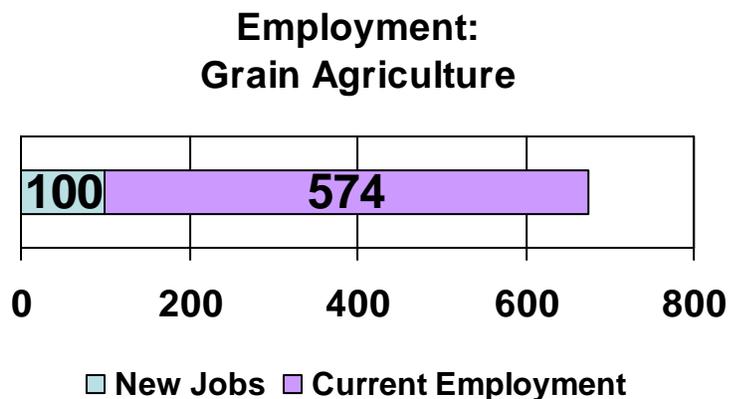
Grain Agriculture



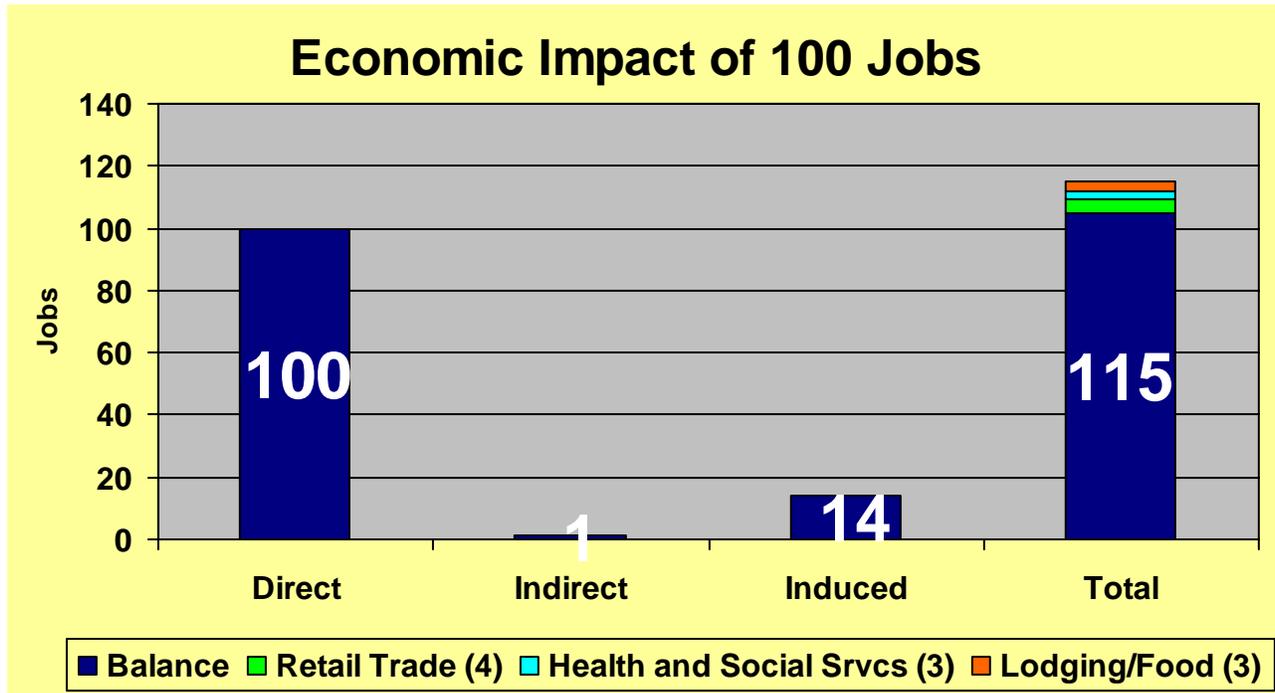
Grain agriculture payments are typically not directly to labor.
Output value can vary widely by year.

100 Jobs in Grain Agriculture =

Employment	122
Output	\$6,700,000
Labor Income	\$1,000,000
Other Property Income	\$1,600,000



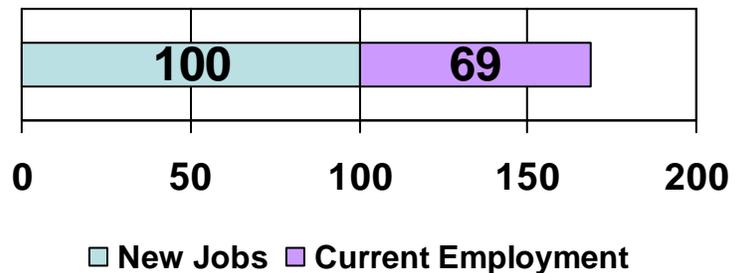
Agricultural Support Activities



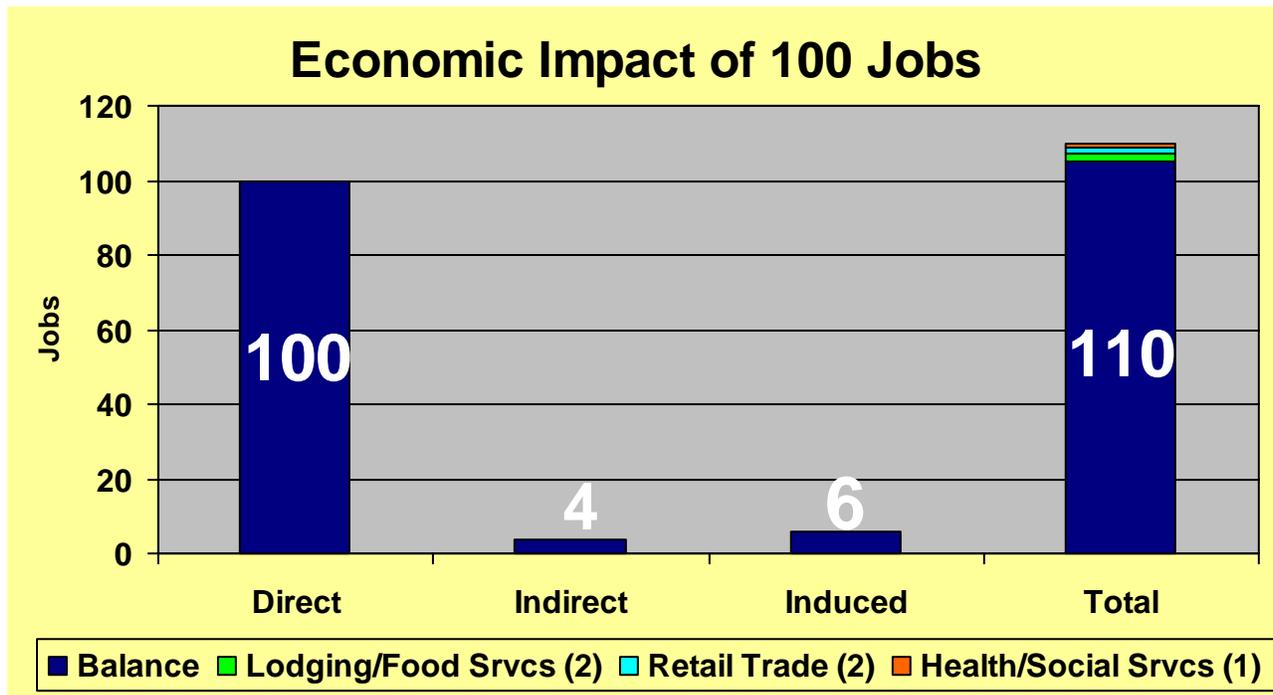
Agricultural support activities are primarily service-based, therefore, high labor income and induced impacts.

100 Jobs in Agricultural Support=	
Employment	115
Output	\$4,180,000
Labor Income	\$3,260,000
Other Property Income	-\$159,000

Employment: Agricultural Support



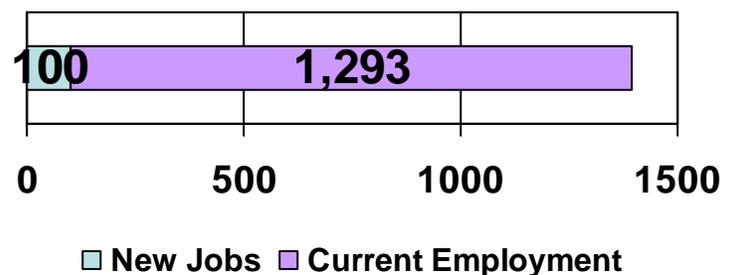
Nursing and Residential Care Facilities



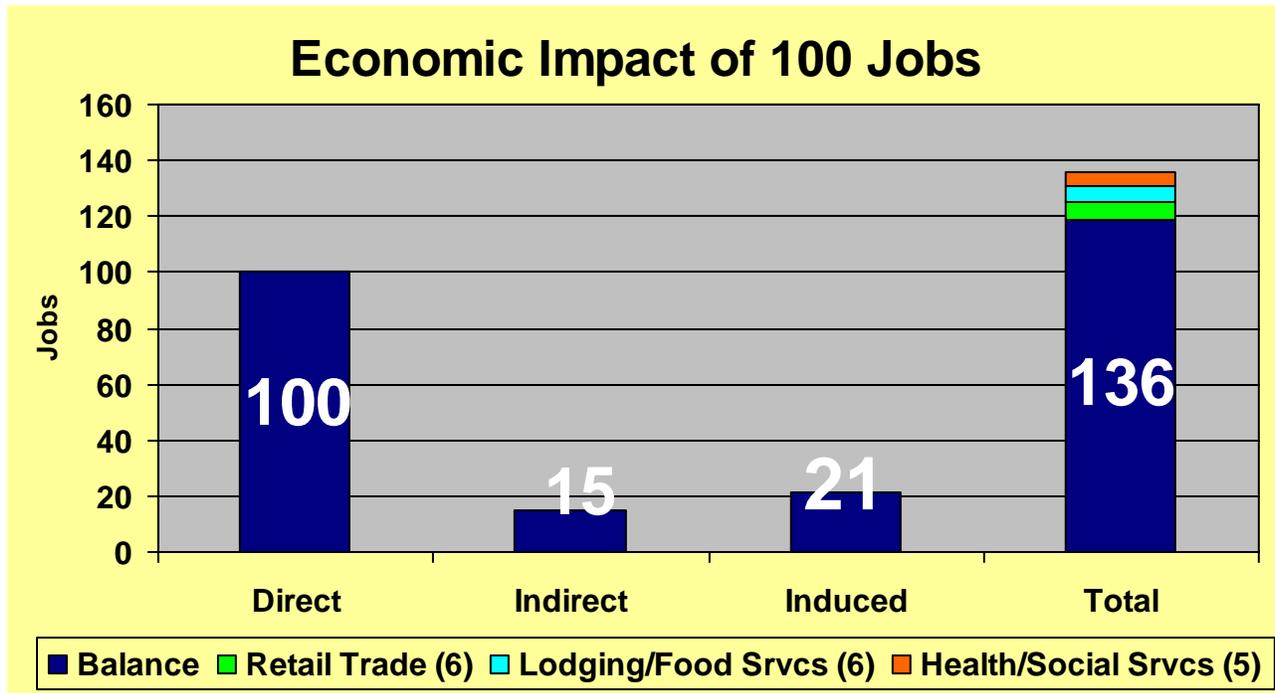
Nursing and Residential Care Facilities are one of the largest industry employers in Rice County. Low impact effects are due to the relative labor-intensity and relatively low payments to labor.

100 Jobs in Nursing and Residential=	
Employment	110
Output	\$3,960,000
Labor Income	\$1,630,000
Other Property Income	\$600,000

Employment: Nursing and Residential Care



Medical and Diagnostic Labs and Outpatient Care



Although also considered “health care”, this industry has larger indirect and induced effects. This is due to the purchase of more supplies, higher payments to labor and a higher output per worker ratio.

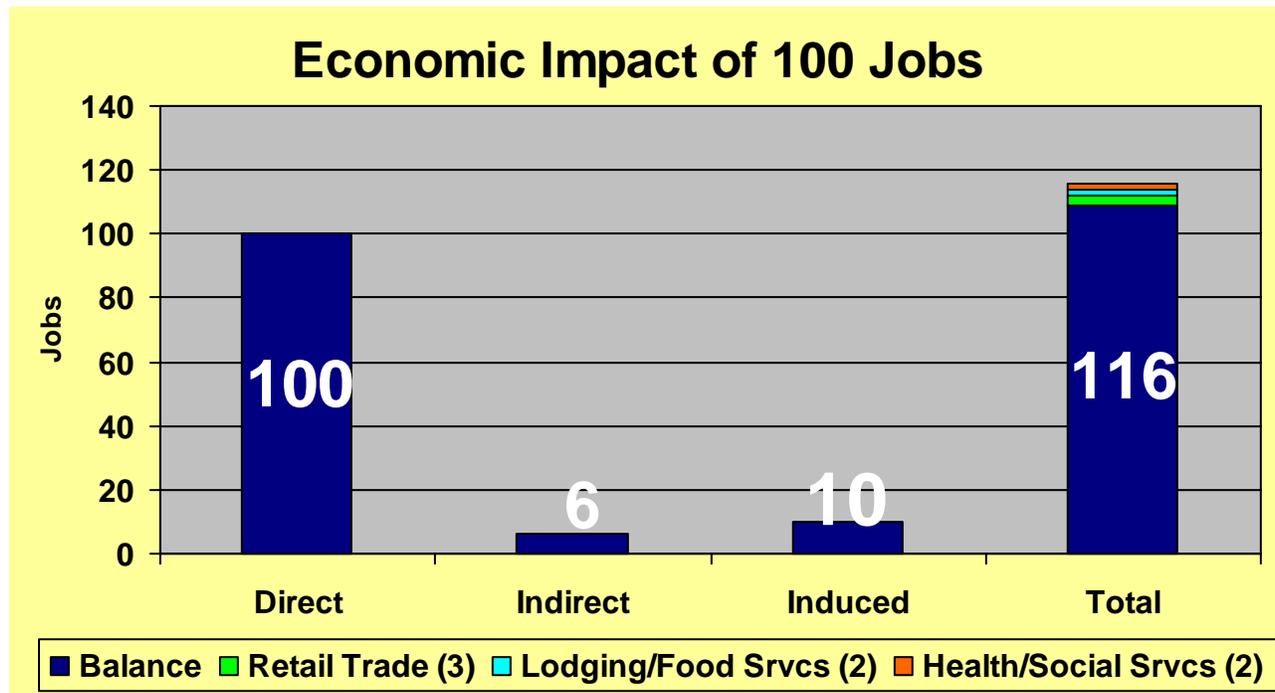
100 Jobs in Medical/Diagnostic=

Employment	136
Output	\$15,740,000
Labor Income	\$5,550,000
Other Property Income	\$3,540,000

Employment: Medical and Diagnostic



Retail Trade – General Merchandise

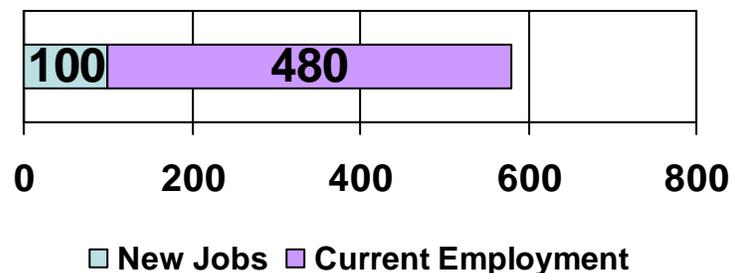


General Merchandise stores are another service based industry. Similarly to Nursing and Residential Care, it has relatively low output per worker and its impacts are largely from employee spending.

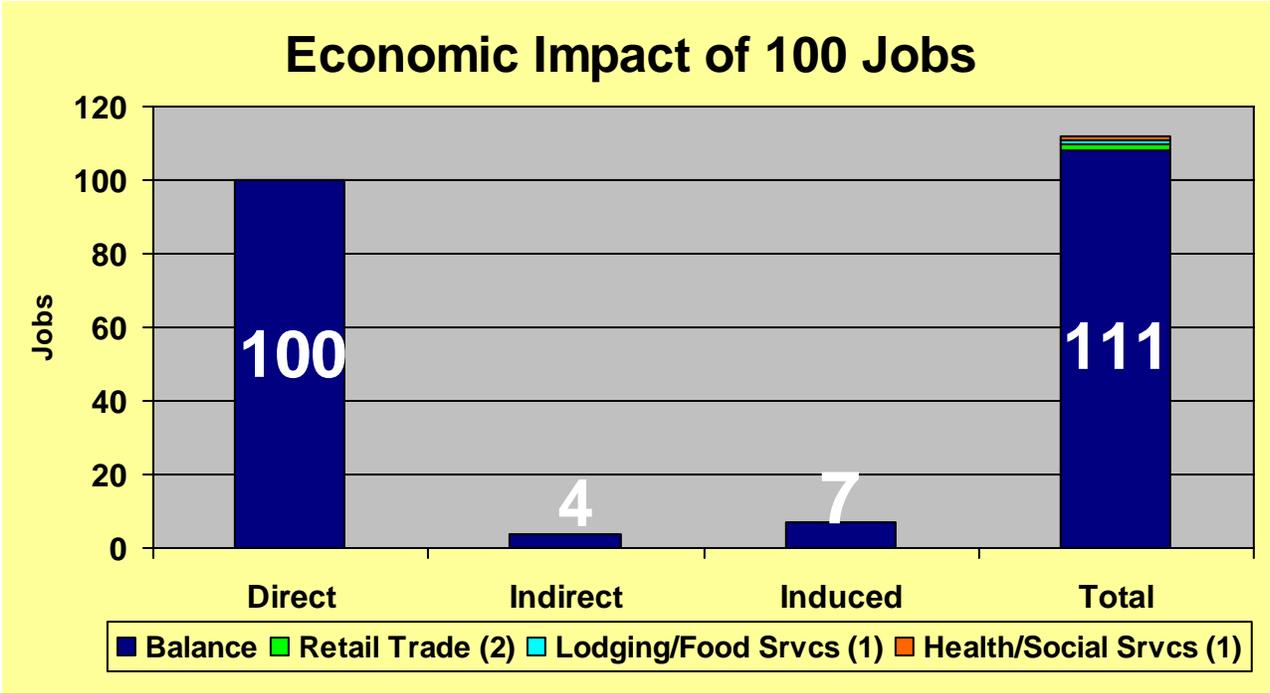
100 Jobs in Retail Trade - General=

Employment	116
Output	\$6,300,000
Labor Income	\$2,590,000
Other Property Income	\$650,000

Employment: Retail Trade - General



Retail Trade – Hobby, Sporting Goods, Books and Music



Specialty retail stores, such as hobby, sporting goods, book and music stores, have impacts very similar to that of general merchandise retailers.

100 Jobs in Retail Trade – Hobby=

Employment	111
Output	\$4,300,000
Labor Income	\$1,800,000
Other Property Income	\$530,000

