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Impact of Agribusiness on the Omaha Metropolitan Statistical Area

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**Impact of Agribusiness on the
Omaha Metropolitan Statistical Area**

Center for Public Affairs Research

prepared for the

Greater Omaha Chamber of Commerce

June 17, 1992

IMPACT OF AGRIBUSINESS ON THE OMAHA METROPOLITAN STATISTICAL AREA

Introduction

The impact of agribusiness on a region requires the use of multipliers to estimate the full economic effect. Multipliers account for the interactions from industries to industries and from industries to households and back, and are produced easily from input-output studies.

To develop the 1989 input-output data, the Center for Public Affairs Research (CPAR) used IMPLAN (IMPact analysis for PLANing), a computer model designed to help describe local economies. IMPLAN was developed by the U.S. Forest Service, and the microcomputer version used by CPAR was developed by the University of Minnesota. This report also builds upon "Omaha Metropolitan Statistical Area Input-Output Tables and Multipliers: A User's Manual", a study published by CPAR in 1988.

As furnished, the Micro-IMPLAN database contained 1982 data. CPAR updated the Micro-IMPLAN database to 1989 using 1989 wage and salary employment data obtained from the Nebraska Department of Labor and Iowa Department of Job Service, together with 1989 income and earnings information from the U.S. Bureau of Economic Analysis. IMPLAN has 528 separate industries, but for the Omaha analysis CPAR collapsed them into 52 industry groups.

Background

An input-output study focuses on a core sector, indicating the interrelationships of industries as buyers and sellers of goods and services to each other. This core sector connects with a final demand sector that includes consumers, government purchasers, investors, and exporters, and a final payment sector that includes compensation to employees, interest, rent, profit, and imports. The beauty of an input-output system is its ability to maintain sector detail while presenting an overview of the whole system.

The purpose of this study is to provide economic information about the impact of agribusiness on the Omaha MSA. Input-output studies provide a transactions table which describes all of the interrelationships (industry to industry, inputs to industry, and industry to final demanders) in monetary values. (An explanation of transactions table is provided later.) They also allow the easy development of multiplier tables, which are used to determine economic impacts.

We can learn much about the Omaha economy simply by reading through the input-output transactions table, which estimates the total value of products produced in Omaha. Multipliers, however, estimate how initial effects (for example, layoffs in one industry) influence other sectors or industries within the region. (The multiplier process and the use of multiplier tables are discussed later.)

Organization

This report is divided into three sections and an appendix. The first section is the introduction which presents background information, identifies the purpose of the study, and describes its organization. The second section presents the transaction tables. These tables include such items as output, value added, exports from the region, and employment. This section explains how to read the tables and identifies noteworthy characteristics of the Omaha economy, such as rank order of Omaha industries by value-added.

The third section presents tables of multipliers for the Omaha economy, including employment multipliers, income (personal and total) multipliers, and value-added multipliers. These tables are primarily for specialists but can also be used by nonspecialists who should be able to understand the descriptions and examples that explain how to use the various multipliers.

The appendix includes a table that shows the aggregation plan for the detailed industry sectors. It also includes Bureau of Economic Analysis Industry numbers, Standard Industrial Classification (SIC) codes, and a glossary of terms.

Geographic Aggregation

The objective of this study was to obtain an input-output system for the Omaha economy. To determine the relevant geographic area, the area that includes most of the labor force had to be identified. To exclude Sarpy County, for example, which provides a large proportion of the labor force within the city of Omaha, would lead to underestimation of employment and other economic effects. A high degree of industrial and demand interdependence are also important in determining the relevant area.

Thus, the entire Omaha Metropolitan Statistical Area (MSA), which is composed of Douglas, Sarpy, and Washington Counties in Nebraska and Pottawattamie County in Iowa, was included in the Omaha economy.

Industry Aggregation

Industry aggregation was much more complex than geographical aggregation. First, for industries to be combined they must have similar production techniques and distribution of sales. For example, industries such as creamery butter and cheese would be grouped together, while neither would be grouped with the glass containers industry. Standard Industrial Classification (SIC) codes were used to determine similar industries, because SIC codes are based on similar production processes.

Second, industries that did not exist in the Omaha MSA were excluded. This was a straightforward task because the IMPLAN system automatically excludes these industries when deriving a transactions table.

Third, industries that were significant in the Omaha MSA remained less aggregated, and some remained as separate sectors. At the same time, the number of sectors had to remain tractable, that is, in the range of 30 to 60 sectors.

The size of employment was the main variable used in considering an industry's significance. As a result, industries such as meat packing, grain mill products, railroads, and insurance were considered as separate sectors and were not aggregated within a larger industrial grouping (for example, railroads within transportation or insurance within finance, insurance, and real estate).

The fourth consideration addressed concerns about the number of visitors to Omaha. This led to isolation of industries that are important to tourism, such as hotels and lodgings, personal services, and eating and drinking places.

The resulting aggregation scheme for industries is shown in table 1. A more detailed listing, which includes Bureau of Economic Analysis industry numbers and SIC codes, is presented in the appendix. The SIC code is the only information needed by a firm to locate its industry sector.

Table 1 contains no surprises in showing firms and industries that are significant or unique to the Omaha economy, for example, meat products; preserved foods; grain mill products; commercial printing; farm machinery and equipment; radio, tv, and communications equipment; railroads; motor freight transport; communications; insurance; and information services.

Definition of Agribusiness

Determining the importance of agribusiness on the Omaha MSA requires a working definition of agribusiness. Since there is no generally accepted definition, we used one developed by Gerald Schluter and William Edmondson¹. Accordingly, agribusiness is "all the supporting economic activity required to move farm production to the consumer." This includes "the activity that produces farm inputs (like fertilizer, manufactured feed), farm production, and assembling, processing, and distributing raw farm products for final consumption by domestic and foreign consumers."

Using the above definition, agribusiness includes the following broad categories: production agriculture, food processing, machinery and other manufactured inputs, other manufacturing using farm inputs, transportation, wholesale trade, eating places, and other retail trade. The agribusiness sectors are indicated in table 1. Tables 2 through 6 provide summaries for the total agribusiness sector, but the individual sectors are still included. Therefore, the reader can make other combinations, such as food processing (sectors 7-11).

1. "How To Tell How Important Agriculture Is to Your State." *Rural Development Perspective* June 1986, pp. 32-34.

Transactions Table

Using the geographic and industry aggregation schemes specified above, the IMPLAN system was used to produce the input-output transactions table for the Omaha MSA. This table consists of three main sectors: an interindustry transactions sector, a final demand sector, and an inputs payment sector. The last two sectors are reviewed in this paper.

Table 2 displays the final demand sector of the transactions table. It consists of personal consumption, investment, federal government spending, state and local government spending, and exports. The sum of these five categories appears in the next column as final demand. The total demand column indicates total output produced by each industry and supplied either to other industries (intermediate demand) or as final demand.

Looking at the grain mill products industry, for example, (row 10) we see from the personal consumption column that Omaha area consumers purchased \$10.70 million worth of grain mill goods in 1989. Within the investment category, \$.01 million was spent. The federal government spent \$.06 million, and under the exports heading we find that \$525.20 million was spent by purchasers outside the Omaha MSA.

From table 2 we can see that \$3.9 billion (27.7 percent) of the exports from the Omaha area are due to agribusiness. In addition, agribusiness accounts for approximately one-fourth (\$6.2 billion) of the Omaha area's output (demand).

Table 3 displays the inputs purchased sector of the transactions table. This sector contains columns for employee compensation, proprietary income, and indirect business taxes. The sum of these three columns is the value added. The aggregate value-added for the region is often called gross regional product and is a measure of the total wealth produced in the area. Conceptually, it is equivalent to gross national product for the United States.

Again using the grain mill products industry as an example, we see that \$66.77 million is paid to employee compensation, \$89.76 million to proprietary income (interest premiums, rents, and profits), and \$2.42 million to indirect business tax. The total value-added by grain mill products within the Omaha MSA is \$158.95 million.

Additional columns are included in the inputs purchased sector. One is imports from outside the region; the other is the number of employees (both full- and part-time) within each industry. The grain mill products industry imported \$241.56 million in goods and services from outside the region and employed 2,150 persons in 1989.

Table 3 shows that agribusiness accounts for 20.8 percent of the payments to employees and 25.0 percent of the employment in the Omaha area. Approximately 94,000 persons were employed in agribusiness. Looking at the gross metropolitan output (value added), we see that agribusiness accounts for \$2.4 billion out of the Omaha area's \$12.7 billion economy.

Characteristics of the Omaha Economy

The transactions table provides a wealth of interesting detail on the Omaha economy. A few aggregate statistics, however, provide some insight into the characteristics of the Omaha economy, notably: Value-added by industry, value-added of exports by industry, and the aggregate net export figures.

Gross Regional Product (Value-added)

Regional value-added is the increase in value resulting from the application of labor, capital, and other resources that are located within the Omaha MSA. The application of resources results in incomes received by the owners of these resources through wages and salaries, rents, interest, and profits. Thus, value-added is equal to the incomes received within the Omaha MSA.

Because of the increase in value that occurs within Omaha and because of the total incomes received within the region, the total value-added is a measure of the economic well-being of Omaha (the gross regional product which is the regional equivalent of the gross national product).

The total value-added (gross regional product) of the Omaha MSA in 1989 was approximately \$12.66 billion. Table 4 shows how the various industrial sectors compare in producing wealth and income (value-added) within the Omaha MSA. These figures can also be seen along the value-added row of the transactions table, table 3. Government heads the list of value-added with \$1.75 billion, while other electrical equipment contributes the least at \$3.87 million.

Industrial output within a region, other than intermediate goods and services, is either exported from the region or consumed within it. Exports to other regions bring in money and generate incomes that are spent for goods and services which are produced within the region or imported. An increase in exports brings more money into the region, and, as a consequence, expands the region's wealth.

Value-added of Exports

Although the merits of exporting industries are known and explain public officials' eagerness to attract them to locate in Omaha, it is not the whole story. Wealth within the region can also be increased by establishing firms within the region to replace imports. As a result, money that would leave the region to pay for imports would stay within the region and increase the incomes of residents. This is increasing regional wealth by import substitution.

An import substitution policy may be more effective in increasing the region's wealth than attempts to attract export industries. In the latter case, local public officials are in competition with officials from other regions, and, frequently, they make concessions in the

bidding process that reduce the net benefits. Second, a regional economy that is diversified and in which most of the wealth is produced internally is less vulnerable to variations in demand for its exports; that is, it is more stable.

Nevertheless, it is interesting to examine the various industrial sectors when they are ranked by the income produced (value-added) in Omaha from export activity. Table 5 shows the relative importance of industrial sectors according to the value-added by regional exports. Leading agribusiness sectors include meat products (ranked 6), grain mill products (ranked 8), and livestock (ranked 11).

Total Net Exports

An item which raises some interesting questions is net exports. Table 6 shows that total regional exports are about \$13.92 billion, while total regional imports are about \$6.25 billion. Therefore, net exports are about \$7.67 billion ($\$13.92 - \6.25 billion); thus, more goods and services leave the Omaha region than enter. **Approximately, one-fourth of the Omaha region's net exports are from agribusiness.**

The Multiplier Process

The idea behind the multiplier is that any change in one variable, such as employment in a given industry, will have an effect that is greater than the initial effect. For example, a layoff of 100 employees at one plant may lead to a total layoff of 250 employees throughout the Omaha economy. In this case, the employment multiplier would be 2.5.

This occurs because the various sectors of the economy (for example, industries, households, and exports) interact by buying from and selling to each other. A reduction in production levels and employment in one industrial sector leads to reductions in output and income payments in other sectors. This, in turn, leads to more changes in other industries, and so on. The net result is that the initial impact in one sector gets multiplied throughout the economy.

We do not have an over all multiplier for the agribusiness sector because the production processes are so dissimilar that any aggregation would be meaningless. However, multipliers are presented for the individual components of the agribusiness sector and we illustrate how they can be used.

Multiplier Tables

Any number of multipliers can be used. The ones published here for the Omaha MSA are as follows: value-added multipliers (table 7), total income multipliers (table 8), personal income multipliers (table 9), and employment multipliers (table 10).

Value-added Multipliers

A good or service is purchased in the marketplace because it is desirable for its own sake or because it is useful in doing something else. It is said to have worth or value. In the market system, value is expressed by price. The process of adding value occurs when we take a good or service as an input and alter it in such a way that it is worth more on the market and commands a higher price. By this process, an individual or group adds to wealth, well-being, or value and, at the same time, increases their incomes.

The importance of value-added is, on one hand, the contribution a region makes to the region, nation, and, if exported, the world, and, on the other hand, equal to the income accruing within the region. So, a region's value-added, which can be referred to as the gross regional product, is at the same time the wealth produced in the region and the income received in the region. It is an important measure because it includes employee compensation, proprietary income, and government revenues received because of economic activity in the region. It is the economic pulse, the single measure of a region's vitality.

Table 7 displays the value-added multipliers. The most important columns in this table are the direct, total, Type III, and induced factor columns.

Direct Value-added. The direct column indicates the proportion of industry output that is due to value-added. Thus, 45.9 cents of every \$1 of output from bakery products (row 11) is a result of value-added by the bakery products sector within the Omaha MSA. For another example, \$594,000 of every \$1 million spent on motor freight transport (row 35) is value-added income received within the region by the motor freight transport sector. This column is useful in finding specific industry effects, rather than total regional effects, resulting from a change in output.

Indirect Value-added. The indirect column indicates the proportion of industry output that is value-added by all supporting sectors due to a change in output of a specific sector. It is the result of an industrial sector purchasing inputs from other supporting sectors which, in turn, purchase from other sectors, and so on. Thus, every \$1 million spent on bakery products (row 11) generates \$184,000 of increased value-added in all supporting sectors.

Induced Value-added. The induced effect takes into consideration the fact that when industries expand (or contract) their output, incomes to households, which supply the inputs, are affected. These inputs are primarily labor, which receives wages and salaries (employee compensation); land, which receives rent; capital, which receives interest, and so on. Households, in turn, increase their expenditures for the output of regional industries, which means that total output of the region increases even more.

The direct and indirect changes in output give rise to increases in householders' income. This results in increased expenditures, generates increases in output, and so on, each round having an ever-diminishing effect. The indirect effect is the aggregate of these effects due to increased incomes. One million dollars spent for bakery products (row 11) generates

\$124,000 in increased value-added for all industries because of increases in household expenditures. Both the indirect and induced effects are of interest but of limited use in determining economic impacts.

Total Value-added. The total column is the most important. This includes the proportion of industry output that is value-added by all industries because of direct, indirect, and induced effects. Thus, every \$1 million of bakery products sold results in \$767,200 ($\$1,000,000 \times .7672$) of value-added in the Omaha region. The total column is effectively a multiplier (sometimes called a response coefficient) that relates the increase in value-added to an increase in output. So, if we knew the change in output or sales of a particular industry, this multiplier would indicate the resulting change in value-added (or well-being) on the Omaha economy.

Type I and Type III Value-added Multipliers. A different type of multiplier is indicated by Type I and Type III. In the case of Type I multipliers, the direct changes in value-added are multiplied to obtain direct and indirect changes in value-added, and, for Type III multipliers, direct changes in value-added are multiplied to obtain the aggregate of direct, indirect, and induced changes in value-added.

Type III multipliers account for all three effects, and will probably be used most often. If the direct change in value-added were known, as a result of a change in industry output, then we could calculate the total change in value-added. For example, if bakery products, experienced a direct change in value-added of \$459,000, then the total change in value-added would be about \$767,200, which is indicated by the total column but can also be obtained by multiplying the direct effect by the Type III multiplier ($\$459,000 \times 1.6709$).

Type I and Type III multipliers relate value-added to value-added, the same variable. It is unlikely that access to direct value-added figures will be available; however, if we know the change in output, the direct column indicates the associated direct value-added amount. Direct changes in income and employment are usually more widely known, and, in these cases, the multipliers are more useful.

Total Income Multipliers

Table 8 displays the total income multipliers. Total income differs from value-added only in excluding the indirect business taxes collected by governments. It includes employee compensation and property income paid by industries for production occurring within the Omaha MSA (which is not necessarily received by residents of the Omaha MSA because much of the capital is supplied from outside the area).

The column headings are the same as those for value-added. Each figure along a row in this table is smaller than the corresponding figure in the value-added table because indirect business taxes are excluded.

Personal Income Multipliers

Table 9 displays the personal income multipliers. Personal income differs from total income in that proprietary income is excluded. It consists only of employee compensation. As a consequence, each entry is smaller than the corresponding item for total income multipliers.

The columns are exactly the same as those for value-added and total income. The direct column indicates the personal income per output for each industry. Thus, for every \$1 million in output of bakery products, \$331,000 goes to personal income.

Employment Multipliers

Table 10 displays the employment multipliers. Employment multipliers focus on the number of employees. More precisely, they focus on jobs (full-time, part-time, permanent, and seasonal), not full-time equivalents. Thus, industry employment patterns (full-time vs. part-time, and so on) must be considered when comparing the employment multipliers for different sectors.

Direct, Indirect, Induced, and Total Employment Effects. The direct column indicates the average number of employees per \$1 million of output. Thus, for bakery products, the number of employees will increase by 12.11 for every \$1 million increase in output.

The indirect column shows the resulting increase in employment due to the purchase of inputs by bakery products from other industries and the further rounds of interindustry transactions that follow. For the bakery products industry, 5.13 employees are hired indirectly for every \$1 million increase in output.

The induced column shows the resulting increase in employment due to the increase in expenditures by households. This expenditure increase follows the increase in incomes that results from the direct and indirect output changes for the bakery products industry. This induced effect results in 3.69 employees being hired for every \$1 million increase in output.

The total column combines the direct, indirect, and induced effects and is usually the figure of most interest when studying employment impacts. A \$1 million increase in the bakery products industry results in an increase of 20.92 employees in the Omaha MSA due to all three effects. This, of course, includes additional employees in industries other than bakery products.

Note again that these four multipliers (direct, indirect, induced, and total) relate employment changes as a result of output changes.

Type I and Type III Employment Multipliers. Type I and Type III multipliers relate employment changes to employment change. In the case of Type I multipliers, direct employment in bakery products is multiplied by 1.42 to determine direct and indirect employment effects combined, that is, 12.11 direct employees multiplied by 1.42 equals 17.20, which is also equal to 12.11 (direct) plus 5.13 (indirect).

The more important of the two multipliers, Type III, includes the induced effect. Thus, direct employment changes in bakery products are multiplied by 1.73 to find the total employment change throughout the economy.

The Type III multiplier is especially useful because usually the number of employees who are laid off from a plant is known, or the number of employees who will be hired if a new plant enters the region is readily estimated. Thus, if a new bakery products firm enters the Omaha region intending to hire 100 employees, the total increase in employment in the region is estimated to be 173 (100×1.73). When the direct employment effects are unknown, they can be estimated if the output changes are known. The direct column in the employment table gives the employees per each \$1 million change in output from which the direct employment effects can be calculated.

Table 1
Sector Classifications Used in the Omaha MSA Input-Output Study

Resource Industries

1. Livestock*
 - Feedlot and range fed cattle, dairy farms
 - Pigs, other livestock
2. Other Agriculture*
 - Field crops, landscaping
 - Agricultural services
3. Mining
 - Sand and gravel, stone
 - Crude petroleum

Construction

4. New Construction
 - Residential, commercial, utility
 - Highways and streets
5. Maintenance and Repair Construction
 - Residential, other

Manufacturing

6. Other Manufacturing
 - Needles and pins
 - Brooms and brushes, signs
7. Meat Products*
 - Meat packing, sausages
8. Other Foods*
 - Dairy products, soft drinks, macaroni
 - Fats and oils, coffee, malt liquors, other foods
9. Frozen specialties*
10. Grain Mill Products*
 - Cereal, prepared feeds
 - Flour, pet food
11. Bakery Products*
 - Bread, cakes, cookies
12. Textile and Apparel*
 - Nonwoven fabrics, canvas products
 - Curtains, house furnishings
13. Wood Products*
 - Kitchen cabinets, millwork, hardwood dimension
 - Prefabricated buildings, pallets, and skids

14. Furniture and Fixtures*
 - Partitions and fixtures upholstered
 - Mattresses, household
15. Paper Products*
 - Containers, coating, and glazing
 - Bags, envelopes, die-cut
16. Other Printing and Publishing*
 - Newspapers, business forms, books
 - Lithographics, typesetting, binding
17. Commercial Printing*
 - Engraving
18. Fertilizer*
19. Other Chemical and Petroleum Products
 - Drugs, soaps, paints
 - Lubricating oils, plastic materials
20. Rubber and Plastic Products
 - Hose
21. Leather Products*
22. Stone, Clay, and Glass
 - Concrete
23. Primary Metals
 - Foundries, lead
 - Wire drawing
24. Fabricated Metals
 - Cans, sash and doors, structural
 - Sheet metal, foil, and leaf
 - Screw machine products, pipes and fittings
25. Farm Machinery and Equipment*
 - Lawn and garden
26. Other Nonelectric Machinery
 - Pumps and compressors
 - Special dies and tools
27. Food Products Machinery*
28. Office and Computing Equipment
 - Office machinery
29. Other Electric and Electronic Equipment
 - Electronic components, batteries
 - X-ray apparatus

Table 1 - Sector Classifications Used in the Omaha MSA Input-Output Study (continued)

30. Radio, TV, and Communications Equipment	42. Owner-Occupied Dwellings
- Telephone and telegraph	
- Records and tapes	43. Real Estate
31. Transportation Equipment	Services
- Truck bodies and trailers	44. Hotels and Lodging Places
- Motor vehicle parts	
32. Instruments	45. Personal Services
- Photographic equipment	- Cleaning, shoe repair
- Ophthalmic goods	- Photographic, beauty shops
	- Automobile
Transportation, Communication, and Utilities	
33. Railroads* ¹	46. Business Services
	- Advertising agencies, legal
34. Other Transportation	- Accounting, research, engineering
- Public transit, interurban taxi	- Building services
- Air, water, pipelines	
- Services, post office	47. Information Services
35. Motor Freight Transport* ¹	- Computer and data processing,
- Warehousing	telemarketing
	- Reservations, credit card service
36. Communications	- Direct mail advertising, credit reporting
- Telephone and telegraph	48. Eating and Drinking Places*
- Broadcasting	
37. Utilities	49. Amusement and Recreation Services
- Electric, natural gas	- Bowling alleys, pool halls, golf courses,
- Water, sanitary services	sports clubs
	- Commercial sports, motion pictures
	- Theatrical producers, entertainers
Trade	50. Other Services
38. Wholesale Trade* ²	- Health, education, and social services
	- Membership organizations
39. Retail Trade* ³	51. Other Government
Finance, Insurance, and Real Estate	52. Special Industries
40. Finance	- Government, households, and rest
- Banks, loan companies, security dealers	of the world industries
	- Inventory valuation adjustment
41. Insurance	
- Carriers, agents	

 *Industries included in agribusiness.

1. We estimated 50% of output, income and employment in railroads and in other motor freight was agribusiness.

2. We estimated 38% of output, income and employment in wholesale trade was agribusiness.

3. We estimated 60% of output and income and 68% of employment in retail trade was agribusiness.

Table 2 -- Omaha MSA Consumption Demand: 1989

Industry	Industry Code	Personal Consumption (mil of \$)	Investment (mil of \$)	Federal Government (mil of \$)	State/Local Government (mil of \$)	Exports (mil of \$)	Final Demand (mil of \$)	Total Demand (mil of \$)
Livestock	1	5.88	3.47	0.03	0.28	425.31	434.97	709.76
Other Agriculture	2	1.68	0.02	3.93	0.00	101.39	107.02	133.26
Mining	3	0.00	0.08	0.06	0.00	34.02	34.16	39.36
New Construction	4	0.00	505.63	10.76	173.38	344.04	1033.82	1033.82
Maintenance And Repair Const	5	0.00	0.00	5.68	22.37	4.99	33.03	364.98
Other Manufacturing	6	1.28	0.12	0.01	0.00	30.53	31.94	36.19
Meat Products	7	66.55	0.00	0.22	0.19	615.18	690.14	905.78
Other Foods, Including Dairy	8	47.52	0.05	0.59	0.01	130.08	178.24	230.83
Frozen Specialties	9	4.44	0.00	0.10	0.01	197.69	202.24	205.34
Grain Mill Products	10	10.70	0.01	0.06	0.00	525.20	535.97	568.30
Bakery Products	11	22.25	0.00	0.02	0.00	4.33	26.59	44.55
Textiles And Apparel	12	17.15	0.02	0.05	0.03	36.43	53.69	60.31
Wood Products	13	0.99	0.05	0.01	0.00	6.50	7.55	31.18
Furniture And Fixtures	14	11.65	10.50	0.21	0.00	116.30	138.66	143.28
Paper Products	15	0.94	0.07	0.04	0.00	96.34	97.39	100.49
Other Printing And Publishing	16	10.47	0.07	0.03	0.00	51.98	62.55	137.12
Commercial Printing	17	0.68	0.04	0.13	0.00	106.77	107.61	211.54
Nitrogenous And Phosphatic Fertilize	18	0.10	0.04	0.03	0.00	56.82	56.99	61.02
Other Chemical & Petrol Products	19	17.02	0.10	0.28	0.00	48.09	65.49	118.96
Rubber And Plastic Products	20	0.40	0.13	0.03	0.00	93.70	94.26	97.05
Leather Products	21	2.14	0.00	0.00	0.00	38.38	40.52	42.95
Stone, Clay, And Glass	22	0.21	0.03	0.01	0.00	65.87	66.11	70.85
Primary Metals	23	0.10	0.04	0.03	0.00	100.41	100.58	105.61
Fabricated Metals	24	0.45	0.57	0.38	0.00	164.64	166.04	193.90
Farm Machinery And Equipment	25	0.24	85.04	0.63	0.00	87.87	173.78	221.33
Other Nonelectric Machinery	26	0.37	2.45	1.08	0.00	193.63	197.53	206.66
Food Products Machinery	27	0.01	2.37	0.06	0.00	5.25	7.70	9.75
Office And Computing Equipment	28	0.12	0.52	0.05	0.00	47.87	48.57	50.31
Other Electric Equipment	29	0.37	0.21	0.06	0.00	3.78	4.43	10.53
Radio, TV, & Communication Equip	30	4.27	28.81	1.50	0.00	293.59	328.17	377.62
Transportation Equipment	31	2.00	4.39	0.09	0.00	84.22	91.50	97.50
Instruments	32	6.61	1.48	0.58	0.00	39.48	48.14	56.63
Railroads And Related Services	33	0.00	0.00	0.00	0.00	19.83	19.83	19.86
Other Transportation	34	21.15	0.34	2.23	7.34	59.09	90.15	262.75
Motor Freight Transport And Warehous	35	27.81	1.91	2.37	0.00	471.94	504.03	764.41
Communications	36	89.25	11.29	2.60	15.59	246.45	365.19	633.22
Utilities	37	138.45	0.04	1.20	32.60	157.81	330.10	1197.97
Wholesale Trade	38	191.33	49.85	3.79	0.00	948.67	1193.63	1734.47
Retail Trade	39	420.43	6.19	0.03	0.04	746.00	1172.68	1254.85
Finance	40	154.44	0.00	2.50	23.33	125.47	305.74	555.66
Insurance	41	136.99	0.00	0.01	0.00	1015.05	1152.05	1587.83
Owner-Occupied Dwellings	42	487.43	0.00	0.00	0.00	0.00	487.43	487.43
Real Estate	43	89.57	16.87	0.66	0.00	524.15	631.25	1019.02
Hotels And Lodging Places	44	28.38	0.03	1.13	0.00	0.87	30.41	96.14
Personal Services	45	219.18	0.00	1.38	0.00	286.36	506.91	732.19
Business Services	46	73.81	0.11	10.08	0.00	383.25	467.25	1083.08
Information Services	47	2.29	0.00	1.61	0.00	560.92	564.82	849.17
Eating And Drinking Places	48	175.54	0.00	0.56	0.00	200.21	376.31	511.37
Amusement And Recreation	49	30.35	0.00	0.09	0.00	97.61	128.05	183.24
Other Services	50	633.67	0.00	11.32	0.00	697.50	1343.29	1445.34
Government	51	327.66	9.24	1.73	6.07	3104.53	3449.23	4097.14
Special Industries	52	3.21	0.00	0.00	0.00	126.68	129.89	129.89
Total, agribusiness		717.79	125.36	9.35	0.55	3856.00	4717.04	6212.29
Agribusiness percentage of all industries		20.6	16.9	13.3	2.9	27.7	25.5	24.5
Total, all industries		3488.34	742.19	70.02	290.05	13923.06	18513.65	25401.77

Table 3 -- Omaha MSA Final Payments: 1989

Industry	Industry Code	Employee Compensation (mil of \$)	Proprietary Income (mil of \$)	Business Taxes (mil of \$)	Value Added (mil of \$)	Imports (mil of \$)	Industry Output (mil of \$)	Employment
Livestock	1	46.18	32.06	13.34	91.58	454.11	709.76	942
Other Agriculture	2	37.47	31.25	2.55	71.27	31.56	133.26	2,706
Mining	3	5.59	14.76	3.60	23.95	5.50	39.36	233
New Construction	4	312.70	34.73	11.25	358.68	392.55	1033.02	15,483
Maintenance And Repair Const	5	151.43	12.62	5.01	169.07	129.65	364.98	4,018
Other Manufacturing	6	10.80	4.35	0.29	15.44	10.64	36.19	559
Meat Products	7	91.47	21.43	2.44	115.34	360.49	905.78	4,134
Other Foods, Including Dairy	8	33.15	23.05	1.46	57.65	98.38	230.83	1,251
Frozen Specialties	9	32.68	17.81	0.94	51.42	72.45	205.34	1,592
Grain Mill Products	10	66.77	89.76	2.42	158.95	241.56	568.30	2,151
Bakery Products	11	14.75	5.53	0.18	20.46	11.66	44.55	540
Textiles And Apparel	12	15.22	3.73	0.27	19.23	30.91	60.31	920
Wood Products	13	8.07	1.79	0.40	10.25	12.27	31.18	446
Furniture And Fixtures	14	40.36	13.19	0.88	54.43	53.07	143.28	1,690
Paper Products	15	40.80	14.23	2.13	57.16	86.38	180.49	1,427
Other Printing And Publishing	16	49.67	15.09	1.37	66.14	33.53	137.12	2,300
Commercial Printing	17	69.52	23.45	2.74	95.71	73.18	211.54	2,797
Nitrogenous And Phosphatic Fertilize	18	6.63	10.77	0.83	18.23	27.65	61.02	163
Other Chemical & Petrol Products	19	22.64	15.61	2.58	40.83	45.65	118.96	758
Rubber And Plastic Products	20	26.89	8.89	0.84	36.63	32.09	97.05	1,266
Leather Products	21	9.24	9.18	0.18	18.61	6.98	42.95	396
Stone, Clay, And Glass	22	22.86	3.70	1.43	27.99	25.69	70.85	999
Primary Metals	23	30.98	4.90	2.05	37.93	40.17	105.61	1,067
Fabricated Metals	24	48.30	21.02	1.80	71.13	86.58	193.90	1,530
Farm Machinery And Equipment	25	56.51	21.42	1.62	79.56	79.08	221.33	1,692
Other Nonelectric Machinery	26	61.87	19.89	1.78	83.54	82.78	206.66	2,067
Food Products Machinery	27	3.23	1.01	0.10	4.34	3.07	9.75	95
Office And Computing Equipment	28	21.83	4.73	0.50	27.06	16.11	50.31	793
Other Electric Equipment	29	3.13	0.66	0.07	3.87	4.13	10.53	149
Radio, TV, & Communication Equip	30	134.09	9.78	5.84	149.71	125.76	377.62	3,807
Transportation Equipment	31	25.17	-0.93	7.52	31.76	49.95	97.50	895
Instruments	32	20.44	9.19	0.42	30.06	14.67	56.63	786
Railroads And Related Services	33	8.77	1.22	0.65	10.64	6.45	19.86	399
Other Transportation	34	143.84	-5.26	7.29	145.86	53.25	262.75	5,944
Motor Freight Transport And Warehous	35	318.51	116.54	18.87	453.91	96.06	764.41	11,894
Communications	36	259.85	222.50	50.00	532.35	28.99	633.22	6,380
Utilities	37	132.23	145.13	13.14	290.49	643.23	1197.97	3,598
Wholesale Trade	38	714.65	225.79	214.55	1154.99	116.05	1734.47	25,633
Retail Trade	39	583.32	139.35	107.05	909.72	55.20	1254.85	46,273
Finance	40	236.63	97.28	10.23	344.14	33.32	555.66	9,547
Insurance	41	473.32	31.05	80.51	584.88	315.38	1587.83	19,526
Owner-Occupied Dwellings	42	0.00	309.54	91.73	401.28	10.83	487.43	0
Real Estate	43	51.37	624.55	134.20	810.13	25.66	1019.02	11,853
Hotels And Lodging Places	44	27.72	10.17	3.36	41.24	14.54	96.14	3,060
Personal Services	45	206.77	166.44	19.55	392.77	105.10	732.19	16,930
Business Services	46	477.78	267.25	6.73	751.76	69.05	1083.08	26,990
Information Services	47	355.15	234.51	4.29	593.95	75.76	849.17	24,003
Eating And Drinking Places	48	148.26	38.81	20.83	207.90	123.69	511.37	21,644
Amusement And Recreation	49	52.53	24.62	13.94	91.09	22.02	183.24	7,688
Other Services	50	838.36	149.37	3.14	990.87	118.88	1445.34	34,925
Government	51	936.21	814.15	0.00	1750.36	1063.96	4097.14	40,553
Special Industries	52	2.97	98.81	0.00	101.79	452.99	101.79	301
Total, agribusiness		1555.16	601.87	258.20	2415.24	1928.50	6212.29	94240.00
Agribusiness percentage of all industries		20.8	14.3	26.9	19.1	30.9	24.5	25.0
Total, all industries		7488.67	4210.48	958.90	12658.05	6249.49	25373.67	376,796

Table 4 -- Omaha MSA Industries Ranked by Value Added: 1989

Rank	Industry	Industry Code	Value Added (mil of \$)
1	Government	51	1750.36
2	Wholesale Trade	38	1154.99
3	Other Services	50	990.87
4	Retail Trade	39	989.72
5	Real Estate	43	810.13
6	Business Services	46	751.76
7	Information Services	47	593.95
8	Insurance	41	584.88
9	Communications	36	532.35
10	Motor Freight Transport And Warehous	35	453.91
11	Owner-Occupied Dwellings	42	401.28
12	Personal Services	45	392.77
13	New Construction	4	358.68
14	Finance	40	344.14
15	Utilities	37	290.49
16	Eating And Drinking Places	48	207.90
17	Maintenance And Repair Const	5	169.07
18	Grain Mill Products	10	158.95
19	Radio, TV, & Communication Equip	30	149.71
20	Other Transportation	34	145.86
21	Meat Products	7	115.34
22	Special Industries	52	101.79
23	Commercial Printing	17	95.71
24	Livestock	1	91.58
25	Amusement And Recreation	49	91.09
26	Other Nonelectric Machinery	26	83.54
27	Farm Machinery And Equipment	25	79.56
28	Other Agriculture	2	71.27
29	Fabricated Metals	24	71.13
30	Other Printing And Publishing	16	66.14
31	Other Foods, Including Dairy	8	57.65
32	Paper Products	15	57.16
33	Furniture And Fixtures	14	54.43
34	Frozen Specialties	9	51.42
35	Hotels And Lodging Places	44	41.24
36	Other Chemical & Petrol Products	19	40.83
37	Primary Metals	23	37.93
38	Rubber And Plastic Products	20	36.63
39	Transportation Equipment	31	31.76
40	Instruments	32	30.06
41	Stone, Clay, And Glass	22	27.99
42	Office And Computing Equipment	28	27.06
43	Mining	3	23.95
44	Bakery Products	11	20.46
45	Textiles And Apparel	12	19.23
46	Leather Products	21	18.61
47	Nitrogenous And Phosphatic Fertilize	18	18.23
48	Other Manufacturing	6	15.44
49	Railroads And Related Services	33	10.64
50	Wood Products	13	10.25
51	Food Products Machinery	27	4.34
52	Other Electric Equipment	29	3.87
Total, agribusiness			2415.24
Agribusiness percentage of all industries			19.1
Total, all industries			12658.05

Table 5 -- Omaha MSA Industries Ranked by Exports: 1989

Rank	Industry	Industry Code	Exports (mil of \$)
1	Government	51	3104.53
2	Insurance	41	1015.05
3	Wholesale Trade	38	948.67
4	Retail Trade	39	746.00
5	Other Services	50	697.50
6	Meat Products	7	615.18
7	Information Services	47	560.92
8	Grain Mill Products	10	525.20
9	Real Estate	43	524.15
10	Motor Freight Transport And Warehous	35	471.94
11	Livestock	1	425.31
12	Business Services	46	383.25
13	New Construction	4	344.04
14	Radio, TV, & Communication Equip	30	293.59
15	Personal Services	45	286.36
16	Communications	36	246.45
17	Eating And Drinking Places	48	200.21
18	Frozen Specialties	9	197.69
19	Other Nonelectric Machinery	26	193.63
20	Fabricated Metals	24	164.64
21	Utilities	37	157.81
22	Other Foods, Including Dairy	8	130.08
23	Special Industries	52	126.68
24	Finance	40	125.47
25	Furniture And Fixtures	14	116.30
26	Commercial Printing	17	106.77
27	Other Agriculture	2	101.39
28	Primary Metals	23	100.41
29	Amusement And Recreation	49	97.61
30	Paper Products	15	96.34
31	Rubber And Plastic Products	20	93.70
32	Farm Machinery And Equipment	25	87.87
33	Transportation Equipment	31	84.22
34	Stone, Clay, And Glass	22	65.87
35	Other Transportation	34	59.09
36	Nitrogenous And Phosphatic Fertilize	18	56.82
37	Other Printing And Publishing	16	51.98
38	Other Chemical & Petrol Products	19	48.09
39	Office And Computing Equipment	28	47.87
40	Instruments	32	39.48
41	Leather Products	21	38.38
42	Textiles And Apparel	12	36.43
43	Mining	3	34.02
44	Other Manufacturing	6	30.53
45	Railroads And Related Services	33	19.83
46	Wood Products	13	6.50
47	Food Products Machinery	27	5.25
48	Maintenance And Repair Const	5	4.99
49	Bakery Products	11	4.33
50	Other Electric Equipment	29	3.78
51	Hotels And Lodging Places	44	0.87
52	Owner-Occupied Dwellings	42	0.00
Total, agribusiness			3856.00
Agribusiness percentage of all industries			27.7
Total, all industries			13923.06

Table 6 -- Omaha MSA Industries Ranked by Net Exports: 1989

Rank	Industry	Industry Code	Exports (mil of \$)	Imports (mil of \$)	Net
					Exports (mil of \$)
1	Government	51	3104.53	1063.96	2040.57
2	Wholesale Trade	38	948.67	116.05	832.61
3	Insurance	41	1015.05	315.38	699.66
4	Retail Trade	39	746.00	55.20	690.80
5	Other Services	50	697.50	118.88	578.61
6	Real Estate	43	524.15	25.66	498.49
7	Information Services	47	560.92	75.76	485.16
8	Motor Freight Transport And Warehous	35	471.94	96.06	375.89
9	Business Services	46	383.25	69.05	314.21
10	Grain Mill Products	10	525.20	241.56	283.64
11	Meat Products	7	615.18	360.49	254.69
12	Communications	36	246.45	28.99	217.46
13	Radio, TV, & Communication Equip	30	293.59	125.76	167.83
14	Frozen Specialties	9	197.69	72.45	125.24
15	Other Nonelectric Machinery	26	193.63	82.78	110.85
16	Personal Services	45	286.36	185.10	101.25
17	Finance	40	125.47	33.32	92.15
18	Fabricated Metals	24	164.64	86.58	78.06
19	Eating And Drinking Places	48	200.21	123.69	76.52
20	Amusement And Recreation	49	97.61	22.82	74.79
21	Other Agriculture	2	101.39	31.56	69.82
22	Furniture And Fixtures	14	116.30	53.07	63.24
23	Rubber And Plastic Products	20	93.70	32.09	61.62
24	Primary Metals	23	100.41	40.17	60.24
25	Stone, Clay, And Glass	22	65.87	25.69	40.18
26	Transportation Equipment	31	84.22	49.95	34.27
27	Commercial Printing	17	106.77	73.18	33.59
28	Office And Computing Equipment	28	47.87	16.11	31.76
29	Other Foods, Including Dairy	8	130.08	98.38	31.70
30	Leather Products	21	38.38	6.98	31.40
31	Nitrogenous And Phosphatic Fertilize	18	56.82	27.65	29.17
32	Mining	3	34.02	5.50	28.52
33	Instruments	32	39.48	14.67	24.81
34	Other Manufacturing	6	30.53	10.64	19.89
35	Other Printing And Publishing	16	51.98	33.53	18.45
36	Railroads And Related Services	33	19.83	6.45	13.38
37	Paper Products	15	96.34	86.38	9.96
38	Farm Machinery And Equipment	25	87.87	79.08	8.79
39	Other Transportation	34	59.09	53.25	5.84
40	Textiles And Apparel	12	36.43	30.91	5.52
41	Other Chemical & Petrol Products	19	48.09	45.65	2.44
42	Food Products Machinery	27	5.25	3.07	2.18
43	Other Electric Equipment	29	3.78	4.13	-0.35
44	Wood Products	13	6.50	12.27	-5.77
45	Bakery Products	11	4.33	11.66	-7.34
46	Owner-Occupied Dwellings	42	0.00	10.83	-10.83
47	Hotels And Lodging Places	44	0.87	14.54	-13.67
48	Livestock	1	425.31	454.11	-28.80
49	New Construction	4	344.04	392.55	-48.50
50	Maintenance And Repair Const	5	4.99	129.65	-124.67
51	Special Industries	52	126.68	452.99	-326.31
52	Utilities	37	157.81	643.23	-485.42
Total, agribusiness			3856.00	1928.50	1927.50
Agribusiness percentage of all industries			27.7	30.9	25.1
Total, all industries			13923.06	6249.49	7673.57

Table 7 -- Value Added Multipliers

Industry	Industry Code	Direct	Indirect	Induced	Total	Type I	Type III
Livestock	1	0.1	0.1	0.0	0.3	1.9	2.1
Other Agriculture	2	0.5	0.2	0.2	0.9	1.3	1.6
Mining	3	0.6	0.2	0.1	0.9	1.3	1.4
New Construction	4	0.3	0.2	0.2	0.7	1.6	2.1
Maintenance And Repair Const	5	0.5	0.1	0.1	0.7	1.3	1.5
Other Manufacturing	6	0.4	0.2	0.2	0.8	1.5	1.8
Meat Products	7	0.1	0.2	0.1	0.4	2.4	2.9
Other Foods, Including Dairy	8	0.2	0.2	0.1	0.5	1.7	2.0
Frozen Specialties	9	0.3	0.2	0.1	0.6	1.9	2.3
Grain Mill Products	10	0.3	0.2	0.1	0.6	1.7	2.0
Bakery Products	11	0.5	0.2	0.1	0.8	1.4	1.7
Textiles And Apparel	12	0.3	0.1	0.1	0.6	1.4	1.8
Wood Products	13	0.3	0.2	0.1	0.6	1.5	2.0
Furniture And Fixtures	14	0.4	0.2	0.1	0.7	1.5	1.8
Paper Products	15	0.3	0.1	0.1	0.5	1.4	1.7
Other Printing And Publishing	16	0.5	0.2	0.2	0.9	1.4	1.8
Commercial Printing	17	0.5	0.1	0.1	0.7	1.3	1.6
Nitrogenous And Phosphatic Fertilize	18	0.3	0.2	0.0	0.5	1.5	1.7
Other Chemical & Petrol Products	19	0.3	0.2	0.1	0.6	1.5	1.8
Rubber And Plastic Products	20	0.4	0.2	0.1	0.7	1.5	1.8
Leather Products	21	0.4	0.2	0.1	0.7	1.4	1.7
Stone, Clay, And Glass	22	0.4	0.2	0.1	0.7	1.4	1.8
Primary Metals	23	0.4	0.2	0.1	0.6	1.5	1.7
Fabricated Metals	24	0.4	0.1	0.1	0.6	1.4	1.6
Farm Machinery And Equipment	25	0.4	0.2	0.1	0.6	1.5	1.8
Other Nonelectric Machinery	26	0.4	0.1	0.1	0.7	1.4	1.6
Food Products Machinery	27	0.4	0.2	0.1	0.7	1.4	1.6
Office And Computing Equipment	28	0.5	0.1	0.1	0.8	1.2	1.5
Other Electric Equipment	29	0.4	0.2	0.1	0.7	1.5	1.8
Radio, TV, & Communication Equip	30	0.4	0.2	0.1	0.7	1.5	1.8
Transportation Equipment	31	0.3	0.1	0.1	0.5	1.4	1.6
Instruments	32	0.5	0.2	0.1	0.8	1.3	1.5
Railroads And Related Services	33	0.5	0.1	0.2	0.8	1.2	1.5
Other Transportation	34	0.6	0.2	0.2	0.9	1.3	1.7
Motor Freight Transport And Warehous	35	0.6	0.2	0.2	1.0	1.4	1.6
Communications	36	0.8	0.1	0.1	1.0	1.1	1.2
Utilities	37	0.2	0.1	0.0	0.4	1.5	1.7
Wholesale Trade	38	0.7	0.2	0.2	1.0	1.3	1.5
Retail Trade	39	0.7	0.2	0.3	1.2	1.2	1.7
Finance	40	0.6	0.3	0.2	1.1	1.4	1.7
Insurance	41	0.4	0.3	0.2	0.9	1.9	2.3
Owner-Occupied Dwellings	42	0.8	0.1	0.0	1.0	1.1	1.2
Real Estate	43	0.8	0.1	0.1	1.0	1.2	1.3
Hotels And Lodging Places	44	0.4	0.3	0.3	1.0	1.7	2.3
Personal Services	45	0.5	0.2	0.2	0.9	1.3	1.7
Business Services	46	0.7	0.2	0.2	1.1	1.3	1.6
Information Services	47	0.7	0.2	0.2	1.1	1.2	1.6
Eating And Drinking Places	48	0.4	0.2	0.4	1.0	1.6	2.4
Amusement And Recreation	49	0.5	0.3	0.4	1.2	1.6	2.3
Other Services	50	0.7	0.2	0.2	1.1	1.3	1.6
Other Government	51	0.4	0.2	0.1	0.7	1.4	1.6
Special Industries	52	1.0	0.0	0.0	1.0	1.0	1.0

Note: The induced and total components are based upon the Type III multipliers.

Table 8 -- Total Income Multipliers

Industry	Industry Code	Direct	Indirect	Induced	Total	Type I	Type III
Livestock	1	0.1	0.1	0.0	0.2	2.0	2.2
Other Agriculture	2	0.5	0.1	0.2	0.8	1.3	1.6
Mining	3	0.5	0.2	0.1	0.7	1.3	1.4
New Construction	4	0.3	0.2	0.1	0.7	1.6	2.0
Maintenance And Repair Const	5	0.4	0.1	0.1	0.7	1.3	1.5
Other Manufacturing	6	0.4	0.2	0.1	0.7	1.4	1.8
Meat Products	7	0.1	0.2	0.1	0.3	2.3	2.8
Other Foods, Including Dairy	8	0.2	0.2	0.1	0.5	1.7	2.0
Frozen Specialties	9	0.2	0.2	0.1	0.6	1.9	2.2
Grain Mill Products	10	0.3	0.2	0.1	0.5	1.7	1.9
Bakery Products	11	0.5	0.2	0.1	0.7	1.4	1.6
Textiles And Apparel	12	0.3	0.1	0.1	0.5	1.4	1.7
Wood Products	13	0.3	0.2	0.1	0.6	1.5	1.9
Furniture And Fixtures	14	0.4	0.2	0.1	0.7	1.4	1.7
Paper Products	15	0.3	0.1	0.1	0.5	1.4	1.7
Other Printing And Publishing	16	0.5	0.2	0.2	0.8	1.4	1.7
Commercial Printing	17	0.4	0.1	0.1	0.7	1.3	1.6
Nitrogenous And Phosphatic Fertilize	18	0.3	0.1	0.0	0.5	1.5	1.6
Other Chemical & Petrol Products	19	0.3	0.2	0.1	0.6	1.5	1.8
Rubber And Plastic Products	20	0.4	0.2	0.1	0.7	1.5	1.8
Leather Products	21	0.4	0.2	0.1	0.7	1.4	1.6
Stone, Clay, And Glass	22	0.4	0.2	0.1	0.7	1.4	1.8
Primary Metals	23	0.3	0.1	0.1	0.6	1.4	1.7
Fabricated Metals	24	0.4	0.1	0.1	0.6	1.3	1.5
Farm Machinery And Equipment	25	0.4	0.2	0.1	0.6	1.5	1.7
Other Nonelectric Machinery	26	0.4	0.1	0.1	0.6	1.3	1.6
Food Products Machinery	27	0.4	0.2	0.1	0.7	1.4	1.6
Office And Computing Equipment	28	0.5	0.1	0.1	0.7	1.2	1.4
Other Electric Equipment	29	0.4	0.2	0.1	0.6	1.4	1.8
Radio, TV, & Communication Equip	30	0.4	0.2	0.1	0.7	1.5	1.7
Transportation Equipment	31	0.2	0.1	0.1	0.4	1.4	1.8
Instruments	32	0.5	0.1	0.1	0.8	1.3	1.5
Railroads And Related Services	33	0.5	0.1	0.2	0.8	1.2	1.5
Other Transportation	34	0.5	0.2	0.2	0.9	1.3	1.7
Motor Freight Transport And Warehous	35	0.6	0.2	0.1	0.9	1.4	1.6
Communications	36	0.8	0.1	0.1	0.9	1.1	1.2
Utilities	37	0.2	0.1	0.0	0.4	1.5	1.7
Wholesale Trade	38	0.5	0.2	0.1	0.9	1.3	1.6
Retail Trade	39	0.6	0.2	0.3	1.0	1.3	1.8
Finance	40	0.6	0.2	0.2	1.0	1.4	1.7
Insurance	41	0.3	0.3	0.1	0.8	1.9	2.4
Owner-Occupied Dwellings	42	0.6	0.1	0.0	0.8	1.2	1.2
Real Estate	43	0.7	0.1	0.1	0.9	1.2	1.3
Hotels And Lodging Places	44	0.4	0.3	0.3	0.9	1.7	2.3
Personal Services	45	0.5	0.1	0.2	0.8	1.3	1.6
Business Services	46	0.7	0.2	0.2	1.1	1.3	1.5
Information Services	47	0.7	0.2	0.2	1.1	1.2	1.5
Eating And Drinking Places	48	0.4	0.2	0.3	0.9	1.6	2.4
Amusement And Recreation	49	0.4	0.3	0.3	1.0	1.6	2.4
Other Services	50	0.7	0.2	0.2	1.0	1.2	1.5
Other Government	51	0.4	0.2	0.1	0.7	1.4	1.6
Special Industries	52	1.0	0.0	0.0	1.0	1.0	1.0

Note: The induced and total components are based upon the Type III multipliers.

Table 9 -- Personal Income Multipliers

Industry	Industry	Direct	Indirect	Induced	Total	Type I	Type III
	Code						
Livestock	1	0.1	0.1	0.0	0.1	2.0	2.3
Other Agriculture	2	0.3	0.1	0.1	0.5	1.3	1.6
Mining	3	0.1	0.1	0.0	0.3	1.6	1.9
New Construction	4	0.3	0.1	0.1	0.5	1.4	1.7
Maintenance And Repair Const	5	0.4	0.1	0.1	0.6	1.2	1.3
Other Manufacturing	6	0.3	0.1	0.1	0.5	1.4	1.7
Meat Products	7	0.1	0.1	0.0	0.2	2.1	2.4
Other Foods, Including Dairy	8	0.1	0.1	0.0	0.3	1.8	2.1
Frozen Specialties	9	0.2	0.1	0.1	0.4	1.9	2.3
Grain Mill Products	10	0.1	0.1	0.0	0.3	2.1	2.4
Bakery Products	11	0.3	0.1	0.1	0.5	1.3	1.5
Textiles And Apparel	12	0.3	0.1	0.1	0.4	1.3	1.6
Wood Products	13	0.3	0.1	0.1	0.4	1.4	1.7
Furniture And Fixtures	14	0.3	0.1	0.1	0.5	1.4	1.6
Paper Products	15	0.2	0.1	0.0	0.4	1.4	1.6
Other Printing And Publishing	16	0.4	0.1	0.1	0.6	1.3	1.6
Commercial Printing	17	0.3	0.1	0.1	0.5	1.3	1.5
Nitrogenous And Phosphatic Fertilize	18	0.1	0.1	0.0	0.2	1.8	2.1
Other Chemical & Petrol Products	19	0.2	0.1	0.0	0.3	1.6	1.8
Rubber And Plastic Products	20	0.3	0.1	0.1	0.5	1.4	1.6
Leather Products	21	0.2	0.1	0.1	0.4	1.6	1.8
Stone, Clay, And Glass	22	0.3	0.1	0.1	0.5	1.3	1.6
Primary Metals	23	0.3	0.1	0.1	0.5	1.4	1.5
Fabricated Metals	24	0.2	0.1	0.0	0.4	1.3	1.5
Farm Machinery And Equipment	25	0.3	0.1	0.0	0.4	1.5	1.7
Other Nonelectric Machinery	26	0.3	0.1	0.1	0.4	1.3	1.5
Food Products Machinery	27	0.3	0.1	0.1	0.5	1.3	1.5
Office And Computing Equipment	28	0.4	0.1	0.1	0.6	1.1	1.3
Other Electric Equipment	29	0.3	0.1	0.1	0.5	1.4	1.6
Radio, TV, & Communication Equip	30	0.4	0.1	0.1	0.5	1.3	1.5
Transportation Equipment	31	0.3	0.1	0.0	0.4	1.3	1.5
Instruments	32	0.4	0.1	0.1	0.5	1.3	1.5
Railroads And Related Services	33	0.4	0.1	0.1	0.6	1.2	1.4
Other Transportation	34	0.5	0.1	0.1	0.8	1.2	1.4
Motor Freight Transport And Warehous	35	0.4	0.1	0.1	0.6	1.3	1.5
Communications	36	0.4	0.0	0.1	0.5	1.1	1.2
Utilities	37	0.1	0.1	0.0	0.2	1.6	1.9
Wholesale Trade	38	0.4	0.1	0.1	0.6	1.3	1.5
Retail Trade	39	0.5	0.1	0.2	0.7	1.2	1.5
Finance	40	0.4	0.2	0.1	0.7	1.4	1.6
Insurance	41	0.3	0.2	0.1	0.6	1.7	2.0
Owner-Occupied Dwellings	42	0.0	0.1	0.0	0.1	0.0	0.0
Real Estate	43	0.1	0.1	0.1	0.2	2.2	3.3
Hotels And Lodging Places	44	0.3	0.2	0.2	0.6	1.5	2.1
Personal Services	45	0.3	0.1	0.1	0.5	1.3	1.7
Business Services	46	0.4	0.1	0.1	0.7	1.2	1.5
Information Services	47	0.4	0.1	0.1	0.6	1.2	1.5
Eating And Drinking Places	48	0.3	0.1	0.2	0.6	1.5	2.1
Amusement And Recreation	49	0.3	0.2	0.2	0.6	1.5	2.3
Other Services	50	0.6	0.1	0.1	0.8	1.2	1.4
Other Government	51	0.2	0.1	0.1	0.4	1.5	1.7
Special Industries	52	0.0	0.0	0.0	0.0	1.0	1.4

Note: The induced and total components are based upon the Type III multipliers.

Table 10 -- Employment Multipliers

Industry	Industry	Direct	Indirect	Induced	Total	Type I	Type III
	Code						
Livestock	1	1.3	2.9	0.9	5.1	3.2	3.8
Other Agriculture	2	20.3	4.3	5.3	29.9	1.2	1.5
Mining	3	5.9	4.3	2.2	12.5	1.7	2.1
New Construction	4	15.0	7.2	4.7	26.9	1.5	1.8
Maintenance And Repair Const	5	11.0	4.3	3.3	18.6	1.4	1.7
Other Manufacturing	6	15.4	5.7	4.5	25.6	1.4	1.7
Meat Products	7	4.6	4.4	1.9	10.9	2.0	2.4
Other Foods, Including Dairy	8	5.4	4.8	2.2	12.4	1.9	2.3
Frozen Specialties	9	7.8	6.2	3.0	16.9	1.8	2.2
Grain Mill Products	10	3.8	5.8	2.0	11.6	2.5	3.1
Bakery Products	11	12.1	5.1	3.7	20.9	1.4	1.7
Textiles And Apparel	12	15.3	3.5	4.0	22.8	1.2	1.5
Wood Products	13	14.3	5.0	4.1	23.4	1.3	1.6
Furniture And Fixtures	14	11.8	5.4	3.7	20.8	1.5	1.8
Paper Products	15	7.9	3.7	2.5	14.0	1.5	1.8
Other Printing And Publishing	16	16.8	6.5	5.0	28.2	1.4	1.7
Commercial Printing	17	13.2	4.2	3.7	21.2	1.3	1.6
Nitrogenous And Phosphatic Fertilize	18	2.7	3.7	1.4	7.8	2.4	2.9
Other Chemical & Petrol Products	19	6.4	5.3	2.5	14.1	1.8	2.2
Rubber And Plastic Products	20	13.0	4.6	3.8	21.5	1.4	1.6
Leather Products	21	9.2	5.4	3.1	17.7	1.6	1.9
Stone, Clay, And Glass	22	14.1	5.0	4.1	23.2	1.4	1.6
Primary Metals	23	10.1	4.3	3.1	17.4	1.4	1.7
Fabricated Metals	24	7.9	3.8	2.5	14.2	1.5	1.8
Farm Machinery And Equipment	25	7.6	4.8	2.7	15.1	1.6	2.0
Other Nonelectric Machinery	26	10.0	4.3	3.1	17.4	1.4	1.7
Food Products Machinery	27	9.7	4.8	3.1	17.7	1.5	1.8
Office And Computing Equipment	28	15.8	3.3	4.1	23.2	1.2	1.5
Other Electric Equipment	29	14.1	5.1	4.1	23.4	1.4	1.7
Radio, TV, & Communication Equip	30	10.1	5.1	3.3	18.5	1.5	1.8
Transportation Equipment	31	9.2	3.3	2.7	15.2	1.4	1.7
Instruments	32	13.9	4.5	3.9	22.3	1.3	1.6
Railroads And Related Services	33	20.1	3.2	5.0	28.3	1.2	1.4
Other Transportation	34	22.6	5.4	6.0	34.0	1.2	1.5
Motor Freight Transport And Warehous	35	15.6	6.5	4.7	26.8	1.4	1.7
Communications	36	10.1	3.3	2.9	16.2	1.3	1.6
Utilities	37	3.0	3.1	1.3	7.4	2.0	2.5
Wholesale Trade	38	14.8	6.6	4.6	26.0	1.4	1.8
Retail Trade	39	36.9	4.8	8.9	50.6	1.1	1.4
Finance	40	17.2	8.0	5.4	30.5	1.5	1.8
Insurance	41	12.3	10.2	4.8	27.3	1.8	2.2
Owner-Occupied Dwellings	42	0.0	3.0	0.6	3.7	0.0	0.0
Real Estate	43	11.6	3.3	3.2	18.1	1.3	1.6
Hotels And Lodging Places	44	31.8	8.1	8.5	48.4	1.3	1.5
Personal Services	45	23.1	4.4	5.9	33.4	1.2	1.4
Business Services	46	24.9	5.9	6.6	37.4	1.2	1.5
Information Services	47	28.3	5.0	7.1	40.4	1.2	1.4
Eating And Drinking Places	48	42.3	6.3	10.4	59.1	1.1	1.4
Amusement And Recreation	49	42.0	10.9	11.3	64.1	1.3	1.5
Other Services	50	24.2	5.1	6.3	35.6	1.2	1.5
Other Government	51	9.9	4.4	3.1	17.4	1.4	1.8
Special Industries	52	3.0	0.0	0.6	3.6	1.0	1.2

Note: The induced and total components are based upon the Type III multipliers.