

Impacts				
id	Cargo	QDirect	QIndirect	QInduced
1	Aggregates (Tons)	\$301.39	\$145.41	\$17.18
2	Jumper Hooper Railcars	\$1,429.03	\$725.24	\$83.94

Output   
 Employment   
 Employee Comp   
 Indirect Business Tax

  
   
Record: 1

**Figure 5.2.1.4**

## **5.2.2 Inland Transportation and Inland Transportation Screen**

Transporting cargo inland generates economic impacts in the study area. The starting point for the analysis of the economic impact of inland transportation is the Cargo Input screen (Figure 5.1.1) after the user has entered the information about cargo types and units to date is discussed in section 5.1. In the Cargo Input screen, select the option “movement via inland transportation” and click the “next” button to reach the Inland Transportation screen. This screen is shown in Figure 5.2.2.1.

Users must select the appropriate record by clicking on the record buttons to identify a

	% Cargo Flows	% Study Area	Rates	Average Miles
Rail Local	0	100	\$0.00	0
Rail Long Haul	80	1	\$10.00	200
Truck Local	0	100	\$0.00	0
Truck Long Haul	0	3	\$0.00	0
Barge	20	4	\$1.00	300
Not Transported	0%			
	100%			

Cargo Type: stuff  
Tonnage: 10000000

For each cargo type shipped, please enter the modal data. Each mode of transport has its own percentage of the cargo, rate, and mileage information. The results are in 1992 dollars.

Buttons: Back, General Impacts, Update, Itemized Impacts

Status: Record: 1

**Figure 5.2.2.1**

cargo type shipped inland. Once a cargo type is identified for inland transportation, users enter the percent of cargo flows by mode (% Cargo Flows), the percentage of the expenditures that occur within the study area (% Study Area), the rate per unit (Rates), and the average miles hauled by mode. After completing this data entry task, users can advance to a new cargo type (record) and continue to enter data, or users can click on the next button to advance to the Impact screen.

**5.2.2.1 Example of Inland Transportation:** Figure 5.2.2.2 is an example of the inland transportation of 1,500 tons general cargo (record 3) transported by truck and rail. In this example, 50% of the general cargoes are transported by rail of which 10% goes locally and

40% is for long-haul. The rate per ton mile for both local and long-haul rail is \$.0253 (displayed as 3 cents). For long-haul rail, 10% of the revenues or expenditures are realized within the study area. The average haul is 250 miles. All revenue from local rail are realized within the study area. The average haul is 50 miles. Long-haul trucking accounts for 50% of the transported general cargoes, 25% of the revenue is realized locally, and the general cargo on average is hauled 100 miles at a per ton mile cost of 5.35 cents (displayed as \$.05).

The screenshot shows a software window titled "Inland Transportation" with a menu bar containing "File" and "Help". The main area contains a table with the following columns: "Mode", "% Cargo Flows", "% Study Area", "Rates", and "Average Miles". The data entered in the table is as follows:

Mode	% Cargo Flows	% Study Area	Rates	Average Miles
Rail Local	10	100	\$0.03	50
Rail Long Haul	40	10	\$0.03	250
Truck Local	0	100	\$0.00	0
Truck Long Haul	50	25	\$0.05	100
Barge	0	0	\$0.00	0
Not Transported	0%			
	100%			

Below the table, there are additional fields: "Cargo Type: General Cargo" and "Units: 1500". A yellow highlighted text box contains the instruction: "For each cargo type shipped, please enter the modal data. Each mode of transport has its own percentage of the cargo, rate, and mileage information. The results are in 1992 dollars." At the bottom right, there are four buttons: "Back", "General Impacts", "Update", and "Itemized Impacts". The status bar at the bottom left shows "Record: 3".

**Figure 5.2.2.2**

**5.2.2.2 Updating:** After completing the task of entering the inland transportation data requirements, clicking on the update button will cause the Kit to compute the direct impacts of the cargoes transported inland and activate the report options. For any given mode, the direct impact of inland transportation is computed as

Direct impact of inland cargo by type and mode =

(Dollars per unit mile)x(Units)x(Average Miles) x

(% of Cargo Flows)x(% Spent in Study Area).

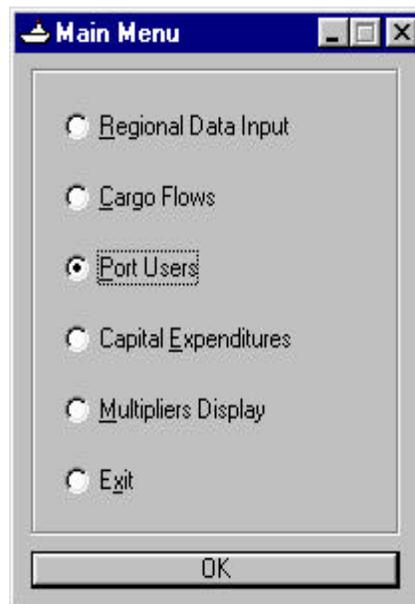
For clarification, when the units are in terms of containers or railcars, the Dollars per Unit Mile is the cost of moving the unit one mile. When the units are in tonnage, the Dollars per Unit Mile are the cost to move a ton of cargo one mile.

**5.2.2.3 Reporting Impacts:** Clicking on the “Update” button also activates two report buttons for general and itemized impacts. For a discussion of these report screens see section 5.2.1.2.

## 6.0 PORT USERS

Port users are industries that are dependent on a port for shipping products and receiving inputs. The dependence on a port varies among port users. Some port users may be completely dependent on a port for their existence. Other industries gain economic advantages from using a port facility instead of some other alternative.

The port user's section of the Port Kit estimates port users total impact on the study area's economy. Users are required to enter data concerning the level of economic activity of a port user and the extent the industries utilize a port. Since data concerning port users' activities are likely limited, the Port Kit has several options to measure a port user's direct level of economic activity. Among these options are sales, employment, and payroll. Once the direct economic impact of a port user is determined, the Port Kit computes the indirect and induced economic impacts. To begin an analysis of a port user's economic impact, click on the "Port Users" button in the main menu screen as shown in Figure 6.1, and then click the OK bar to advance to the Port Users screen.



**Figure 6.1**

## 6.1 Port Users Screen

The Port Users screen is shown in Figure 6.1.1. This screen has two parts. The upper section is designed to select an industry and enter the direct impacts. The lower section of the screen shows the computed economic impact in 1992 constant dollars.

Results in 1992 dollars				
	Direct	Indirect	Induced	Total
Output	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Employment	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Employee Comp	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Indirect Business Tax	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**Figure 6.1.1**

**6.1.1 Selection of Port Users Industry:** The earlier selection of a level of aggregation determines the list of port user industries. This list can be viewed in two ways:

- 1. List Button:** Clicking on the “List” button will cause a Select a Record screen to appear (Figure 6.1.1.1) The records in the screen are the industries selected in the aggregation choice. Clicking on an industry and on the “OK” button will cause the industry (record) to be displayed on the display lines in the Port Users screen.

**2. Record Arrow:** Clicking on the record arrow cycles through the industry list.

**3 Clear button:** The economic impacts of port users are cumulated in the results section of the Port Users screen. That is, as the different port users' data are entered into the Kit, the cumulative impacts will be shown in the results section of the screen when the "Results" button is clicked. To analyze the economic impact of each industry separately, click the "Clear" button to remove previous findings from the display boxes.

**6.1.2 Port Utilization:** The direct economic impacts of port users on the business activities in a study area are only those business activities dependent on the presence of the port. Only business activities associated with the movement of goods and resources through a port count in assessing the direct economic impact of a port user. The value of port user activities that is related to a port are a proportion of the port users total activities. This fraction is called the port utilization rate and its value can vary between zero and 100%. A port utilization rate of zero indicates an industry is not a port user; a value of 100% means the port user is totally reliant on a port for all its business activities. A port utilization rate (0-100) must be determined and entered for each port users industry. This number is entered in the "Port Utilization" box. In most cases, the value of the port utilization percent will be a judgment call. A starting point for this judgment call is to consider the amount of activity a port user would have in the absences of the port. The percentage of loss in the industry's activities would be an estimate of the industry's port utilization rate.

**6.1.3 Port Users Sales:** The Port Kit uses the sales revenue or sales output of port users' industries to gauge their level of economic activity. To estimate the direct impact of a port users dependence on a port, the sales output of the port user is multiplied by the port utilization rate.

Direct Impact of a Port User Industry = (Sales Output) x (Port Utilization Rate).

The direct impact is then applied to the study areas input-output multipliers to derive the estimates of the indirect and induced impacts.

**6.1.3.1. Sales Output Box:** To begin an impact analysis of a port user, the port users level of sales must be entered in the “Sales Output” Box.

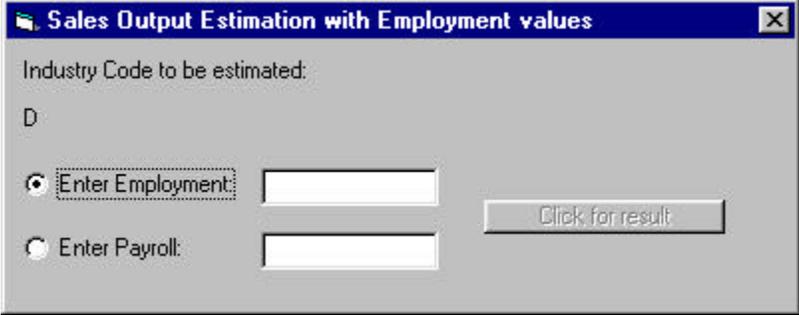
**6.1.3.2. Results Button:** After entering a port utilization rate and sales output for a port user, clicking on the “Results” button activates the economic impact analysis. The results are printed on the lower portion of the port user screen.

**6.1.3.3. Multiple Port Users:** To analyze more than one port user, select another port user industry by clicking on the “List” button or clicking on the “Record” button. This will cause a new port user industry to be displayed in the display lines. To begin an economic impact analysis of a new port user industry, enter a port utilization rate for the industry and the industry sales output. Clicking on the “Results” button activates the economic impact analysis and the impact results are added to the other port users impacts in the lower portion of the screen. When there is more than one port user being analyzed, the results that are shown in the lower portion of the “Port users” screen are the cumulative results from all industries that have had economic impacts estimated. To delete the previous results, click on the “Clear” button.

#### **6.1.4 Estimating Sales Output**

A data series containing sales data for port users may prove to be elusive. The Kit provides two optional methods to estimate sales. The Kit contains two national databases, employment-to-output ratio, and a personal-income-to-output ratio. If users are willing to assume that these national ratios approximate the corresponding study area’s ratios, then local port users sales can be estimated using the national ratios. Kit users have the option to estimate sales output by industry by entering either employment data or payroll data for the

port user industry. To choose a sales estimating technique, click on the “Estimate” button to advance to the estimation subroutines and the Sales Output Estimation screen (Figure 6.1.4.1).



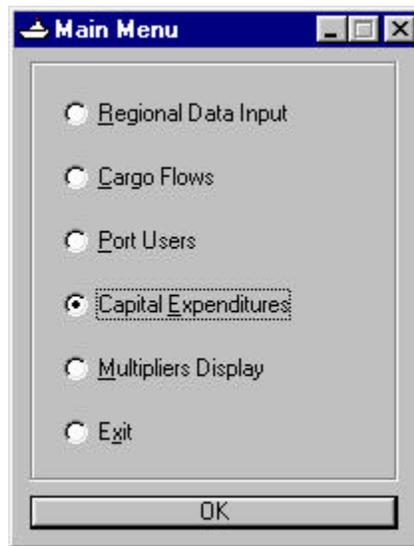
**Figure 6.1.4.1**

**6.1.4.1: Estimating Sales Using Employment:** Click on the “Enter Employment” option, and then enter the employment level for the industry. Clicking on the “Click for Result” button will activate a subroutine that estimates sales output for the industry and returns the Kit to the Port Users screen where the impact analysis can proceed.

**6.1.4.2: Estimating Sales Using Payrolls:** Click on the “Enter Payroll” option, and then enter the amount of payroll for the industry. Clicking on the “Click for Result” button will activate a subroutine that estimates sale output for the industry and returns the Kit to the Port Users screen.

## 7. CAPITAL EXPENDITURES

Port capital expenditures have economic impacts. Port capital expenditures include new port construction, enlargement, improvements, and rehabilitation of port facilities. To begin the impact analysis of a capital expenditure, click on the “Capital Expenditures” button in the main menu (Figure 7.1), and then click the “OK” button to advance to the Total Construction screen.



**Figure 7.1**

### 7.1 Total Construction Cost Screen

The Construction screen is shown in Figure 7.1.1. The Kit requires the users to name a project in the “Project Input” box. This creates a record number that is identified in the record line. The total expenditures for the construction project is entered next in the “Expenditure Amount” box.

**Figure 7.1.1**

Once the amount of expenditures spent on the construction project is entered, the percentage of the construction expenditures spent locally must be entered into the “Percent Spent Locally” Input box. This percentage should reflect the local content of the construction project materials and labor.

**7.1.1 Add:** By clicking on the “Add” button, a new construction project can be created and added to the capital expenditures database. Note that this also creates a new record number for the new project.

**7.1.2 Update:** Clicking on the “Update” button will calculate the expenditure that have been made locally and convert them to 1992 dollars.

**7.1.3 Delete:** Clicking on the “Delete” button deletes the current record.

**7.1.4 List:** Clicking on the “List” button displays a list of all projects.

**7.1.5 Next:** Clicking on the “Next” button advances the Kit to the Capital Expenditure screen.

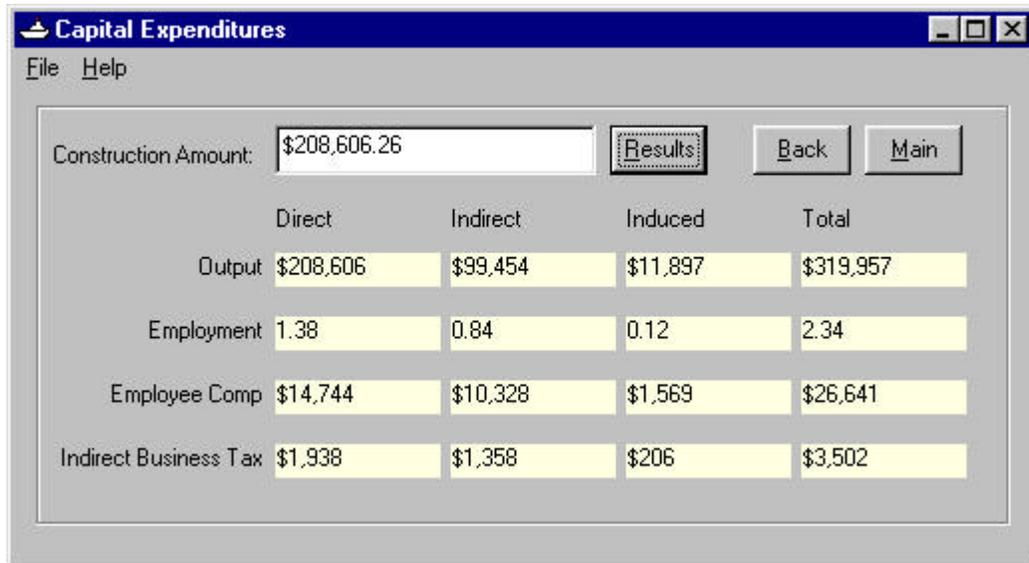
## 7.2 Capital Expenditure Screen

The Capital Expenditure screen is shown in Figure 7.2.1. The construction amount is the amount of local construction expenditures for the project in 1992 dollars. That is, the construction amount is the sum of total local expenditures converted into 1992 dollars. This amount is the estimate of the direct impact of construction expenditures. Clicking on the “Results” button results in the calculations of the indirect and induced economic impacts. The results of such a calculation are shown in Figure 7.2.2.

	Direct	Indirect	Induced	Total
Output				
Employment				
Employee Comp				
Indirect Business Tax				

**Figure 7.2.1**

Figure 7.2.2 shows the total economic impact of the \$1,000,000 new building. Again this includes the indirect and induced impacts on the study area’s output, employment, employee compensation, and indirect business taxes. To print or save a copy of the results, click on the “File” drop-down menu to access these options. To analyze a new construction project, click on the “Back” button to return to the Total Construction Cost screen.

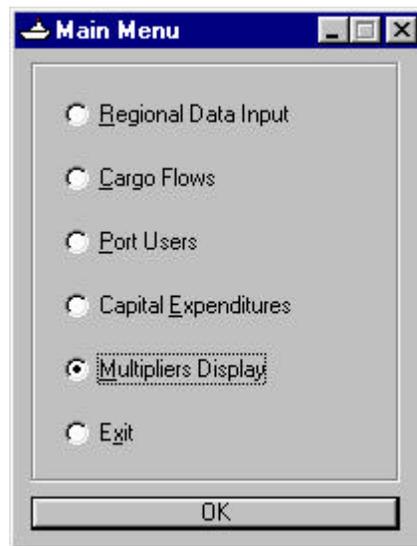


**Figure 7.2.2**

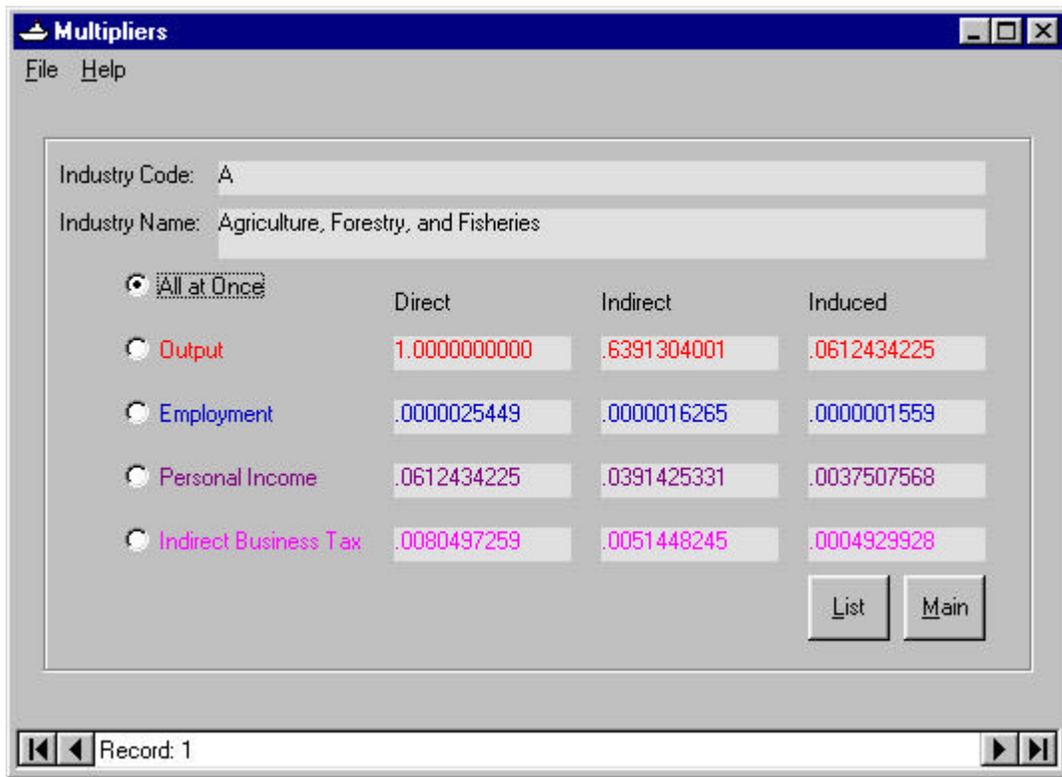
## 8.0 MULTIPLIERS DISPLAY

The economic impact multipliers for the study area that have been calculated by the Kit are available for display. From the Main Menu, (Figure 8.1) click on the “Multipliers Display” button and the “OK” button. A Multipliers screen will appear like the one shown in Figure 8.2.

The Multipliers screen shows the direct, indirect, and induced multipliers by industry for output, employment, personal income, and indirect business taxes. Different industries’ multipliers can be displayed by either clicking on a record arrow or selecting an industry from the industry list after it is displayed by either clicking on a record arrow or selecting an industry from the industry list after clicking on the industry list button. The commands drop-down menu also gives several ways to retrieve industry multipliers.



**Figure 8.1**



**Figure 8.2**

Clicking on the “Multipliers Screen Command” button results in several options. Users can save the database, list the industries, or search for a particular industry’s multipliers based on an industry code.

## **9.0 PRINTING AND SAVING: FILE COMMANDS**

Clicking on the File command in the menu bar causes a drop-down menu to appear. The menu gives the user options:

1. Save a copy of the database.
2. Save a text file of the Impact Results.
3. Print the results of the Impact Study.

## References

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various years.

## APPENDIX I

### Major SIC Industry Groups

#### One Digit Industry Groups

The accompanying table lists the major industries included in the one digit level of aggregation. The industrial code is based upon the 1987 Standard Industrial Classification System (SIC) and is shown in the column labeled SIC.<sup>7</sup> The Kit bridges the SIC codes to the Input-Output (I-O) industry classification system used by the Bureau of Economic Analysis (BEA).<sup>8</sup> The I-O industry classification is given in the industry code column. In most cases, there is a direct link between the two classification systems, but not always. This proved to be particularly true at the one digit level of aggregation. Hence, several of the industries were excluded from their SIC industry so that the Port Kit could map them to the appropriate I-O industry. This is the reason for excluding eating and drinking places and veterinary services from the SIC classification and mapping them into separate the I-O industries. The water transportation industry is separated from the transportation public utilities industry group to allow the explicit recognition of this industry in the economic impact analysis.

#### One Digit Level of Aggregation

id	IndustryCode	SIC	Industry
1	A	A, excluding 074	Agriculture, Forestry, and Fishing
2	B	B	Mining
3	C	C	Construction
4	D	D	Manufacturing
5	E	E, excluding 44	Transportation (less Water Transportation, plus Rail), Communications, Public Utilities
6	F	F	Wholesale Trade

<sup>7</sup> *Standard Industrial Classification Manual 1987*, Executive Office of the President, Office of Management and Budget.

<sup>8</sup> For a description of the systems used in the I-O accounts, see the section "Definitions and conventions for classification" in the *Survey of Current Business*, U.S. Department of Commerce, November 1997, Vol. 77.

### One Digit Level of Aggregation (Continued)

id	IndustryCode	SIC	Industry
7	G	G, excluding 58	Retail Trade (except Eating and Drinking places)
8	H	H	Finance, Insurance, and Real Estate
9	I	I	Services
10	74	58	Eating and Drinking Places
11	I	074	Veterinary services
13	65C	44	Water Transportation
15	J	J	Government Enterprises

### Two Digit Level of Industry Aggregation

The following table shows the industries at the 2-digit level of industry aggregation. The second column shows the I-O industry codes, and the third column shows corresponding SIC industries.

### Two Digit Level of Industry

id	IndustryCode	SIC	Industry
1	01+03+04	02	Agricultural Production - Livestock
2	01+03+04	07, excluding 074	Agricultural Services
3	01+03+04	08	Forestry
4	01+03+04	09	Fishing, Hunting, and Trapping
5	02	01	Agricultural Production - Crops
6	05+06	10	Metal Mining
7	07	12	Coal Mining
8	08	13	Oil and Gas Extraction
9	09+10	14	Nonmetallic Minerals, Except Fuels
10	13+37+38+39+40+41+42+59A+59B+60+61	33	Primary Metal Industries
11	13+37+38+39+40+41+42+59A+59B+60+61	34	Fabricated Metal Products
12	13+37+38+39+40+41+42+59A+59B+60+61	37	Transportation Equipment
13	14	20	Food and Kindred Products
14	15	21	Tobacco Products
15	16+17+18+19	22	Textile Mill Products
16	16+17+18+19	23	Apparel and Other Textile Products
17	20+21	24	Lumber and Wood Products

id	IndustryCode	SIC	Industry
18	22+23	25	Furniture and Fixtures
19	24+25	26	Paper and Allied Products
20	26A+26B	27	Printing and Publishing
21	27A+27B+28+29A+29B+30	28	Chemicals and Allied Products
22	31	29	Petroleum and Coal Products
23	32	30	Rubber and Misc. Plastics Products
24	33+34	31	Leather and Leather Products
25	35+36	32	Stone, Clay, and Glass Products
26	43+(44+45)+46+47+48+49+50+51+52	35	Industrial Machinery and Equipment
27	53+54+55+56+57+58	36	Electronic and Other Electric Equipment
28	62+63	38	Instruments and Related Products
29	64	39	Miscellaneous Manufacturing Industries
30	65A+65E	40	Railroad Transportation
31	65A+65E	41	Local and Interurban Passenger Transit
32	65A+65E	46	Pipelines, Except Natural Gas
33	65A+65E	47	Transportation Services
34	65B	42	Trucking and Warehousing
35	65D	45	Transportation by Air
36	66+67	48	Communications
37	68A+68B+68C	49	Electric, Gas, and Sanitary Services
38	70A	60	Depository Institutions
39	70A	61	Nondepository Institutions
40	70A	62	Security and Commodity Brokers
41	70A	67	Holding and Other Investment Offices
42	70B	63	Insurance Carriers
43	70B	64	Insurance Agents, Brokers, and Service
44	71B	65	Real Estate
45	72A	70	Hotels and Other Lodging Places
47	72B+73A+73B+73C+73D+77B	72	Personal Services
48	72B+73A+73B+73C+73D+77B	73	Business Services
49	72B+73A+73B+73C+73D+77B	76	Miscellaneous Repair Services
50	72B+73A+73B+73C+73D+77B	81	Legal Services
51	72B+73A+73B+73C+73D+77B	82	Educational Services
52	72B+73A+73B+73C+73D+77B	83	Social Services
53	72B+73A+73B+73C+73D+77B	84	Museums, Botanical, Zoological Gardens
54	72B+73A+73B+73C+73D+77B	86	Membership Organizations

id	IndustryCode	SIC	Industry
55	72B+73A+73B+73C+73D+77B	87	Engineering and Management Services
56	72B+73A+73B+73C+73D+77B	89	Services, NEC
57	74	58	Eating and Drinking Places
58	75	75	Auto Repair, Services, and Parking
59	76	78	Motion Pictures
60	76	79	Amusement and Recreation Services
61	77A	074	Veterinary Services
62	77A	80	Health Services
63	65C	44	Water Transportation
65	C	C	Construction
66	F	F	Wholesale Trade
67	G	G, excluding 58	Retail Trade
68	J	J	Government Enterprises

### Three digit level of Industry Aggregation

The following table shows the industries at the 3-digit level of industry aggregation. The second column shows the I-O industry codes, and the third column shows the SIC counterparts.

### Three Digit Level of Aggregation

id	IndustryCode	SIC	Industry
1	01+04	021	Livestock, Except Dairy and Poultry
2	01+04	024	Dairy farms
3	01+04	025	Poultry and Eggs
4	01+04	027	Animal Specialties
5	01+04	029	General Farms, Primarily Animal
6	01+04	071	Soil Preparation
7	01+04	072	Crop Preparation
8	01+04	075	Animal Services, Except Veterinary
9	01+04	076	Farm Labor and Management Services
10	01+04	078	Landscape and Horticultural Services
11	01+04	085	Forest Services
12	01+04	092	Fish Hatcheries and Preserves
13	02	011	Cash Grains
14	02	013	Field Crops, Except Cash Grains
15	02	016	Vegetables and Melons
16	02	017	Fruits and Tree Nuts
17	02	018	Horticultural specialties
18	02	019	General Farms, primarily crop
19	03	081	Timber Tracts
20	03	083	Forest Products

<b>id</b>	<b>IndustryCode</b>	<b>SIC</b>	<b>Industry</b>
21	03	091	Commercial Fishing
22	03	097	Hunting, Trapping, and Game
23	05+06	101	Iron Ores
24	05+06	102	Copper Ores
25	05+06	103	Lead and Zinc Ores
26	05+06	104	Gold and Silver Ores
27	05+06	106	Ferroalloy Ores, except Vanadium
28	05+06	108	Metal Mining Services
29	05+06	109	Miscellaneous Metal Ores
30	07	122	Bituminous Coal and Lignite
31	07	123	Anthracite
32	07	124	Coal Mining Services
33	08	131	Crude Petroleum and Natural Gas
34	08	132	Natural Gas Liquids
35	08	138	Oil Field Services
36	09+10	141	Dimension Stone
37	09+10	142	Crushed and Broken Stone
38	09+10	144	Sand and Gravel
39	09+10	145	Clay, Ceramic, and Refractory Minerals
40	09+10	147	Chemical Fertilizers Minerals
41	09+10	148	Nonmetallic Minerals Services
42	09+10	149	Miscellaneous Nonmetallic Metals
43	13+59A+59B+60+61	348	Ordnance and Accessories, NEC
44	13+59A+59B+60+61	371	Motor Vehicles and Equipment
45	13+59A+59B+60+61	372	Aircraft and Parts
46	13+59A+59B+60+61	373	Ship and Boat Building and Repairing
47	13+59A+59B+60+61	374	Railroad Equipment
48	13+59A+59B+60+61	375	Motorcycles, Bicycles, and Parts
49	13+59A+59B+60+61	376	Guided Missiles, Space Vehicles, Parts
50	13+59A+59B+60+61	379	Miscellaneous Transportation Equipment
51	14	201	Meat Products
52	14	202	Dairy Products
53	14	203	Preserved Fruits and Vegetables
54	14	204	Grain Mill Products
55	14	205	Bakery Products
56	14	206	Sugar and Confectionery Products
57	14	207	Fats and Oils
58	14	208	Beverages
59	14	209	Misc. Food and Kindred Products
60	15	211	Cigarettes
61	15	212	Cigars
62	15	213	Chewing and smoking tobacco and snuff
63	15	214	Tobacco stemming and redrying
64	16	221	Broadwoven Fabric Mills, Cotton
65	16	222	Broadwoven Fabric Mills, Manmade

id	IndustryCode	SIC	Industry
66	16	223	Broadwoven Fabric Mills, Wool
67	16	224	Narrow Fabric Mills
68	16	226	Textile Finishing, Except Wool
69	16	228	Yarn and Thread Mills
70	17	227	Carpets and Rugs
71	17	229	Miscellaneous Textile Goods
72	18	225	Knitting Mills
73	18	231	Men's and Boy's Suits and Coats
74	18	232	Men's and Boy's Furnishing
75	18	233	Women's and Misses Outerwear
76	18	234	Women's and Children's Undergarments
77	18	235	Hats, Caps, and Millinery
78	18	236	Girl's and Children's Outerwear
79	18	237	Fur Goods
80	18	238	Miscellaneous Apparel and Accessories
81	19	239	Misc. Fabricated Textile Products
82	20+21	241	Logging
83	20+21	242	Sawmills and Planing Mills
84	20+21	243	Millwork, Plywood & Structural Members
85	20+21	244	Wood Containers
86	20+21	245	Wood Buildings and Mobile Homes
87	20+21	249	Miscellaneous Wood Products
88	22+23	251	Household Furniture
89	22+23	252	Office Furniture
90	22+23	253	Public Building and Related Furniture
91	22+23	254	Partitions and Fixtures
92	22+23	259	Miscellaneous Furniture and Fixtures
93	24	261	Pulp Mills
94	24	262	Paper Mills
95	24	263	Paperboard Mills
96	24	267	Misc. Converted Paper Products
97	25	265	Paperboard Containers and Boxes
98	26A	271	Newspapers
99	26A	272	Periodicals
100	26B	273	Books
101	26B	274	Miscellaneous Publishing
102	26B	275	Commercial Printing
103	26B	276	Manifold Business Forms
104	26B	277	Greeting Cards
105	26B	278	Blankbooks and Bookbinding
106	26B	279	Printing Trade Services
107	27A	281	Industrial Inorganic Chemicals
108	27A	286	Industrial Organic Chemicals
109	27A	289	Miscellaneous Chemical Products
110	27B	287	Agricultural Chemicals
111	28	282	Plastics Materials and Synthetics

id	IndustryCode	SIC	Industry
112	29A	283	Drugs
113	29B	284	Soap, Cleaners, and Toilet Goods
114	30	285	Paints and Allied Products
115	31	291	Petroleum Refining
116	31	295	Asphalt Paving and Roofing Materials
117	31	299	Misc. Petroleum and Coal Products
118	32	301	Tires and Inner Tubes
119	32	302	Rubber and Plastics Footwear
120	32	305	Hose & Belting & Gaskets & Packing
121	32	306	Fabricated Rubber Products, NEC.
122	32	308	Miscellaneous Plastics Products, NEC.
123	33+34	311	Leather Tanning and Finishing
124	33+34	313	Boot and Shoe Cut Stock and Findings
125	33+34	314	Footwear, Except Rubber
126	33+34	315	Leather Gloves and Mittens
127	33+34	316	Luggage
128	33+34	317	Handbags and Personal Leather Goods
129	33+34	319	Leather Goods, NEC.
130	35	321	Flat Glass
131	35	322	Glass and Glassware, Pressed or Blown
132	35	323	Glass and Glass Products, except
133	36	324	Cement, Hydraulic
134	36	325	Structural Clay Products
135	36	326	Pottery and Related Products
136	36	327	Concrete, Gypsum, and Plaster Products
137	36	328	Cut Stone and Stone Products
138	36	329	Misc. Nonmetallic Mineral Products
139	37+38+41	331	Blast Furnace and Basic Steel Products
140	37+38+41	332	Iron and Steel foundries
141	37+38+41	333	Primary Nonferrous Metals
142	37+38+41	334	Secondary Nonferrous metals
143	37+38+41	335	Nonferrous Rolling and Drawing
144	37+38+41	336	Nonferrous Foundries (Castings)
145	37+38+41	339	Miscellaneous Primary Metal Products
146	37+38+41	345	Screw Machine Products, Bolts, Etc.
147	37+38+41	346	Metal Forgings and Stampings
148	39	341	Metal Cans and Shipping Containers
149	40	343	Plumbing and Heating, Except Electric
150	40	344	Fabricated Structural Metal Products
151	42	342	Cutlery, Handtools, and Hardware
152	42	347	Metal Services, NEC
153	42	349	Misc. Fabricated Metal Products
154	43	351	Engines and Turbines
155	(44+45)+46	352	Farm and Garden Machinery
156	(44+45)+46	353	Construction and Related Machinery

id	IndustryCode	SIC	Industry
157	47	354	Metalworking Machinery
158	48	355	Special Industry Machinery
159	49	356	General Industrial Machinery
160	50	359	Industrial Machinery, NEC
161	51	357	Computer and Office Equipment
162	52	358	Refrigeration and Service Machinery
163	53	361	Electric Distribution Equipment
164	53	362	Electrical Industrial Apparatus
165	54	363	Household Appliances
166	55	364	Electric Lighting and Wiring Equipment
167	56	365	Household Audio and Video Equipment
168	56	366	Communications Equipment
169	57	367	Electronic Components and Accessories
170	58	369	Misc. Electrical Equipment & Supplies
171	62	381	Search and Navigation Equipment
172	62	382	Measuring and Controlling Devices
173	62	384	Medical Instruments and Supplies
174	62	387	Watches, Clocks, Watchcases, and Parts
175	63	385	Ophthalmic Goods
176	63	386	Photographic Equipment and Supplies
177	64	391	Jewelry, Silverware, and Plated Ware
178	64	393	Musical Instruments
179	64	394	Toys and Sporting Goods
180	64	395	Pens, Pencils, Office, & Art Supplies
181	64	396	Costume Jewelry and Notions
182	64	399	Miscellaneous Manufactures
183	65A	401	Railroads
184	65A	411	Local and Suburban Transportation
185	65A	412	Taxicabs
186	65A	413	Intercity and Rural Bus Transportation
187	65A	414	Bus Charter Service
188	65A	415	School Buses
189	65A	417	Bus Terminal and Service Facilities
190	65A	474	Rental of Railroad Cars
191	65B	421	Trucking and Courier Services, ex. Air
192	65B	422	Public Warehousing and Storage
193	65B	423	Trucking Terminal Facilities
194	65D	451	Air Transportation, Scheduled
195	65D	452	Air Transportation, Nonscheduled
196	65D	458	Airports, Flying Fields, & Services
197	65E	461	Pipelines, Except Natural Gas
198	65E	472	Passenger Transportation Arrangement
199	65E	473	Freight Transportation Arrangement
200	65E	478	Miscellaneous Transportation Services
201	66	481	Telephone Communications

<b>id</b>	<b>IndustryCode</b>	<b>SIC</b>	<b>Industry</b>
202	66	482	Telegraph and Other Communications
203	66	484	Cable and Other Pay TV Services
204	66	489	Communications Services, NEC
205	67	483	Radio and TV Broadcasting
206	68A+68B	491	Electric Services
207	68A+68B	492	Gas Production and Distribution
208	68A+68B	493	Electric and Other services Combined
209	68C	494	Water Supply
210	68C	495	Sanitary Services
211	68C	496	Steam and Air-Conditioning Supply
212	68C	497	Irrigation Systems
213	70A	601	Central Reserve Depositories
214	70A	602	Commercial Banks
215	70A	603	Savings Institutions
216	70A	606	Credit Unions
217	70A	608	Foreign Bank and Branches/Agencies
218	70A	609	Functions Closely Related to Banking
219	70A	611	Federal & Fed.-Sponsored Credit
220	70A	614	Personal Credit Institutions
221	70A	615	Business Credit Institutions
222	70A	616	Mortgage Bankers and Brokers
223	70A	621	Security Brokers and Dealers
224	70A	622	Commodity Contracts Brokers, Dealers
225	70A	623	Security and Commodity Exchanges
226	70A	628	Security and Commodity Services
227	70A	671	Holding offices
228	70A	672	Investment offices
229	70A	673	Trusts
230	70A	679	Miscellaneous investing
231	70B	631	Life Insurance
232	70B	632	Medical Service and Health Insurance
233	70B	633	Fire, Marine, and Casualty Insurance
234	70B	635	Surety Insurance
235	70B	636	Title Insurance
236	70B	637	Pension, Health, and Welfare Funds
237	70B	639	Insurance Carriers, NEC
238	70B	641	Insurance Agents, Brokers, & Service
239	71B	651	Real Estate Operators and Lessors
240	71B	653	Real Estate Agents and Managers
241	71B	654	Title Abstract Offices
242	71B	655	Subdividers and Developers
243	72A	701	Hotels and Motels
244	72A	702	Rooming and Boarding Houses
245	72A	703	Camps and Recreational Vehicle Parks
246	72A	704	Membership-Basis Organization Hotels
247	72B	721	Laundry, Cleaning, and garment services

id	IndustryCode	SIC	Industry
248	72B	722	Photographic Studios, Portrait
249	72B	723	Beauty Shops
250	72B	724	Barber Shops
251	72B	725	Shoe Repair and Shoeshine Parlors
252	72B	726	Funeral Service and Crematories
253	72B	729	Miscellaneous Personal Services
254	72B	762	Electrical Repair Shops
255	72B	763	Watch, Clock, and Jewelry Repair
256	72B	764	Re-upholstery and Furniture Repair
257	73A	737	Computer and Data Processing Services
258	73B	811	Legal Services
259	73B	871	Engineering, Architectural, and
260	73B	872	Accounting, Auditing, and Bookkeeping
261	73B	899	Services, nec
263	73C+77B	732	Credit Reporting and Collection
264	73C+77B	733	Mailing, Reproduction, Stenographic
265	73C+77B	734	Services to dwellings and Other
266	73C+77B	735	Misc. Equipment Rental and Leasing
267	73C+77B	736	Personnel Supply Services
268	73C+77B	738	Miscellaneous Business Services
269	73C+77B	769	Miscellaneous Repair Shops
270	73C+77B	821	Elementary and Secondary Schools
271	73C+77B	822	Colleges, Universities, and Professional
272	73C+77B	823	Libraries
273	73C+77B	824	Vocational schools
274	73C+77B	829	Schools & Educational Services, NEC
275	73C+77B	832	Accounting, Auditing, and Bookkeeping
276	73C+77B	833	Job training and Related Services
277	73C+77B	835	Child Day Care Services
278	73C+77B	836	Residential Care
279	73C+77B	839	Social Services, nec
280	73C+77B	841	Museums and Art Galleries
281	73C+77B	842	Botanical and Zoological Gardens
282	73C+77B	861	Business Associations
283	73C+77B	862	Professional organizations
284	73C+77B	863	Labor Organizations
285	73C+77B	864	Civic and Social Associations
286	73C+77B	865	Political Organizations
287	73C+77B	866	Religious Organizations
288	73C+77B	869	Membership Organizations, NEC
289	73C+77B	873	Research and Testing Services
290	73C+77B	874	Management and Public Relations
291	73D	731	Advertising
292	74	58	Eating and Drinking Places
293	75	751	Automotive Rental and Leasing, without
294	75	752	Automobile Parking

<b>id</b>	<b>IndustryCode</b>	<b>SIC</b>	<b>Industry</b>
295	75	753	Automotive Repair shops
296	75	754	Automotive Services, Except Repair
297	76	781	Motion Picture Production and Services
298	76	782	Motion Picture Distribution and Services
299	76	783	Motion Picture Theaters
300	76	784	Video Tape Rental
301	76	791	Dance Studios, Schools, and Halls
302	76	792	Producers, Orchestras, Entertainers
303	76	793	Bowling Centers
304	76	794	Commercial Sports
305	76	799	Misc. Amusement, Recreation Services
306	77A	074	Veterinary Services
307	77A	801	Offices and Clinics of Medical Doctors
308	77A	802	Offices and Clinics of Dentists
309	77A	803	Offices of Osteopathic Physicians
310	77A	804	Offices of Other Health Practitioners
311	77A	805	Nursing and Personal Care Facilities
312	77A	806	Hospitals
313	77A	807	Medical and Dental Laboratories
314	77A	808	Home Health Care Services
315	77A	809	Health and Allied Services, NEC
317	65C	441	Deep Sea Foreign Trans. of Freight
318	65C	442	Deep Sea Domestic Trans. of Freight
319	65C	443	Freight Trans. on the Great Lakes
320	65C	444	Water Transportation of Freight, NEC
321	65C	448	Water Transportation of Passengers
322	65C	449	Water Transportation Services
323	C	C	Construction
324	F	F	Wholesale Trade
325	G	G, excluding	Retail Trade
326	J	J	Government Enterprises

## APPENDIX 2

### Indirect Business Tax Rates 1992

id	State	Employee Compensation	IBT	IBT Rate
1	Alabama	\$ 48,940	\$ 5,361	10.95%
2	Arkansas	\$ 24,814	\$ 3,222	12.98%
3	Florida	\$ 163,302	\$ 29,193	17.88%
4	Georgia	\$ 94,516	\$ 11,890	12.58%
5	Illinois	\$ 182,240	\$ 24,050	13.20%
6	Indiana	\$ 75,229	\$ 8,649	11.50%
7	Iowa	\$ 33,305	\$ 4,541	13.63%
8	Kansas	\$ 32,376	\$ 4,400	13.59%
9	Kentucky	\$ 43,192	\$ 6,533	15.13%
10	Louisiana	\$ 46,984	\$ 9,229	19.64%
11	Minnesota	\$ 69,174	\$ 8,657	12.51%
12	Mississippi	\$ 24,200	\$ 3,400	14.05%
13	Missouri	\$ 69,562	\$ 8,346	12.00%
14	Nebraska	\$ 20,503	\$ 2,761	13.47%
15	Ohio	\$ 151,145	\$ 17,612	11.65%
16	Oklahoma	\$ 35,350	\$ 4,451	12.59%
17	Oregon	\$ 37,763	\$ 4,563	12.08%
18	Tennessee	\$ 65,211	\$ 8,714	13.36%
19	Texas	\$ 233,187	\$ 39,991	17.15%
20	United States	\$ 3,627,099	\$ 505,591	13.94%
21	Washington	\$ 76,180	\$ 12,823	16.83%
22	West Virginia	\$ 17,693	\$ 2,602	14.71%
23	Wisconsin	\$ 67,554	\$ 9,317	13.79%

Millions of dollars

Source: Comprehensive Revision of Gross State Product by Industry, 1977-94. Survey of Current Business, U.S. Department of Commerce, Bureau of Economic Analysis, Vol. 77, Number 6, June 1997.

## **APPENDIX 3**

### **Price Indexes**

The Kit contains a database of price indexes for 1987-1997 by industry.<sup>9</sup> Because of the lack of published price index numbers for some of the industries, and because of the many aggregation schemes, it was necessary to interpolate many of the actual price index numbers in the Kit's price index database. For missing price index numbers, the interpolation consisted of fitting the missing price index number into an appropriate industry aggregation level for which a price index number existed. For example, if industry x did not have price index numbers, and it belonged in an industrial aggregate made up of industries x, y, and z for which a price index was known, then industry x was assigned that price index number. The accompanying table is the Kit's database of price indexes.

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<sup>9</sup> The major data sources for the Kit's price indexes database are U.S. Department of Agriculture, *Agriculture Statistics*. United States Government Printing Office. U.S. Department of Labor Bureau of Labor Statistics, *Producers Price Index Detailed Report*, various years.

**Appendix 3  
Price Indexes**

IndustryCode	Industry Name	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
01+03+04	Agricultural products and related services	94.32	97.97	100.62	97.79	98.88	100	102.28	103.35	104.07	112.05	109.31
02	Other agricultural products	85.22	74.78	85.22	92.17	91.30	100	88.70	105.22	100.35	116.63	99.93
05+10	Metallic ores mining	130.68	131.46	130.94	121.93	107.31	100	90.99	106.27	132.38	120.23	112.01
07	Coal mining	102.13	100.64	100.32	102.66	102.45	100	99.26	99.15	97.45	97.23	98.09
08	Crude petroleum and natural gas	97.12	89.54	98.95	108.10	101.83	100	99.61	92.94	87.06	110.85	114.38
09+10	Nonmetallic minerals mining	89.45	91.91	94.64	96.77	98.98	100	101.11	102.55	105.36	108.17	109.62
13+37+38+39+40+41+ 42+59A+59B+60+61	Metal products	87.12	91.43	95.70	97.34	98.79	100	101.61	104.61	108.55	108.93	109.45
14	Food and kindred products	87.77	91.62	95.98	99.40	99.66	100	101.54	102.74	104.11	108.73	109.41
15	Tobacco products	54.95	61.60	70.11	79.58	90.14	100	94.70	81.58	83.93	86.49	91.57
16+17+18+19	Textile goods	89.11	92.31	94.67	97.05	98.64	100	100.53	100.76	102.37	103.84	104.58
20+21	Lumber and wood products	81.19	84.19	88.90	90.21	92.06	100	114.34	119.04	118.81	118.35	122.51
22+23	Furniture and fixtures	86.57	90.64	94.06	96.91	98.94	100	102.03	105.53	108.46	110.82	112.45
24+25	Paper goods	86.55	93.81	99.67	100.58	99.92	100	99.17	102.06	121.04	114.36	110.15
26A+26B	Printed materials	79.69	83.95	88.57	92.68	96.88	100	103.41	106.32	112.93	117.61	120.10
27A+27B+28+29A+29B+30	Chemical products	82.35	89.83	95.07	96.18	98.89	100	101.11	103.34	113.99	115.90	116.93
31	Petroleum refining and related products	87.80	84.31	94.27	113.82	103.49	100	96.64	93.15	96.14	108.84	106.80
32	Rubber and miscellaneous plastics products	88.35	93.43	96.50	97.46	99.56	100	101.05	102.54	107.97	107.79	107.53
33+34	Footwear, leather, and leather products	83.94	89.29	92.91	96.54	98.27	100	101.57	102.83	105.59	106.06	107.95
35+36	Stone, clay and glass products	92.64	93.79	95.66	97.52	99.56	100	102.30	106.03	110.20	111.52	112.94
43+44+45+46+47+48+49+50+51+52	Machinery, except Electrical	88.43	91.17	94.86	97.60	99.74	100	100.09	100.69	101.97	102.14	101.54
53+54+55+56+57+58	Electrical equipment	93.23	94.40	96.66	98.29	99.37	100	101.08	101.71	102.26	102.17	100.72
62+63	Scientific, Controlling, Ophthalmic, and Photographic equipment	88.54	90.14	93.34	96.55	98.40	100	101.77	102.86	104.47	105.39	105.81
64	Miscellaneous Manufacturing	86.79	89.88	93.48	96.07	98.24	100	101.59	103.09	105.27	106.86	107.86
65A+65E	Ground Transportation, except Trucking	98.50	99.12	96.14	97.12	100.16	100	97.70	99.32	98.18	100.20	102.07
65B	Motor Freight Transportation and Warehousing	83.45	91.61	96.51	102.88	99.23	100	100.96	107.01	109.97	107.40	112.21
65C	Water Transportation	77.26	85.05	88.97	91.48	96.27	100	99.70	100.00	103.00	103.70	104.20
65D	Air Transportation	99.07	112.32	109.80	99.69	103.54	100	105.60	108.50	113.70	121.10	125.30
66+67	Communications	93.98	94.14	97.02	98.29	98.53	100	102.17	104.38	107.00	108.37	107.73
68A+68B+68C	Utilities	92.27	90.52	93.07	94.44	99.55	100	102.11	100.57	100.77	99.79	101.42
72B+73A+73B+73C+73D+77B	Finance, Professional and Educational/Social services	77.93	82.31	85.36	90.95	94.44	100	102.15	105.40	108.40	112.45	116.92
70A	Financial Institutions	80.16	72.40	76.27	85.00	93.50	100	101.94	109.52	112.73	116.01	125.81
70B	Insurance	85.22	91.21	92.31	95.98	106.40	100	113.14	115.98	124.61	132.45	146.14
71B	Real Estate and Royalties	83.82	86.90	90.97	95.07	98.04	100	103.03	105.88	108.65	111.60	114.76
72A	Hotels and Lodging places	85.50	87.65	91.16	93.67	98.14	100	103.89	105.59	109.07	113.95	121.52
74	Eating and Drinking places	85.59	85.44	88.57	92.15	96.88	100	101.24	102.36	102.35	101.07	99.91
75	Automotive Repair and services	79.54	83.16	86.83	90.58	95.32	100	106.16	111.22	112.52	113.45	113.85
76	Amusements	78.13	81.98	86.55	91.53	96.39	100	102.89	107.41	110.79	115.15	117.50
77A	Health Services	67.96	73.44	79.62	86.28	93.05	100	105.85	110.97	114.89	118.07	121.40
A	Agriculture, Forestry, and Fisheries	94.557	104.57	111.54	109.46	101.66	100	103.70	100.08	103.14	114.13	103.21
B	Mining	97.79	91.81	99.35	106.37	101.95	100	99.35	95.32	92.33	109.75	111.96
C	Construction	90.56	93.80	96.16	99.08	99.88	100	103.45	107.58	112.65	116.16	119.84
D	Manufacturing	85.95	88.93	93.36	97.53	98.72	100	101.45	102.81	105.79	108.26	108.80
E	Transportation (except Water Transportation), Communications, and Utilities	92.64	94.70	97.13	98.06	99.78	100	101.76	102.49	104.09	103.67	104.97
F	Wholesale Trade	93.21	97.85	97.26	101.86	101.81	100	101.62	104.34	107.82	106.82	105.78
G	Retail Trade	85.59	85.44	88.57	92.15	96.88	100	101.24	102.36	102.35	101.07	99.91
H	Finance, Insurance, and Real Estate	81.69	83.36	87.07	92.35	97.82	100	103.73	105.91	112.94	116.26	122.11
I	Services	75.35	79.87	84.00	89.65	94.33	100	103.55	107.47	110.73	114.47	118.46
J	Government Enterprises	80.65	83.83	87.20	91.40	96.08	100	103.07	106.29	109.83	113.21	116.24

## APPENDIX 4

### List of Kits Assess Tables

1D	One digit SIC to BEA bridge for regionalizing data.
2D	Two digit SIC to BEA bridge for regionalizing data.
3D	Three digit SIC to BEA bridge for regionalizing data.
capitalex	Capital Expenditures list and amounts.
cargorevenue	Cargo Revenues based tonnage, unit cost, and mode.
choice	Datafile descriptors; Aggregation choice, year, locale, etc.
datatable	Producer Price index data by year vs industry.
IBT	Indirect Business Tax data for several states and nation, Survey of Current Business.
NewADJCOS	The “A” matrix, a regioanlized version of NewCoefficients.
NewCoefficients	The National “A” matrix of coefficients.
NewInverse	The Leontief inverse of (I-A).
PortUsers	The data for the Port Users section.
RPCs	The regional purchase coefficients, these regionalize “A.”
tblCode	The industry names for various BEA codes.
tblMULT	The output multipliers.
tblRats	The Employment:Output ratio, Payroll:Output ratio, and adjusted Employee Compensation row from NewInverse.
tblScrap	Contains the Scrap industry data, as well as output and the three bridges.
u1D	The aggregation of the national USE table, bridged to 1-digit SIC. Q being total commodity output.
u2D	The aggregation of the national USE table, bridged to 2-digit SIC.
u3D	The aggregation of the national USE table, bridged to 3-digit SIC.
v1D	The aggregation of the national MAKE table, bridged to 1-digit SIC. X being total commodity output.
v2D	The aggregation of the national MAKE table, bridged to 2-digit SIC.
v3D	The aggregation of the national MAKE table, bridged to 3-digit SIC.
aggScrap	The aggregated scrap values.
qryDetail	The bridged version of the data the user entered in “1D”, “2D”, “3D.”
qryMODa	Rail, Truck, Barge data summed from Cargo Revenue section, internal to port.
qryMULT	The multipliers.
qryRRTB	Rail, Truck, Barge impacts, external to port.
qrySumINV	The column sums of NewInverse.