REGIONAL MULTIPLIERS

A User Handbook for the Regional Input-Output Modeling System (RIMS II)

Third Edition
March 1997

Introduction

Effective planning for public- and private-sector projects and programs at the State and local levels requires a systematic analysis of the economic impacts of the projects and programs on affected regions. In turn, systematic analysis of economic impacts must account for the interindustry relationships within regions because these relationships largely determine how regional economies are likely to respond to project and program changes. Thus, regional input-output (I-O) multipliers, which account for interindustry relationships within regions, are useful tools for regional economic impact analysis.

In the 1970's, the Bureau of Economic Analysis (BEA) developed a method for estimating regional I-O multipliers known as RIMS (Regional Industrial Multiplier System), which was based on the work of Garnick and Drake.[1] In the 1980's, BEA completed an enhancement of RIMS, known as RIMS II (Regional Input-Output Modeling System), and published a handbook for RIMS II users.[2] In 1992, BEA published a second edition of the handbook, in which the multipliers were based on more recent data and improved methodology. Now, BEA is making available a third edition of the handbook, in response to requests by users for additional discussion of the data that they must provide in order to use RIMS II and of the data sources and methods used for multiplier estimation. The multipliers in the third edition reflect I-O data for 1987, the most recent benchmark year for which BEA's national I-O data are available.

RIMS II is based on an accounting framework called an I-O table. For each industry, an I-O table shows the distribution of the inputs purchased and the outputs sold. A typical I-O table in RIMS II is derived mainly from two data sources: BEA's national I-O table, which shows the input and output structure of nearly 500 U.S. industries, and BEA's regional economic accounts, which are used to adjust the national I-O table in order to reflect a region's industrial structure and trading patterns.[3]

Using RIMS II for impact analyses has several advantages.[4] RIMS II multipliers can be estimated for any region composed of one or more counties and for any industry or group of industries in the national I-O table. The cost of estimating regional multipliers is relatively low because of the accessibility of the main data sources for RIMS II. According to empirical tests, the estimates based on RIMS II are similar in magnitude to the estimates based on relatively expensive surveys.[5]

To effectively use the multipliers for impact analysis, users must provide geographically and industrially detailed information on the initial changes in output, earnings, or employment that are associated with the project or program under study. The multipliers can then be used to estimate the total impact of the project or program on regional output, earnings, or employment.

RIMS II is widely used in both the public and private sector. In the public sector, for example, the Department of Defense uses RIMS II to estimate the regional impacts of military base closings, and State departments of transportation use RIMS II to estimate the regional impacts of airport construction and expansion. In the private sector, analysts, consultants, and economic development practitioners use RIMS II to estimate the regional impacts of a variety of projects, such as the development of theme parks and shopping malls.

This handbook comprises three additional sections of text and five appendixes. In the second section, the types of RIMS II multipliers are discussed, and examples of their use are presented. In the third section, the information that users of RIMS II must provide and the proper use of RIMS II multipliers are discussed. In the fourth

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1. See Daniel H. Garnick, "Differential Regional Multiplier Models," *Journal of Regional Science* 10 (February 1970): 35–47 ; and Ronald L. Drake, "A Short-Cut to Estimates of Regional Input-Output Multipliers," *International Regional Science Review* 1 (Fall 1976): 1–17.

2. See U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Input-Output Modeling System (RIMS II): Estimation, Evaluation, and Application of a Disaggregated Regional Impact Model*(Washington, DC: U.S. Government Printing Office, 1981); and U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II)*(Washington, DC: U.S. Government Printing Office, 1986).

3. See U.S. Department of Commerce, Bureau of Economic Analysis, *Benchmark Input-Output Accounts of the United States, 1987*(Washington, DC: U.S. Government Printing Office, 1994); and U.S. Department of Commerce, Bureau of Economic Analysis, *Local Area Personal Income, 1969–92* (Washington, DC: U.S. Government Printing Office, 1994).

4. For a discussion of the limitations of using I-O models in impact analysis, see Daniel M. Otto and Thomas G. Johnson, *Microcomputer-Based Input-Output Modeling*(Boulder, CO: Westview Press, 1993), 28–46.

5. See *Regional Input-Output Modeling System (RIMS II), 39–57* ; and Sharon M. Brucker, Steven E. Hastings, and William R. Latham III, "The Variation of Estimated Impacts from Five Regional Input-Output Models," *International Regional Science Review* 13 (1990): 119–39.

section, four hypothetical case studies that illustrate use of the multipliers are presented; the case studies focus on estimating the regional economic impacts of constructing and operating a sports facility, closing and converting a military base, closing a motor vehicle manufacturing plant, and opening a glass-container manufacturing plant.

In appendix A, the data sources and methods used in estimating the RIMS II multipliers are discussed, and a list of suggestions for further reading is presented.

Appendix B presents a list of the detailed industries for which multipliers are available, and appendix C presents a list of the industry aggregations for which multipliers are available.

Appendix D presents a sample of one of the four detailed-industry tables that are available from RIMS II, and it presents a sample of one of the four aggregate-industry tables that are available. Appendix E presents information on BEA economic areas, which can help RIMS II users in their choice of regions for impact analysis.

Availability of Regional I-O Multipliers From RIMS II

For any region composed of one or more counties, RIMS II can provide two series of tables of I-O multipliers: Series 1 is for detailed industries, and series 2 is for industry aggregations. Each series consists of four tables: (1) Output multipliers, (2) earnings multipliers, (3) employment multipliers, and (4) total final-demand multipliers for output, earnings, and employment and total direct-effect multipliers for earnings and employment.

Table designation	Type of multiplier	Industry composition
1.1	Final-demand output multipliers	38 row industries and 471 column industries
1.2	Final-demand earnings multipliers	38 row industries and 471 column industries
1.3	Final-demand employment multipliers	38 row industries and 471 column industries
1.4	Total final-demand output, earnings, and employment multipliers and total direct-effect earnings and employment multipliers.	Totals of 471 row industries
2.1	Final-demand output multipliers	38 row industries and 38 column industries
2.2	Final-demand earnings multipliers	38 row industries and 38 column industries
2.3	Final-demand employment multipliers	38 row industries and 38 column industries
2.4	Total final-demand output, earnings, and employment multipliers and total direct-effect earnings and employment multipliers.	Totals of 38 row industries

The prices of the tables (two series per region) are on a descending scale, starting at $1,500 per region for the first region ordered. For further information or to place an order, e-mail rimsread@bea.doc.gov, call (202) 606–5343, or write to Regional Economic Analysis Division, BE-61, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230.

RIMS II Multipliers for Output, Earnings, and Employment

RIMS II provides users with five types of multipliers: Final-demand multipliers for output, for earnings, and for employment and direct-effect multipliers for earnings and for employment. These multipliers measure the economic impact of a change in final demand, in earnings, or in employment on a region's economy.[6] This section defines the RIMS II multipliers and gives brief examples of their use. (For a detailed discussion of the source data and methods used in the derivation of the RIMS II multipliers, see appendix A.)

Final-Demand Multipliers for Output

The final-demand multipliers for output are the basic multipliers from which all the other RIMS II multipliers are derived. They are presented in the final-demand output multiplier table. (For a sample of this table, designated as table 1.1, see appendix D.) In this table, each column entry indicates the change in output in each row industry that results from a $1 change in final demand in the column industry. The impact on each row industry is calculated by multiplying the final-demand change in the column industry by the multiplier for each row. The total impact on regional output is calculated by multiplying the final-demand change in the column industry by the sum of all the multipliers for each row except the household row.[7]

For example, suppose that final demand in the food products machinery industry in the Kansas City BEA economic area (hereafter called the Kansas City economic area) increases by $1 million.[8] The effect of this increase in output on output in each industry in the economic area is calculated from the column of final-demand output multipliers for the food products machinery industry (summarized in column 1 in table A).[9] According to these calculations, the output of the farm products and agricultural, forestry, and fishing services industry increases by $15,000 (0.0150 times $1 million); the output of the industrial machinery and equipment industry, which includes the food products machinery industry, increases by $1.0393 million (1.0393 times $1 million); and total output in the economic area increases by $2.0655 million (2.0655 times $1 million).

Table A.—Final-Demand Multipliers for the Food Products Machinery Industry, Kansas City, MO-KS Economic Area

Industry	Output (dollars)	Earnings (dollars)	Employment[1] (jobs)
	(1)	(2)	(3)
Farm products and agricultural, forestry, and fishing services	0.0150	0.0036	0.2846
Industrial machinery and equipment	1.0393	.3072	9.8743
All other industries	1.0112	.2983	14.1743
Total	**2.0655**	**.6091**	**24.3332**

1. The employment multiplier is measured on the basis of a $1 million change in output delivered to final demand.

Multipliers for Earnings

RIMS II provides two types of multipliers for estimating the impacts of changes on earnings: Final-demand multipliers and direct-effect multipliers. These multipliers are derived from the table of final-demand output multipliers.

The final-demand multipliers for earnings can be used if data on final-demand changes are available. In the final-demand earnings multiplier table, each column entry indicates the change in earnings in each row industry that results from a $1 change in final demand in the column industry. The impact on each row industry is calculated by multiplying the final-demand change in the column industry by the multiplier for each row. The total impact

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6. The term "change in final demand," rather than the "change in output delivered to final users," is used in this handbook because of its widespread use in regional impact analysis.

The impact of an increase in final demand, earnings, or employment differs from that of a decline only by the sign of the impact.

7. The household row is excluded to avoid double counting, because each of the other row entries already includes earnings paid to households.

8. For a listing of the 1721 A BEA economic areas and associated metropolitan areas, see appendix E . For a discussion of the procedure used to define the BEA economic areas, see Kenneth P. Johnson, "Redefinition of the BEA Economic Areas," SURVEY OF CURRENT BUSINESS 75 (February 1995): 75–81.

9. For the complete final-demand output multiplier table for this economic area, see RIMS table 1.1 in appendix D.

on regional earnings is calculated by multiplying the final-demand change in the column industry by the sum of the multipliers for each row.

For example, the effect of a $1 million increase in final demand in the food products machinery industry on earnings in each industry in the Kansas City economic area is calculated from the multipliers for earnings in column 2 in table A . According to these calculations, earnings in the farm products and agricultural, forestry, and fishing services industry increases by $3,600 (0.0036 times $1 million); earnings in the industrial machinery and equipment industry increases by $307,200 (0.3072 times $1 million); and total earnings in the economic area increases by $609,100 (0.6091 times $1 million).

The direct-effect multipliers for earnings can be used if data on the initial changes in earnings by industry are available. In the direct-effect earnings multiplier table, each entry indicates the total change in earnings in the region that results from a $1 change in earnings in the row industry. The total impact on regional earnings is calculated by multiplying the initial change in earnings in the row industry by the multiplier for the row.

For example, suppose that output in the food products machinery industry in the Kansas City economic area increases so that workers in the industry will have additional annual earnings of $1 million. The effect of this increase on total earnings in the economic area is calculated by multiplying the initial change in earnings of $1 million by the multiplier in the row for the food products machinery industry in the direct-effect earnings multiplier table. The multiplier is 2.0829, so the total impact on the economic area is an earnings increase of $2.0829 million (2.0829 times $1 million).[10]

Multipliers for Employment

RIMS II provides two types of multipliers for estimating the impacts of changes on employment: Final-demand multipliers and direct-effect multipliers. These multipliers are derived from the table of final-demand output multipliers.

The final-demand multipliers for employment can be used if data on final-demand changes are available. In the final-demand employment multiplier table, each column entry indicates the change in employment in each row industry that results from a $1 million change in final demand in the column industry. The impact on each row industry is calculated by multiplying the final-demand change in the column industry by the multiplier for each

row. The total impact on regional employment is calculated by multiplying the final-demand change in the column industry by the sum of the multipliers for each row.

For example, the effect of a $1 million increase in final demand in the food products machinery industry on employment in each industry in the Kansas City economic area is calculated from the multipliers for employment in column 3 in table A . According to these calculations, employment in the farm products and agricultural, forestry, and fishing services industry increases by 0.2846 jobs (0.2846 times 1 for each $1 million change in final demand); employment in the industrial machinery and equipment industry increases by 9.8743 jobs (9.8743 times 1); and total employment in the economic area increases by 24.3332 jobs (24.3332 times 1).

The direct-effect multipliers for employment can be used if data on the initial changes in employment by industry are available. In the direct-effect employment multiplier table, each entry indicates the total change in employment in the region that results from a change of one job in the row industry. The total impact on regional employment is calculated by multiplying the initial change in employment in the row industry by the multiplier for the row.

For example, suppose that output in the food products machinery industry in the Kansas City economic area increases so that 1,000 new jobs in the industry are created. The effect of this increase on total employment in the economic area is calculated by multiplying the initial change in employment of 1,000 jobs by the multiplier in the row for the food products machinery industry in the direct-effect employment multiplier table. The multiplier is 2.601, so the total impact on the economic area is 2,601 new jobs (2.601 times 1,000).[11]

Choosing a Multiplier

The choice of multiplier for estimating the impact of a project on output, earnings, and employment depends on the availability of estimates of the initial changes in final demand, earnings, and employment. If the estimates of the initial changes in all three measures are available, the RIMS II user can select any of the RIMS II multipliers. To assess the reasonableness of the impact estimates based on the multiplier selected, the user can compare these estimates with the estimates based on the other multipliers. In theory, all the impact estimates should be consistent.[12]

10. The multiplier is from RIMS table 1.4, which is not included in this handbook.

11. The multiplier is from RIMS table 1.4, which is not included in this handbook.

12. The impact estimates based on the product of the initial change in final demand and the final-demand multiplier for earnings (or employment) reflect

In theory, all the impact estimates should be consistent.[12] If the available estimates are limited to initial changes in final demand, the user can select a final-demand multiplier for impact estimation. If the available estimates are limited to initial changes in earnings or employment, the user can select a direct-effect multiplier.[13]

In some instances, such as estimating the impact of shutting down an industry in a region, the user must select the output-driven multiplier for impact estimation.[14] The output-driven multiplier measures the change in output in each row industry that results from a $1 change in total industry output in the column industry under study. Using the output-driven multiplier instead of the final-demand output multiplier ensures that the impact of the industry's shutdown on its own output will not exceed that output.

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12. The impact estimates based on the product of the initial change in final demand and the final-demand multiplier for earnings (or employment) reflect national average relationships between output and earnings (or employment). In contrast, the impact estimates based on the product of the initial change in earnings (or employment) and the direct-effect multiplier for earnings (or employment) reflect regional relationships between output and earnings (or employment). If the regional relationships differ from the national relationships, the two sets of estimates will differ and the estimates based on the direct-effect multipliers are preferable.

13. In this instance, the user typically estimates earnings or employment impacts. However, by converting the initial changes in earnings or employment

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into final-demand changes, the user can also estimate output impacts. For the conversion method, see the section "Initial Changes."

14. This multiplier, though not a part of RIMS II, can be derived from the final-demand output multiplier table. See appendix A.

Information Required From Users of RIMS II

To effectively use the RIMS II multipliers for impact analysis, users must provide geographically and industrially detailed information on the initial changes in output, earnings, or employment that are associated with the project or program under study. To provide this information, the user must answer five questions about the project or program.

- What is the affected region?
- Which industries are initially affected?
- Is there more than one phase of the project or program?
- What are the initial changes in output, earnings, or employment?
- Should the initial changes be separated into production costs, transportation costs, and trade margins?

This section provides guidance to the RIMS II user in answering these questions.

Affected Region

The user must determine the region that is affected by the project or program under study. The choice of the region depends on the purpose of the study. For example, suppose the user wants to estimate the impact of an increase in final demand for the output of a motor vehicle and equipment factory in Jackson County, MO, a county in the Kansas City metropolitan area and economic area that is closely linked economically to the other counties in the economic area. Assume further that most of the factory's labor force live in the other counties and that most of the factory's nonlabor inputs are purchased from businesses in the other counties. If the study focuses on the impact in the vicinity of the factory, then the region of choice is the county.[15] Alternatively, the focus might be the factory's impact on the surrounding metropolitan area. Finally, if the study seeks a comprehensive estimate of the factory's impact, then the region of choice is the economic area.[16]

For example, the final-demand output multipliers for the motor vehicles and equipment industry for the county, and thus the impacts, are relatively small, because most of the economic effects occur in the other counties (table B) .[17] The multipliers, and the impacts, are larger for the metropolitan area and the economic area, because the larger regions contain a larger number of the businesses from which the factory purchases its inputs, a larger proportion of the factory's labor force, and a larger proportion of the businesses that serve the labor force.

Table B.—Final-Demand Output Multipliers for Selected Industries and Areas

[Dollars]

Industry	Jackson County, MO	Kansas City, MO-KS metropolitan area	Kansas City, MO-KS economic area
	(1)	(2)	(3)
Farm products and agricultural, forestry, and fishing services	1.7944	2.1363	2.6533
Construction	1.8723	2.2521	2.3270
Food and kindred products and tobacco products	1.5222	2.0154	2.6498
Lumber and wood products and furniture and fixtures	1.6863	1.9772	2.0294
Fabricated metal products	1.7173	2.0087	2.0989
Motor vehicles and equipment	1.6967	1.7921	1.9636
Transportation	1.8649	2.1793	2.2263
Retail trade	1.8285	2.1561	2.1917
Eating and drinking places	1.7608	2.0982	2.2618
Private households	1.0997	1.3747	1.4576

The use of a multicounty region can sometimes complicate the impact analysis because of offsetting effects. For example, suppose a new shopping mall in a county draws a large share of its shoppers from nearby counties, where they previously shopped. For the county with the mall, the impact on sales and sales tax revenues is substantial. However, for the multicounty region, the impact of the mall also reflects the offsetting declines in sales and sales tax revenues in the nearby counties, so the impact on sales and sales tax revenues is smaller than that for the county.

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15. For one-county regions, impacts are sometimes underestimated because RIMS II multipliers do not reflect "feedback" effects, such as purchases made in the county by commuters from nearby counties.

16. For a multicounty region, impacts are sometimes overestimated because RIMS II multipliers reflect economic activity in industries that are unaffected by the project or program under study, but overestimation is likely to be less severe for economic areas than for States because of the strong economic links among counties in economic areas.

17. For the final-demand output multipliers for all industries for the county, for the metropolitan area, and for the economic area, see RIMS table 2.4 in appendix D.

Affected Industries

The user must determine which industries are initially affected by the project or program. The specification of these industries in the maximum possible detail will promote the accuracy of the impact analysis. If possible, the industries should be selected from the list of detailed industries for which RIMS II multipliers are available (appendix B). Otherwise, the industries must be selected from the list of aggregations of industries for which the multipliers are available (appendix C).

For example, suppose that the user plans to analyze the impact of a new meat-packing plant in the Kansas City economic area. The impact should be calculated with the multiplier for the industry of meat-packing plants and sausages and other prepared meat products (the meat-packing industry), not with the multiplier for the industry of food and kindred products and tobacco products, which comprises the meat-packing industry and 44 other industries. The final-demand output multiplier for the meat-packing industry is 4.1213, so that a $100,000 increase in final demand for meat packing is calculated to result in a total output increase of $412,130 in the economic area. However, if the multiplier of 2.6498 for the food and kindred products and tobacco products industry is used, the estimated increase in total output is only $264,980.

In addition, if detailed data are available on the purchases of goods and services (including labor) made by the initially affected industry, these "bill-of-goods" data should be used in impact estimation. For example, for the impact estimate for the meat-packing plant, instead of using the increase in final demand for meat packing, the user could use the change in the meat-packing industry's purchases of goods and services—such as food products, chemicals, printing, and labor—that are needed to manufacture the additional packaged meat. The impact would be calculated by multiplying the change in the purchases of each product by the appropriate final-demand output multiplier and then by adding the results to the initial change in the meat-packing industry.

The impacts calculated from changes in the bill-of-goods will equal the impacts calculated from final-demand changes if the shares of an industry's bill-of-goods that are accounted for by each purchased good and service equal the inputs per dollar of output for the industry in the RIMS II model. When the impact estimates differ, the bill-of-goods approach is likely to be more accurate because it reflects data for the project and the region under study.[18]

Project Phases

The user must determine if the project or program has more than one phase. If so, the user should calculate the impact of each phase. For example, if a project has two phases—construction and operation—then the impact of the construction phase should be calculated separately from the impact of the operation phase. In addition, if the operation changes over time, the impact of each phase of the operation should be estimated.

RIMS II, like all I-O models, is a "static equilibrium" model, so impacts calculated with RIMS II have no specific time dimension. However, because the model is based on annual data, it is customary to assume that the impacts occur in 1 year. For many situations, this assumption is reasonable.

However, for long-term projects, RIMS II should be carefully used because of the difficulty of accounting for the effects of changes in prices and wages.[19] For example, a factory is shut down, but a reduction in economic activity may not be the only result. The reduction in economic activity can lead to an increase in the supply of inputs—for example, an excess supply of labor—and a corresponding decline in input prices. The decline in input prices encourage the use of these inputs in other activities, so economic activity picks up. The pickup in economic activity may partially offset the decline in economic activity initiated by the shutdown of the factory. If the user can determine which industries are likely to increase their output as a result of the decline in input prices, then RIMS II multipliers can be used to estimate the output impacts of the new activity. The net impact of the project can be estimated by adding the impact of the factory shutdown to the impact of the increases in output in other industries.

Users should note that the impacts estimated with RIMS II multipliers provide information only about the project or program under study and not about the optimal use of resources, such as public funds or land. If the optimal use of resources is an issue, the user must estimate the impacts of all the feasible projects involving those resources and then compare the results.

Initial Changes

The user must determine the initial change in final demand, earnings, or employment due to the project.[20]

18. In contrast, the final-demand approach reflects the national average interindustry relationships that are incorporated in RIMS II. See appendix A.

19. RIMS II, like all I-O models, does not automatically account for these effects.

20. The RIMS II multipliers are then used to estimate how these initial changes affect all industries in the regional economy. The total impact of the project on the regional economy is thus composed of the initial change in the

Depending on the availability of data, the user can estimate the initial change either as a change in final demand in the initially affected industry or as a change in earnings or employment in the initially affected industry.[21]

Change in final demand

If the user can estimate the change in final demand in the initially affected industry, the user can estimate the impact on output, earnings, or employment on the basis of final-demand multipliers. In some instances, estimating the final-demand change is easy. For example, suppose all of the output of a new manufacturing plant in a region is shipped out of the region and does not compete with the output of the existing plants. The final-demand change for the region's manufacturing industry is calculated as the difference between the sum of the final-demand output of the new plant and that of the existing plants and the final-demand output of the existing plants. Thus, the change in final demand is simply the output of the new plant.

When the activity of a new project competes with the existing regional activity, estimating the change in final demand is more difficult, because it is necessary to estimate how much of the new project's output replaces the existing output. For example, suppose a shopping mall is constructed in a region that already has similar shops. If a portion of the sales at the new mall would have occurred at the existing shops in the absence of the new mall, then the final-demand change due to the mall is only the net increase in regional sales. If in the extreme case, all the sales at the new mall would have occurred at the existing shops, the final-demand change due to the mall is zero.

Change in earnings and employment

If the user can estimate the change in earnings or employment in the initially affected industry, the user can estimate the impact on earnings or employment on the basis of direct-effect multipliers. These estimates, which reflect data for the affected region, are preferable to estimates on the basis of final-demand multipliers, which reflect national average data.

If only data on the initial change in earnings or employment are available, the RIMS II user can still estimate the

change in final demand and thus estimate the output impacts. First, the final-demand multiplier for earnings (or employment) is divided by the direct-effect multiplier for earnings (or employment) to yield the change in earnings (or employment) per dollar of final demand. Next, the initial change in earnings (or employment) is divided by the change in earnings (or employment) per dollar of final demand to yield the change in final demand. The change in final demand is then multiplied by the final-demand output multiplier to yield the impact on output.

Separating the Initial Changes

If the initial changes are expressed as final-demand changes—which are valued in purchasers', or final users', prices—then the user must separate the changes into components for production costs, transportation costs, and trade margins before doing an impact study.[22] The separation of the changes is necessary because RIMS II follows the convention used in the national I-O accounts of valuing output at producers' prices, which exclude distribution costs, such as transportation costs and wholesale and retail trade margins, but include excise taxes collected and paid by producers. Transportation costs and trade margins are shown as purchases by the users of commodities.

For example, suppose that a consumer spends $100 to buy a car battery at an auto parts store. The price of the battery is the sum of (1) the producer's price that the manufacturer charges the wholesaler; (2) the wholesale margin, which is the difference between the price the wholesaler charges the retailer and the cost to the wholesaler; (3) the retail margin, which is the difference between the price the retailer charges the consumer and the cost to the retailer; and (4) the transportation costs, which consist of the costs of transporting the output from the manufacturer to the wholesaler and from the wholesaler to the retailer. Accordingly, the final-demand changes associated with the battery purchase are the final-demand changes for manufacturing, for wholesale trade, for retail trade, and for transportation. The impact of the purchase is then calculated by multiplying these final-demand changes by the respective final-demand multipliers.

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directly affected industry plus the sum of the changes in all industries in the region.

21. To be consistent with BEA's national I-O table for 1987, which underlies the current RIMS II multipliers, initial changes that are specified in terms of dollars of final demand or of earnings should be deflated.

22. Data on transportation costs and trade margins from the national I-O accounts are provided to RIMS II users as part of the RIMS II product.

Four Case Studies Using RIMS II Multipliers

The case studies in this section illustrate four types of projects for which RIMS II users might estimate impacts. The first case study is a project that has both a construction and an operation phase. The second is a project with negative impacts on a region that are partly offset by new economic initiatives. The third is a project to relocate an industry, and the fourth is a project to develop a new industry in a region.

Case Study 1:
Constructing and Operating
a Sports Facility

This case study of the estimation of the impacts of a new sports facility on a regional economy is in two parts. The first part discusses impact estimation for the construction phase and focuses on three alternative estimation methods. The second part discusses impact estimation for the operation phase.

Sports facility construction

Suppose developers plan to construct a sports facility in the Kansas City economic area. The plan requires an investment of $111.5 million and will create 1,601 new construction jobs with associated earnings of $34.3 million. Three methods can be used to estimate the impact of the construction.

Using data on final-demand changes.—The investment in construction of the sports facility is a $111.5 million change in final demand for the construction, maintenance, and repair industry because construction is a final good. Table C shows the estimates of the impacts. The change in final demand (row 1) is multiplied by the respective final-demand multipliers for output, earnings, and employment (rows 2–4) to yield the impacts (rows 5–7). The impacts of the sports facility construction are $260.7 million in output, $80.1 million in earnings, and 3,848 jobs.

Using data on initial changes in earnings and employment.—The construction jobs and associated earnings required to build the sports facility are initial changes of

$34.3 million in earnings and 1,601 jobs in the industry. Table C shows the estimates of the impacts. The initial changes (rows 8 and 9) are multiplied by the direct-effect multipliers for earnings and for employment for the construction industry (rows 10 and 11) to yield the impacts (rows 12 and 13). The impacts of sports facility construction are $80.1 million in earnings and 3,847 jobs.

Whenever project-specific estimates of initial changes in earnings and jobs are available, this method should be used to calculate impacts. Although the earnings and employment impacts in rows 6 and 7 are virtually the same as those in rows 12 and 13, impacts based on direct-effect multipliers do not always equal impacts based on final-demand multipliers.[23]

Table C.—Estimation of the Impacts of Sports Facility Construction, Kansas City, MO-KS Economic Area

	Impact based on data on the change in final demand:	
1	Change in final demand (thousands of dollars)	111,545
	Final-demand multiplier:	
2	Output (dollars)	2.3369
3	Earnings (dollars)	.7185
4	Employment (jobs) [1]	34.5
	Impact on:	
5	Output (thousands of dollars) [row 1 x row 2]	260,670
6	Earnings (thousands of dollars) [row 1 x row 3]	80,145
7	Employment (jobs) [row 1 x row 4]	3,848
	Impact based on data on initial changes in earnings and employment:	
	Initial change:	
8	Earnings (thousands of dollars)	34,345
9	Employment (jobs)	1,601
	Direct-effect multiplier:	
10	Earnings (dollars)	2.3335
11	Employment (jobs)	2.4031
	Impact on:	
12	Earnings (thousands of dollars) [row 8 x row 10]	80,144
13	Employment (jobs) [row 9 x row 11]	3,847

1. The employment multiplier is measured on the basis of a $1 million change in output delivered to final demand.

Using data on changes in the bill-of-goods.—The purchases of goods and services (including labor) by the construction industry that directly result from the $111.5 million investment in the construction of the sports facility constitute the changes in the bill-of-goods. These purchases are converted into regional purchases in producers' prices, and the regional purchases are then multiplied by final-demand multipliers for output, earnings, and employment to yield the impacts.

23. See footnote 12.

Table D.—Purchases Associated With the Sports Facility Construction, Kansas City, MO-KS Economic Area

[Thousands of dollars]

Industry	Total purchases (purchasers' prices)	Regional purchases (purchasers' prices)	Regional purchases (producers' prices)
	(1)	(2)	(3)
Manufacturing	58,468	37,143	33,730
Paints and allied products	10,155	5,453	4,619
Miscellaneous plastics products	6,217	6,217	5,406
Ready-mixed concrete	8,370	8,370	8,370
Nonferrous wiredrawing and insulating	8,220	3,288	2,832
Fabricated structural metal	9,167	6,167	6,167
Pipe, valves, and pipe fittings	7,876	3,590	2,981
Wiring devices	8,463	4,058	3,355
Transportation	....	....	477
Costs:			
Paints and allied products	....	....	240
Miscellaneous plastics products	....	....	94
Ready-mixed concrete	....	....	0
Nonferrous wiredrawing and insulating	....	....	55
Fabricated structural metal	....	....	0
Pipe, valves, and pipe fittings	....	....	53
Wiring devices	....	....	35
Wholesale trade	....	....	2,936
Margins:			
Paints and allied products	....	....	594
Miscellaneous plastics products	....	....	717
Ready-mixed concrete	....	....	0
Nonferrous wiredrawing and insulating	....	....	401
Fabricated structural metal	....	....	0
Pipe, valves, and pipe fittings	....	....	556
Wiring devices	....	....	668
Engineering, architectural, and surveying services	18,732	18,732	18,732
Earnings paid to households	34,345	34,345	34,345
Total	**111,545**	**90,220**	**90,220**

In table D, column 1 shows the total purchases in purchasers' prices, which include distribution costs, and column 2 shows which of these purchases occur in the economic area.[24] Column 3 then shows the purchases in producers' prices in the economic area.

The regional purchases in producers' prices (column 3) reflect the separation of the purchases into production-cost and distribution-cost components. Table E shows this separation for the paints and allied products industry. Column 1 (from table D, column 2) shows that the construction industry spent $5.453 million to purchase paints and allied products in the economic area. The entries for wholesale trade and for transportation are not shown because these costs are included in the purchase price of paints and allied products. Column 2 shows the dollar composition of the purchases of paints and allied products, in producers' prices, from the national I-O accounts. Column 3 shows the percentage composition: For the Nation, 84.7 percent of the purchases of paints and

allied products is for the output of paint manufacturers, 4.4 percent is for the transportation of the paint between the manufacturer and the wholesaler (the transportation cost), and 10.9 percent is for the services provided by the wholesaler (the wholesale margin). Each entry in column 3 is multiplied by $5.453 million (column 1) in order to separate the purchases of paints and allied products in the economic area into production-cost and distribution-cost components.[25] Column 4 shows the resulting regional purchases in producers' prices.

Table E.—Purchases of Paints and Allied Products by Production Cost and Distribution Cost for the Kansas City, MO-KS Economic Area

[Thousands of dollars]

Industry	Regional purchases (purchasers' prices)	U.S. purchases		Regional purchases (producers' prices) ($5,453 x col. 3)
		Producers' prices	Percent of total	
	(1)	(2)	(3)	(4)
Manufacturing	5,453	194,000	84.7	4,619
Transportation costs	....	10,000	4.4	240
Wholesale trade margins ...	....	25,000	10.9	594
Total	**5,453**	**229,000**	**100.0**	**5,453**

Table Fshows the estimation of the impacts of sports facility construction. The regional purchases in producers' prices (column 1) are multiplied by the final-demand multipliers for output, earnings, and employment (columns 2–4) to yield the impacts (columns 5–7) of the changes in the bill-of-goods. The all-industry impacts of the changes in the bill-of-goods (the subtotals in columns 5–7) are then added to the initial changes in output, earnings, and employment to yield total impacts of the sports facility construction of $286.8 million in output, $87.8 million in earnings, and 4,027 jobs.

Whenever estimates of purchases of goods and services that result from a project are available, this method (the bill-of-goods approach) should be used to calculate impacts. These impact estimates are likely to be more accurate than the estimates based on data for the construction industry as a whole (used in the first method) because the composition of purchases by the construction industry can differ substantially from project to project.

Sports facility operation

Suppose that the operation of the new sports facility initially results in output, or annual revenues from ticket and concession sales, of $22.8 million and in 250 new jobs

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24. For earnings paid to regional households, it is assumed that the changes in earnings paid are reflected in the changes in consumption expenditures and that the consumption pattern of construction wage earners is similar to the consumption pattern for the general population in the RIMS II model. For instances in which earnings paid cannot be treated as earnings spent, see the operation phase of case study 1 and the base-closing phase of case study 2.

25. It is assumed that the percentage distribution of these components is the same in the economic area as in the Nation. It is also assumed that all manufacturers, transporters, and wholesalers of paints and allied products are located in the economic area.

Table F.—Estimation of the Impacts of Sports Facility Construction Based on Data on Changes in the Bill-of-Goods, Kansas City, MO-KS Economic Area

Industry	Regional purchases in producers' prices (thousands of dollars)	Final-demand multiplier			Impact		
		Output (dollars)	Earnings (dollars)	Employment [1] (jobs)	Output (thousands of dollars) (col. 1 x col. 2)	Earnings (thousands of dollars) (col. 1 x col. 3)	Employment (jobs) (col. 1 x col. 4)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Paints and allied products	4,619	1.7722	0.3907	14.8	8,186	1,805	68
Miscellaneous plastics products	5,406	1.9872	.4842	21.5	10,743	2,618	116
Ready-mixed concrete	8,370	2.1576	.5266	23.9	18,059	4,408	200
Nonferrous wiredrawing and insulating	2,832	1.8598	.4000	17.0	5,267	1,133	48
Fabricated structural metal	6,167	2.2295	.5818	23.1	13,749	3,588	142
Pipe, valves, and pipe fittings	2,981	2.0844	.6050	25.2	6,214	1,804	75
Wiring devices	3,355	2.0838	.5857	24.6	6,991	1,965	83
Transportation	477	2.2263	.7393	31.5	1,062	353	15
Wholesale trade	2,936	2.0538	.6704	28.0	6,030	1,968	82
Engineering, architectural, and surveying services	18,732	2.6124	1.0134	43.1	48,935	18,983	807
Earnings paid to households	34,345	1.4569	.4331	23.0	50,037	14,875	790
Subtotal	**90,220**	....	....	....	**175,273**	**53,500**	**2,426**
Plus: Initial change	....	....	....	....	111,545	34,345	1,601
Equals: **Total**	....	....	....	....	**286,818**	**87,845**	**4,027**

1. The employment multiplier is measured on the basis of a $1 million change in output delivered to final demand.

with associated earnings of $15.0 million. The impacts of the operation are estimated on the basis of bill-of-goods purchases.[26]

The bill-of-goods purchases are converted into regional purchases, in producers' prices, which are then multiplied by the appropriate RIMS II multipliers to yield the impacts. In table G , column 1 shows the purchases in purchasers' prices, column 2 shows which of these purchases occur in the economic area, and column 3 shows the purchases in producers' prices.

For example, suppose that all manufactured products are purchased from wholesalers, and suppose that the manufacturers from which the wholesalers purchase ice cream and frozen desserts and bread, cake, and related products are located outside the economic area. Then, for ice cream and frozen desserts and for bread, cake, and related products, the regional purchases in producers' prices are calculated for wholesale trade but not for manufacturing and transportation (column 3). For the other manufactured products, the regional purchases in producers' prices reflect the separation of the purchases into production costs, transportation costs, and wholesale margins.

For advertising, electric services, water supply and sewerage systems, insurance carriers, management and consulting services, and miscellaneous equipment rental and leasing, the regional purchases in purchasers' prices can be viewed as regional purchases in producers' prices because no margin adjustments are necessary.

26. These impact estimates are likely to be more accurate than those based on data for the commercial sports industry because the composition of purchases by each sports facility differs substantially.

For the $15.0 million in earnings paid to workers in the sports facility, only those earnings that are spent in the economic area can be viewed as purchases in the economic area. The earnings spent by households are likely to be less than the earnings paid, because a substantial part of earnings goes to high-salaried professional athletes, who are likely to save a larger-than-average share

Table G.—Purchases Associated With Sports Facility Operation, Kansas City, MO-KS Economic Area

[Thousands of dollars]

Industry	Total purchases (purchasers' prices)	Regional purchases (purchasers' prices)	Regional purchases (producers' prices)
	(1)	(2)	(3)
Manufacturing	2,200	1,681	1,136
Ice cream and frozen desserts	265	80	0
Bread, cake, and related products	235	101	0
Malt beverages	650	450	291
Bottled and canned soft drinks	500	500	370
Other food	550	550	475
Transportation	....	....	23
Costs:			
Ice cream and frozen desserts	....	....	0
Bread, cake, and related products	....	....	0
Malt beverages	....	....	10
Bottled and canned soft drinks	....	....	2
Other food	....	....	11
Wholesale trade	....	....	388
Margins:			
Ice cream and frozen desserts	....	....	9
Bread, cake, and related products	....	....	38
Malt beverages	....	....	149
Bottled and canned soft drinks	....	....	128
Other food	....	....	64
Electric services (utilities)	980	900	900
Water supply and sewerage systems	280	280	280
Insurance carriers	320	320	320
Management and consulting services, testing and research labs	1,500	900	900
Miscellaneous equipment rental and leasing	1,300	801	801
Advertising	1,200	1,200	1,200
Earnings paid to households	15,000	8,250	8,250
Total	**22,780**	**14,332**	**14,198**

Table H.—Estimation of the Impacts of Sports Facility Operation, Kansas City, MO-KS Economic Area

Industry	Regional purchases in producers' prices (thousands of dollars)	Final-demand multiplier			Impact		
		Output (dollars)	Earnings (dollars)	Employ-ment[1] (jobs)	Output (thousands of dollars) (col. 1 x col. 2)	Earnings (thousands of dollars) (col. 1 x col. 3)	Employ-ment (jobs) (col. 1 x col. 4)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ice cream and frozen desserts	0	2.0156	0.4017	18.5	0	0	0
Bread, cake, and related products	0	1.9296	.4956	22.4	0	0	0
Malt beverages	291	1.8001	.3063	10.9	524	89	3
Bottled and canned soft drinks	370	2.0317	.3907	16.1	752	145	6
Other food	475	2.0186	.4119	19.9	959	196	9
Transportation	23	2.2263	.7393	31.5	51	17	1
Wholesale trade	388	2.0538	.6704	28.0	797	260	11
Electric services (utilities)	900	1.6283	.3249	11.7	1,465	292	11
Water supply and sewerage systems	280	2.8611	.7023	31.4	801	197	9
Insurance carriers	320	2.6926	.8838	36.7	862	283	12
Management and consulting services, testing and research labs	900	2.4989	.9090	41.5	2,249	818	37
Miscellaneous equipment rental and leasing	801	2.1202	.6625	32.6	1,698	531	26
Advertising	1,200	2.3785	.9678	41.3	2,854	1,161	50
Earnings paid to households	8,250	1.4569	.4331	23.0	12,019	3,573	190
Subtotal	**14,198**				**25,031**	**7,562**	**365**
Plus: Initial change					22,780	15,000	250
Equals: **Total**					**47,811**	**22,562**	**615**

1. The employment multiplier is measured on the basis of a $1 million change in output delivered to final demand.

of their earnings and who are likely to reside outside the economic area in the off-season. In this case study, it is assumed that only $8.25 million of the $15.0 million paid to households is spent in the economic area and therefore can be viewed as purchases in the economic area.

Table H shows the estimation of the impacts from the sports facility operation. The regional purchases in producers' prices (column 1) are multiplied by the final-demand multipliers for output, earnings, and employment (columns 2–4) to yield the impacts (columns 5–7) of the changes in the bill-of-goods. The all-industry impacts of the changes in the bill-of-goods (the subtotals in columns 5–7) are then added to the initial changes in output, earnings, and employment to yield the impacts of the operation of the sports facility of $47.8 million in output, $22.6 million in earnings, and 615 jobs.

Case Study 2:
Closing and Converting a Military Base and Operating a Factory

This case study of the estimation of the impacts of the closing of a military base and the operation of a new factory at the same site is in three parts. The first part discusses the impact estimation for the closing of the military base. The second part discusses the impact estimation for the factory operation. The third part discusses the estimation of the combined impact of the base closing and of the factory operation.

Military base closing

Suppose the Federal Government plans to close a military base in the Kansas City economic area. In order to calculate the impacts of the base closing, the estimates of the negative changes in final demand for regional goods and services are multiplied by the appropriate RIMS II multipliers.

These changes consist of the decline in the purchases of goods and services that results from closing the military base and the decline in purchases by military personnel. For both types of purchases, the user must determine which purchases occur in the economic area and then must show these purchases in producers' prices.[27]

Table I shows the estimates of the regional purchases, in producers' prices, that result from the bill-of-goods purchases made by the military base with its $114.0 million annual operating budget. Column 1 shows the bill-of-goods purchases. Column 2 shows which of these purchases occur in the economic area. Column 3 then shows the regional purchases, in producers' prices, that result from the operation of the military base.

For example, consider the electric and electronic equipment industry. Column 3 shows that regional purchases, in producers' prices, of electric and electronic equipment is zero, because none of this industry's output is produced in the economic area. However, the wholesale trade margins and transportation costs that are associated with the purchase of electric and electronic equipment in the eco-

27. For a more extensive treatment of the conversion of purchases from purchasers' to producers' prices, see case study 1.

Table I.—Purchases Associated With Military Base Closing, Kansas City, MO-KS Economic Area

[Thousands of dollars]

Industry	Total purchases (purchasers' prices)	Regional purchases (purchasers' prices)	Regional purchases (producers' prices)
	(1)	(2)	(3)
Construction	−6,450	−5,150	−5,150
Manufacturing	−42,775	−35,985	−26,944
Lumber and wood products and furniture and fixtures	−1,000	−720	−602
Fabricated metal products	−3,200	−1,100	−1,100
Industrial machinery and equipment	−26,725	−25,050	−21,242
Electronic and other electric equipment	−5,815	−4,740	0
Motor vehicles and equipment	−6,035	−4,375	−4,000
Transportation	....	....	−278
Costs:			
Lumber and wood products and furniture and fixtures	....	....	−1
Fabricated metal products	....	....	0
Industrial machinery and equipment	....	....	−19
Electronic and other electric equipment	....	....	−111
Motor vehicles and equipment	....	....	−147
Wholesale trade	....	....	−4,763
Margins:			
Lumber and wood products and furniture and fixtures	....	....	−117
Fabricated metal products	....	....	0
Industrial machinery and equipment	....	....	−3,789
Electronic and other electric equipment	....	....	−629
Motor vehicles and equipment	....	....	−228
Communications	−4,000	−4,000	−4,000
Electric, gas, and sanitary services	−19,750	−19,750	−19,750
Business services	−8,125	−6,575	−6,575
Miscellaneous services	−2,900	−2,540	−2,540
Earnings paid to military personnel	−30,000	−30,000	−30,000
Total	**−114,000**	**−104,000**	**−100,000**

Table J.—Purchases By Military Personnel, Kansas City, MO-KS Economic Area

[Thousands of dollars]

Industry	Total purchases (purchasers' prices)	Regional purchases (purchasers' prices)	Regional purchases (producers' prices)
	(1)	(2)	(3)
Manufacturing	−6,900	−5,100	−2,800
Food and kindred products and tobacco products	−1,445	−945	−600
Apparel and other textile products	−1,213	−963	−500
Chemicals and allied products and petroleum and coal products	−2,759	−2,259	−1,200
Lumber and wood products and furniture and fixtures	−1,483	−933	−500
Transportation	....	....	−79
Costs:			
Food and kindred products and tobacco products	....	....	−26
Apparel and other textile products	....	....	−2
Chemicals and allied products and petroleum and coal products	....	....	−49
Lumber and wood products and furniture and fixtures	....	....	−2
Wholesale trade	....	....	−447
Margins:			
Food and kindred products and tobacco products	....	....	−98
Apparel and other textile products	....	....	−55
Chemicals and allied products and petroleum and coal products	....	....	−276
Lumber and wood products and furniture and fixtures	....	....	−18
Retail trade	....	....	−1,774
Margins:			
Food and kindred products and tobacco products	....	....	−221
Apparel and other textile products	....	....	−406
Chemicals and allied products and petroleum and coal products	....	....	−734
Lumber and wood products and furniture and fixtures	....	....	−413
Communications	−400	−400	−400
Electric, gas, and sanitary services	−500	−500	−500
Hotels and other lodging places, amusement and recreation services, and motion pictures	−2,500	−1,800	−1,800
Personal services	−2,100	−1,900	−1,900
Eating and drinking places	−6,800	−4,800	−4,800
Miscellaneous services	−1,800	−1,500	−1,500
Total	**−21,000**	**−16,000**	**−16,000**

nomic area are included in the regional purchases from the wholesale trade and transportation industries.

Table J shows the estimates of regional purchases, in producers' prices, that result from the bill-of-goods purchases by military personnel. Compared with the general population, military personnel receive a larger share of total earnings from payments-in-kind for clothing and housing, so they allocate a smaller share of total purchases to these items. Accordingly, the use of the bill-of-goods data (column 1) as the basis for estimating regional purchases in producers' prices permits the RIMS II user to account for the difference between the earnings and expenditure patterns of military personnel and those of the general population.[28]

Table K shows the estimation of the impacts of the military base closing. Column 1 shows the total regional purchases in producers' prices, which are the sum of the purchases for the operation of the military base (from table I, column 3) and the purchases by military personnel (from table J, column 3). The total regional purchases in producers' prices are multiplied by the respective multipliers (columns 2–4) to yield the impacts (columns 5–7)

of the changes in the purchases. The all-industry impacts of the changes in the purchases (the subtotals in columns 5–7) are then added to the initial changes in output, earnings, and employment to yield the total impacts. The total impacts, or losses, of the military base closing are $176.9 million in output, $79.4 million in earnings, and 5,263 jobs.

Factory operation

Suppose local planners propose the conversion of the military base into a factory for manufacturing $50.0 million in output of farm machinery and equipment. Table L shows the estimation of the impacts of the operation of the factory.[29] If all the factory output is sold outside the

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28. The personal consumption expenditures data in RIMS II reflect the earnings and expenditure patterns of the general population.

29. The impacts of the construction of the factory are not considered, because they are only short-term impacts.

Table K.—Estimation of the Impacts of a Military Base Closing, Kansas City, MO-KS Economic Area

Industry	Regional purchases in producers' prices (thousands of dollars)	Final-demand multiplier			Impact		
		Output (dollars)	Earnings (dollars)	Employment [1] (jobs)	Output (thousands of dollars) (col. 1 x col. 2)	Earnings (thousands of dollars) (col. 1 x col. 3)	Employment (jobs) (col. 1 x col. 4)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Construction	−5,150	2.3270	0.7122	34.4	−11,984	−3,668	−177
Manufacturing	−29,744	....	....	....	....	....	....
Food and kindred products and tobacco products	−600	2.6498	.5265	27.4	−1,590	−316	−16
Apparel and other textile products	−500	1.7359	.4302	25.0	−868	−215	−13
Chemicals and allied products and petroleum and coal products	−1,200	1.8983	.4244	15.8	−2,278	−509	−19
Lumber and wood products and furniture and fixtures	−1,102	2.0294	.5705	28.0	−2,236	−629	−31
Fabricated metal products	−1,100	2.0989	.5762	23.4	−2,309	−634	−26
Industrial machinery and equipment	−21,242	2.0785	.5955	24.6	−44,151	−12,650	−523
Electronic and other electric equipment	0	1.9596	.5183	22.4	0	0	0
Motor vehicles and equipment	−4,000	1.9636	.3907	14.8	−7,854	−1,563	−59
Transportation	−357	2.2263	.7393	31.5	−795	−264	−11
Communications	−4,400	2.0209	.4866	17.6	−8,892	−2,141	−77
Electric, gas, and sanitary services	−20,250	1.7034	.3414	12.9	−34,494	−6,913	−261
Wholesale trade	−5,210	2.0623	.6737	28.1	−10,745	−3,510	−146
Retail trade	−1,774	2.1917	.7888	50.2	−3,888	−1,399	−89
Hotels and other lodging places, amusement and recreation services, and motion pictures	−1,800	2.3923	.8017	50.4	−4,306	−1,443	−91
Personal services	−1,900	2.4157	.8541	60.5	−4,590	−1,623	−115
Business services	−6,575	2.4058	.9273	45.6	−15,818	−6,097	−300
Eating and drinking places	−4,800	2.2618	.6659	53.2	−10,857	−3,196	−255
Miscellaneous services	−4,040	2.2759	.6561	38.1	−9,195	−2,651	−154
Subtotal	**−86,000**	....	....	....	**−176,850**	**−49,421**	**−2,363**
Initial change	....	....	....	....	....	−30,000	−2,900
Total	....	....	....	....	**−176,850**	**−79,421**	**−5,263**

1. The employment multiplier is measured on the basis of a $1 million change in output delivered to final demand.

Table L.—Estimation of the Impacts of Operating a Factory for Farm Machinery and Equipment in the Kansas City, MO-KS Economic Area

Change in final demand (thousands of dollars)	Final-demand multiplier			Impact		
	Output (dollars)	Earnings (dollars)	Employment [1] (jobs)	Output (thousands of dollars) (col. 1 x col. 2)	Earnings (thousands of dollars) (col. 1 x col. 3)	Employment (jobs) (col. 1 x col. 4)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
50,000	2.0408	0.5465	24.3	102,040	27,325	1,215

1. The employment multiplier is measured on the basis of a $1 million change in output delivered to final demand.

Table M.—Estimation of the Impacts of the Conversion of a Military Base to a Factory in the Kansas City, MO-KS Economic Area

	Output (thousands of dollars)	Earnings (thousands of dollars)	Employment (jobs)
	(1)	(2)	(3)
Factory operation	102,040	27,325	1,215
Military base closing	−176,850	−79,421	−5,263
Net impact	−74,810	−52,096	−4,048

economic area, the change in final demand is equal to the factory output (column 1).[30] This final-demand change is multiplied by the respective multipliers (columns 2–4) to yield the impacts (columns 5–7).

Impacts of the conversion

Table M shows the estimation of the impacts of the conversion of a military base to a factory. It is assumed that the net impacts occur in 1 year; in practice, it is likely to take several years to shut down the base before conversion can begin. Net impacts are estimated by adding the estimates of the impacts of closing the military base (table K) to the estimates of the impacts of the operation of the farm machinery and equipment factory at the same site (table L). The factory operation replaces $102.0 million of the $176.9 million loss of output due to the base closing, $27.3 million of the $79.4 million loss of earnings, and 1,215 of the 5,263 jobs lost. Therefore, the impact of the conversion is a $74.8 million loss of output, a $52.1 million loss of earnings, and 4,048 jobs lost.

30. If some of the new factory's output competes with the output of other regional factories, the change in final demand would equal the new factory's output minus the displaced output of the other regional factories.

Case Study 3:
Departure of an Industry from a Region

This case study of the departure of the motor vehicles and passenger car bodies industry (the motor vehicle industry) shows how the RIMS II user can estimate the impacts of an industry's departure from a region.

Suppose that the motor vehicle industry is departing from the Kansas City economic area where it produced $120.0 million in annual output and provided 333 full- and part-time jobs with associated earnings of $15.6 million. The impact of the departure on each regional industry (including the motor vehicle industry) must be estimated on the basis of output-driven multipliers, which measure the change in each industry that results from a $1 change in total output in the motor vehicle industry, because the impact on the motor vehicle industry cannot exceed its total output.

Table N shows the calculation of the impacts. The change in the output of the motor vehicle industry equals the industry's total output of $120.0 million. In order to ensure that the impact of the industry's departure on motor vehicle output does not exceed $120.0 million, the final-demand output multiplier for the motor vehicle industry must be constrained to equal one. This constraint is applied by converting the final-demand

multipliers (columns 1–3) to output-driven multipliers (columns 4–6): Each entry in columns 1–3 is divided by the final-demand output multiplier (1.1330) for the motor vehicle industry. The resulting output-driven multipliers for each industry are then multiplied by the output-change of $120.0 million to yield the impacts (columns 7–9) on each industry of the motor vehicle industry's departure.

This case study does not consider the potentially offsetting impacts of the re-employment of the labor and capital that were left idle as a result of the motor vehicle industry's departure from the area. For example, the unemployed motor vehicle workers might find jobs in other industries in the area, or the availability of the vacant motor vehicle factory might induce a new industry to enter the area. If the user knows how the idle labor and capital are likely to be re-employed, RIMS II multipliers can be used to estimate these offsetting impacts.[31]

Case Study 4:
Arrival of an Industry in a Region

This case study of the glass-containers manufacturing industry shows how the RIMS II user can estimate the impacts of a new industry's arrival in a region.

Suppose that a manufacturer plans to locate the first glass-container factory in the Kansas City economic area,

31. For an example of the estimation of offsetting impacts, see case study 2.

Table N.—Estimation of the Impacts of the Departure of the Motor Vehicle Industry from the Kansas City, MO-KS Economic Area

Industry	Final-demand multiplier			Output-driven multiplier			Impact		
	Output[1] (dollars)	Earnings (dollars)	Employ-ment[2] (jobs)	Output[1] (dollars) (col. 1 / 1.1330)	Earnings (dollars) (col. 2 / 1.1330)	Employ-ment[2] (jobs) (col. 3 / 1.1330)	Output (thou-sands of dollars) (col. 4 x $120 mil.)	Earnings (thou-sands of dollars) (col. 5 x $120 mil.)	Employ-ment (jobs) (col. 6 x $120 mil.)
Food and kindred products and tobacco products	0.0206	0.0025	0.1007	0.0182	0.0022	0.0889	−2,184	−264	−11
Textile mill products	.0005	.0001	.0050	.0004	.0001	.0044	−48	−12	−1
Apparel and other textile products	.0134	.0030	.2058	.0118	.0026	.1816	−1,416	−312	−22
Paper and allied products	.0074	.0015	.0513	.0065	.0013	.0453	−780	−156	−5
Printing and publishing	.0241	.0068	.2661	.0213	.0060	.2349	−2,556	−720	−28
Chemicals and allied products and petroleum and coal products	.0269	.0046	.1219	.0237	.0041	.1076	−2,844	−492	−13
Rubber and miscellaneous plastics products and leather and leather products	.0481	.0111	.4529	.0425	.0098	.3997	−5,100	−1,176	−48
Lumber and wood products and furniture and fixtures	.0045	.0011	.0467	.0040	.0010	.0412	−480	−120	−5
Stone, clay, and glass products	.0054	.0013	.0510	.0048	.0011	.0450	−576	−132	−5
Primary metal industries	.0181	.0040	.1257	.0160	.0035	.1109	−1,920	−420	−13
Fabricated metal products	.0255	.0068	.2464	.0225	.0060	.2175	−2,700	−720	−26
Industrial machinery and equipment	.0195	.0061	.2155	.0172	.0054	.1902	−2,064	−648	−23
Electronic and other electric equipment	.0126	.0032	.1403	.0111	.0028	.1238	−1,332	−336	−15
Motor vehicles and equipment	1.1330	.1473	3.1453	1.0000	.1300	2.7761	−120,000	−15,600	−333
Other transportation equipment	.0007	.0002	.0081	.0006	.0002	.0071	−72	−24	−1
Instruments and related products	.0020	.0005	.0198	.0018	.0004	.0175	−216	−48	−2
Miscellaneous manufacturing industries	.0012	.0003	.0190	.0011	.0003	.0168	−132	−36	−2
Private households	.3960	.0007	.0829	.3495	.0006	.0732	....	−72	−9
All other industries	.6019	.1949	9.3700	.5312	.1720	8.2701	−63,744	−20,640	−992
Total	**1.9654**	**.3960**	**14.6744**	**1.7347**	**.3495**	**12.9518**	**−208,164**	**−41,928**	**−1,554**

1. The column total is the sum of the entries in all rows except "Private households"; the entries for those rows include earnings paid to households. The "Private households" row entry is the sum of earnings paid to households by all industries.

2. The employment multiplier is measured on the basis of a $1 million change in output delivered to final demand.

Table O.—Estimation of the Impacts of the Arrival of a Glass-Containers Manufacturing Industry, Kansas City, MO-KS Economic Area

Industry	Regional purchases in producers' prices (thousands of dollars)	Final-demand multiplier			Impact		
		Output (dollars)	Earnings (dollars)	Employment [1] (jobs)	Output (thousands of dollars) (col. 1 x col. 2)	Earnings (thousands of dollars) (col. 1 x col. 3)	Employment (jobs) (col. 1 x col. 4)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sand and gravel	1,348	1.8058	0.5165	22.3	2,434	696	30
Paperboard containers and boxes	5,480	1.6738	.4013	16.2	9,172	2,199	89
Industrial inorganic and organic chemicals	3,861	1.7851	.3725	12.9	6,892	1,438	50
Special dies and tools and machine tool accessories	727	2.0861	.7671	29.9	1,517	558	22
Railroads and related services	800	2.1208	.6327	22.3	1,697	506	18
Electric services (utilities)	2,005	1.6283	.3249	11.7	3,265	651	23
Gas production and distribution (utilities)	2,507	1.6774	.2767	9.7	4,205	694	24
Wholesale trade	1,446	2.0538	.6704	28.0	2,970	969	40
Advertising	1,186	2.3785	.9678	41.3	2,821	1,148	49
Earnings paid to households	15,028	1.4569	.4331	23.0	21,894	6,509	346
Subtotal	**34,388**	....	....	....	**56,867**	**15,368**	**691**
Initial change	....	....	....	....	50,000	15,028	350
Total	....	....	....	....	**106,867**	**30,396**	**1,041**

1. The employment multiplier is measured on the basis of a $1 million change in output delivered to final demand.

where it will produce $50.0 million in annual output and provide 350 full- and part-time jobs with associated earnings of $15.0 million.

The change in final demand for the output of the factory is $50.0 million, and the RIMS II user wants to estimate the impacts of the change in final demand on the economic area.[32] The impact estimation is complicated by the treatment of the industry in RIMS II; inasmuch as this industry does not yet exist in the economic area, the column entries in the final-demand multiplier table for the industries from which the glass-container industry purchases inputs are zero. Impact estimates based on these column entries would thus exclude the impacts of

a change in final demand in the glass-container industry on other regional industries. To overcome this limitation, the user must estimate impacts on the basis of bill-of-goods data on the purchases of goods and services by the glass-container industry.

Table O shows the calculation of the impacts. The regional purchases, in purchasers' prices (column 1), that result from the operation of the new factory are multiplied by the respective final-demand multipliers for output, earnings, and employment (columns 2–4) to yield the impacts of the changes in the purchases (columns 5–7). The all-industry impacts of the changes in the purchases (the subtotals in columns 5–7) are then added to the initial changes in output, earnings, and employment to yield total impacts of the operation of the glass-container factory of $106.9 million in output, $30.4 million in earnings, and 1,041 jobs.

32. The impacts of the construction of the new factory are not considered. For an illustration of the estimation of construction impacts on the basis of bill-of-goods data, see case study 1.

Appendix A:
Data Sources and Methods

Most regional economists agree that the most accurate method of estimating a regional input-output (I-O) model is to survey the businesses in a region in order to determine which goods and services are purchased by industries in the region and whether these goods and services are purchased from other industries in the region or from industries in other regions. However, because these surveys are costly, few regional I-O models in the United States are based on survey, or primary source, data.

As a result, the estimation of the regional input-output modeling system (RIMS II), like that of most regional I-O models, is based on data from the national I-O accounts and other secondary data. It is assumed that the national I-O data can be used to represent the composition of inputs purchased in the region. The national data are then adjusted by regional data, because the industries in a region cannot obtain all of their inputs from within the region.

The RIMS II model and its multipliers are prepared in three major steps.[33] First, an adjusted national industry-by-industry direct requirements table is prepared. Second, the adjusted national table is used to prepare a regional industry-by-industry direct requirements table.[34] Third, a regional industry-by-industry total requirements table is prepared, and the multipliers are derived from this table.

The Adjusted National Direct Requirements Table

The adjusted national industry-by-industry direct requirements table is derived from the make and use tables in BEA's 1987 benchmark I-O accounts for the U.S. economy.[35] The use table is adjusted so that it includes only the use of domestically produced commodities: The data in a use table for imported commodities are subtracted from the data in the total commodity use table.

After this adjustment, a national industry-by-industry direct requirements table is prepared by means of standard I-O procedures.[36] An industry-share matrix, which shows each industry's share of the production of a commodity, is calculated by dividing each entry in each column of the make table by the respective column total. Next, a commodity-by-industry direct requirements matrix, which shows the dollar's worth of each commodity that is required to produce a dollar's worth of each industry's output, is calculated by dividing each entry in each column of the use table by the respective column total. A national industry-by-industry direct requirements table is then estimated by multiplying the industry-share matrix by the commodity-by-industry direct requirements matrix.

Unlike the national I-O accounts, RIMS II includes households as both suppliers of labor inputs to regional industries and as purchasers of regional output, because it is customary in regional impact analysis to account for the effects of changes in household earnings and expenditures. Thus, both a household row and a household column are added to the national direct requirements table before the table is regionalized.[37]

The household row

Each entry in the household row shows the earnings received by households per dollar of output of the column

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33. This discussion is mainly for users who are familiar with I-O theory and linear algebra. For a more detailed discussion of I-O theory and the use of regional I-O models in impact analysis, see "Suggested Reading" at the end of this appendix.

34. In RIMS II, a region consists of the county or counties that are specified by the user.

35. The make table shows the dollar value, in producers' prices, of each commodity produced by each industry. The use table shows the dollar value, in producers' prices, of each commodity used by each industry and by each final user. See *Benchmark Input-Output Accounts for the U.S. Economy, 1987,* SURVEY OF CURRENT BUSINESS 74 (April 1994): 73–115; and U.S. Department of Commerce, Bureau of Economic Analysis, *Benchmark Input-Output Accounts of the United States, 1987* (Washington, DC: U.S. Government Printing Office, 1994).

36. See Ronald E. Miller and Peter D. Blair, *Input-Output Analysis: Foundations and Extensions* (Englewood Cliffs, NJ: Prentice-Hall, 1985), 149–199.

37. I-O theory requires that the sum of the entries in each column of the direct requirements table be less than, or equal to, one. Because this condition is not met for all industries after the household row is added, nine industries must be combined with similar industries.

industry corresponding to the entry. In impact analysis with RIMS II, earnings is defined as the earnings that are received by households from the production of regional goods and services and that are available for spending on these goods and services. Thus, earnings is calculated as the sum of wages and salaries, proprietors' income, directors' fees, and employer contributions for health insurance less personal contributions for social insurance.[38] In equation form, the household row is

$$HSHR_j = (W\&S_j + PRP_j + DF_j + ECHI_j \\ - PCSI_j)/TIO_j,$$

where the subscript j is industry j (column j in the direct requirements table), $HSHR$ is the household row, $W\&S$ is wages and salaries, PRP is proprietors' income, DF is directors' fees, $ECHI$ is employer contributions for health insurance, $PCSI$ is personal contributions for social insurance, and TIO is total industry output.

The estimates of wages and salaries by I-O industry are from the national I-O accounts. The other earnings components are not available by I-O industry and must be estimated.

The estimates of nonfarm proprietors' income by I-O industry are made by multiplying nonfarm proprietors' income at the two-digit Standard Industrial Classification (SIC) level by each I-O industry's share of wages and salaries in the corresponding two-digit SIC industry. The data source for nonfarm proprietors' income and for wages and salaries at the two-digit SIC level is BEA's Regional Economic Information System (REIS). The estimates of farm proprietors' income for 17 I-O agricultural industries are calculated by multiplying total farm proprietors' income by the shares of total farm cash receipts accounted for by each of the agricultural industries. The data source for farm proprietors' income and cash receipts is REIS.[39]

The estimates of directors' fees by I-O industry are calculated by multiplying directors' fees at the two-digit SIC level by each I-O industry's share of wages and salaries in the corresponding two-digit SIC industry. The data source for directors' fees is REIS.

The estimates of employer contributions for health insurance by I-O industry are prepared in two steps. First,

employer contributions to private pension funds and private welfare funds at the two-digit SIC level are multiplied by the all-industry ratio of employer contributions for health insurance to employer contributions to private pension funds and private welfare funds to yield estimates of employer contributions for health insurance at the two-digit SIC level. These estimates are then multiplied by each I-O industry's share of wages and salaries in the corresponding two-digit SIC industry. The source for the all-industry data is the national income and product accounts, and the source for the two-digit SIC data is REIS.

The estimates of personal contributions for social insurance by I-O industry are calculated by multiplying personal contributions for social insurance for all industries by each I-O industry's share of wages and salaries for all industries. The data source for personal contributions for social insurance is REIS.

The household column

Each entry in the household column shows the expenditures per dollar of household earnings on the product of the row industry corresponding to the entry. The estimation of the household column is based on personal consumption expenditures (PCE) data from the national I-O accounts. PCE data in the imported-commodity use table are subtracted from PCE data in the overall use table to yield a column that shows PCE for domestically produced commodities. After each column entry is expressed as a share of total PCE, the column is multiplied by the industry-share matrix (discussed earlier) to yield the PCE shares by I-O industry.[40] The PCE shares by industry are then multiplied by the ratio of personal income less taxes and savings to personal income in order to account for the dampening effect of taxes and savings on expenditures.

The Regional Direct Requirements Table

The regional industry-by-industry direct requirements table is derived from the adjusted national industry-by-industry direct requirements table. Location quotients (LQ's) are used to "regionalize" the national data.[41] The

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38. Earnings includes employer contributions for health insurance, because personal consumption expenditures data in the national I-O accounts include expenditures on health care. Earnings excludes personal contributions for social insurance, because these contributions are usually deducted from an employee's wages and salaries and therefore are unavailable for spending on regional goods and services.

39. For agriculture, the estimates of proprietors' income by I-O industry are not based on wages and salaries, because the share of total employment accounted for by wage-and-salary workers in agriculture is substantially smaller than that in other industries.

40. The last entry of the column is purchases of domestic services by households, which equals earnings received by domestic service workers.

41. For most industries in RIMS II, LQ's are based on 1992 wages and salaries by industry at the four-digit SIC level. The LQ for wages and salaries is the ratio of the industry's share of regional wages and salaries to that industry's share of national wages and salaries. For some industries, the LQ's are adjusted, because wages and salaries in these industries, in comparison with proprietors' income, accounts for a relatively small share of total earnings.

LQ is used as a measure of the extent to which regional supply of an industry's output is sufficient to meet regional demand. If the LQ for a row industry in the regional direct requirements table is greater than, or equal to, one, it is assumed that the region's demand for the output of the row industry is met entirely from regional production. In this instance, all row entries for the industry in the regional direct requirements table are set equal to the corresponding entries in the adjusted national direct requirements table.

Conversely, if the LQ is less than one, it is assumed that regional supply of the industry's output is not sufficient to meet regional demand. In this instance, all row entries for the industry in the regional direct requirements table are set equal to the product of the corresponding entries in the adjusted national direct requirements table and the LQ for the industry.

The household row and the household column that were added to the national direct requirements table are also adjusted regionally. The household-row entries are adjusted downward, on the basis of commuting data from the Census of Population, in order to account for the purchases made outside the region by commuters working in the region. The household-column entries are adjusted downward, on the basis of tax data from the Internal Revenue Service, in order to account for the dampening effect of State and local taxes on household expenditures.

The Regional Total Requirements Table and the Multipliers

A regional industry-by-industry total requirements table is prepared by calculating the Leontief inverse from the regional direct requirements table.[42] The regional total requirements table shows the regional final-demand output multipliers. In I-O terminology, the multipliers account for the sum of the direct, indirect, and induced effects of a change in final demand. The final-demand, direct-effect, and output-driven multipliers can be derived from the total requirements table.[43]

Final-demand earnings and employment multipliers

Final-demand earnings multipliers are derived by multiplying each final-demand output multiplier in the total requirements table by the household-row entry in the direct requirements table that corresponds to the row industry for the output multiplier. This calculation is expressed as

$$c_{i,j} = b_{i,j} \times a_{471,i},$$

where $c_{i,j}$ is the entry in row i and column j of the final-demand earnings multiplier table, $b_{i,j}$ is the final-demand output multiplier in the total requirements table, and $a_{471,i}$ is the household-row entry in the direct requirements table.[44]

Final-demand employment multipliers are derived by multiplying each entry in the final-demand earnings multiplier table by the employment-to-earnings ratio for each row industry.[45] This calculation is expressed as

$$e_{i,j} = c_{i,j} \times G_i,$$

where $e_{i,j}$ is the entry in row i and column j of the final-demand employment multiplier table, $c_{i,j}$ is the final-demand earnings multiplier, and G_i is the employment-to-earnings ratio for row industry i.

Direct-effect earnings and employment multipliers

Direct-effect earnings multipliers are derived by dividing each household-row entry in the total requirements table by the corresponding household-row entry in the direct requirements table. This calculation is expressed as

$$D_j = b_{471,j} / a_{471,j},$$

where D_j is the direct-effect earnings multiplier for industry j, $b_{471,j}$ is the household-row entry for industry j in the total requirements table, and $a_{471,j}$ is the household-row entry for industry j in the direct requirements table.

Direct-effect employment multipliers are derived by dividing the final-demand employment multiplier for each industry by the product of the corresponding household-row entry in the direct requirements table and the employment-to-earnings ratio for each column industry. This calculation is expressed as

$$H_j = F_j / (a_{471,j} \times G_j),$$

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42. The Leontief inverse is defined as $(I-A)^{-1}$, where I is an identity matrix, A is the regional industry-by-industry direct requirements matrix, and -1 indicates a matrix inversion.

43. For the discussion of the use of these multipliers in regional impact analysis, see the section "RIMS II Multipliers for Output, Earnings, and Employment."

44. The sum of all the entries in column j of the final-demand earnings multiplier table is equal to the household-row entry in column j of the total requirements table. The last row of the final-demand earnings multiplier table represents earnings received by households that have domestic service jobs.

45. Employment is measured on a job-count basis for both wage-and-salary workers and proprietors. Estimates of employment by I-O industry are made by allocating REIS employment data by two-digit SIC industry in proportion to Bureau of Labor Statistics wage-and-salary employment data by I-O industry.

where H_j is the direct-effect employment multiplier for industry j, F_j is the final-demand employment multiplier for industry j, $a_{471,j}$ is the household-row entry for industry j in the direct requirements table, and G_j is the employment-to-earnings ratio for industry j.[46]

Output-driven multipliers

Output-driven multipliers can be calculated from the total requirements table. The table entry for which the row entry i equals the column entry j is called the "diagonal" entry for column j. The output-driven multiplier for industry j is defined as the ratio of each entry in column j to the diagonal entry for that column. This ratio is expressed as

$$o_{i,j} = b_{i,j}/b_{j,j},$$

where $o_{i,j}$ is the output-driven multiplier i for industry j, $b_{i,j}$ is the final-demand output multiplier i for industry j in the total requirements table, and $b_{j,j}$ is the diagonal entry for industry j in the total requirements table.

Suggested Reading

Hewings, Geoffrey J.D. *Regional Input-Output Analysis*. Scientific Geography Series vol. 6. Beverly Hills, CA: Sage Publications, 1985.

Miernyck, William H. *The Elements of Input-Output Analysis*. New York, NY: Random House, 1965.

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Richardson, Harry W. *Input-Output and Regional Economics*. New York, NY: Halsted Press, 1972.

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46. The final-demand employment multiplier for industry j is the sum of all the entries except the household-row entry in column j of the final-demand employment multiplier table.

Appendix B:
Detailed Industries for Which
Multipliers Are Available

Appendix B.—Detailed Industries for Which Multipliers Are Available

[The detailed industries are based on the 1987 benchmark input-output (I-O) accounts. The titles in boldface represent the groupings of industries used for the summary version of the 1987 tables. An asterisk preceding a Standard Industrial Classification (SIC) code indicates that the SIC industry is included in more than one I-O industry.]

I-O industry number and title	Related 1987 SIC codes
AGRICULTURE, FORESTRY, AND FISHERIES	
1 **Livestock and livestock products:**	
1.0100 Dairy farm products	024, *019, *0259, *029
1.0200 Poultry and eggs	0251-3, *0259, *019, *0219, *029
1.0301 Meat animals	0211-4, *0219, *019, *0259, *029
1.0302 Miscellaneous livestock	0271-3, *0279, *019, *0219, *0259, *029
2 **Other agricultural products:**	
2.0100 Cotton	0131, *019, *0219, *0259, *029
2.0201 Food grains	*011, *019, *0219, *0259, *029
2.0202 Feed grains	*011, *0139, *019, *0219, *0259, *029
2.0203 Grass seeds	*0139, *019, *0219, *0259, *029
2.0300 Tobacco	0132, *019, *0219, *0259, *029
2.0401 Fruits	0171-2, 0174-5, *0179, *019, *0219, *0259, *029
2.0402 Tree nuts	0173, *0179, *019, *0219, *0259, *029
2.0501 Vegetables	0134, *0139, 016, *019, *0219, *0259, *029, *0119
2.0502 Sugar crops	0133, *019, *0219, *0259, *029
2.0503 Miscellaneous crops	*0119, *0139, *019, *0219, *0259, *029
2.0600 Oil bearing crops	0116, *0119, *0139, *019, *0219, *0259, *029
2.0701 Forest products	*018, *019, *0219, *0259, *029
2.0702 Greenhouse and nursery products	*018, *019, *0219, *0259, *029
3 **Forestry and fishery products:**	
3.0001 Forestry products	081, 083, 097
3.0002 Commercial fishing	091
4 **Agricultural, forestry, and fishery services:**	
4.0001 Agricultural, forestry, and fishery services ...	0254, *0279, 071-2, 075-6, 085, 092
4.0002 Landscape and horticultural services	078
MINING	
5+6 **Metallic ores mining:**	
5.0000 Iron and ferroalloy ores	101, 106
6.0100 Copper ore	102
6.0200 Nonferrous metal ores, except copper	103-4, 109, *108
7 **Coal mining:**	
7.0000 Coal	122-3, *124
8 **Crude petroleum and natural gas:**	
8.0000 Crude petroleum and natural gas	131-2, *138
9+10 **Nonmetallic minerals mining:**	
9.0001 Dimension, crushed and broken stone	141-2
9.0002 Sand and gravel	144
9.0003 Clay, ceramic, and refractory minerals	145
9.0004 Nonmetallic mineral services and miscellaneous minerals.	*148, 149
10.0000 Chemical and fertilizer minerals	147

I-O industry number and title	Related 1987 SIC codes
CONSTRUCTION	
11+12 **Construction:**	
11.0000 New and maintenance and repair	15-17, 6552
11.0601 Petroleum and natural gas well drilling	*138
11.0602 Petroleum, natural gas, and solid mineral exploration.	*138, *108, *124, *148
11.0603 Access structures for solid mineral development.	*108, *124, *148
12.0215 Maintenance and repair of petroleum and natural gas wells.	*138
MANUFACTURING	
13 **Ordnance and accessories:**	
13.0100 Guided missiles and space vehicles	3761
13.0200 Ammunition, except for small arms, n.e.c.	3483
13.0300 Tanks and tank components	3795
13.0500 Small arms	3484
13.0600 Small arms ammunition	3482
13.0700 Ordnance and accessories, n.e.c.	3489
14 **Food and kindred products:**	
14.0103 Meat packing plants and sausages and other prepared meat products.	2011, 2013
14.0105 Poultry slaughtering and processing	2015
14.0250 Creamery butter and natural, processed, and imitation cheese.	2021, 2022
14.0400 Dry, condensed, and evaporated dairy products.	2023
14.0500 Ice cream and frozen desserts	2024
14.0600 Fluid milk	2026
14.0700 Canned and cured fish and seafoods	2091
14.0800 Canned specialties	2032
14.0900 Canned fruits, vegetables, preserves, jams, and jellies.	2033
14.1000 Dehydrated fruits, vegetables, and soups	2034
14.1100 Pickles, sauces, and salad dressings	2035
14.1200 Prepared fresh or frozen fish and seafoods.	2092
14.1301 Frozen fruits, fruit juices, and vegetables	2037
14.1302 Frozen specialties, n.e.c.	2038
14.1401 Flour and other grain mill products	2041
14.1402 Cereal breakfast foods	2043
14.1403 Prepared flour mixes and doughs	2045
14.1501 Dog and cat food	2047
14.1502 Prepared feeds, n.e.c.	2048
14.1600 Rice milling	2044
14.1700 Wet corn milling	2046
14.1801 Bread, cake, and related products	2051, *546
14.1802 Cookies and crackers	2052
14.1803 Frozen bakery products, except bread	2053
14.1900 Sugar	2061-3
14.2001 Candy and other confectionery products ...	2064
14.2002 Chocolate and cocoa products	2066
14.2003 Chewing gum	2067
14.2004 Salted and roasted nuts and seeds	2068
14.2101 Malt beverages	2082
14.2102 Malt	2083
14.2103 Wines, brandy, and brandy spirits	2084
14.2104 Distilled and blended liquors	2085
14.2200 Bottled and canned soft drinks	2086
14.2300 Flavoring extracts and flavoring syrups, n.e.c..	2087
14.2400 Cottonseed oil mills	2074
14.2500 Soybean oil mills	2075
14.2600 Vegetable oil mills, n.e.c.	2076
14.2700 Animal and marine fats and oils	2077
14.2800 Roasted coffee	2095
14.2900 Edible fats and oils, n.e.c.	2079
14.3000 Manufactured ice	2097
14.3100 Macaroni, spaghetti, vermicelli, and noodles.	2098
14.3201 Potato chips and similar snacks	2096
14.3202 Food preparations, n.e.c.	2099
15 **Tobacco products:**	
15.0101 Cigarettes	211
15.0102 Cigars	212
15.0103 Chewing and smoking tobacco and snuff	213
15.0200 Tobacco stemming and redrying	214
16 **Broad and narrow fabrics, yarn and thread mills:**	
16.0100 Broadwoven fabric mills and fabric finishing plants.	221-3, 2261-2
16.0200 Narrow fabric mills	224
16.0300 Yarn mills and finishing of textiles, n.e.c.	2269, 2281-2

Appendix B.—Detailed Industries for Which Multipliers Are Available—Continued

I-O industry number and title	Related 1987 SIC codes	I-O industry number and title	Related 1987 SIC codes
16.0400 Thread mills	2284	26.0700 Greeting cards	277
		26.0802 Bookbinding and related work	2789
17 Miscellaneous textile goods and floor coverings:		26.0803 Typesetting	2791
17.0100 Carpets and rugs	227	26.0806 Platemaking and related services	2796
17.0600 Coated fabrics, not rubberized	2295	**27A Industrial and other chemicals:**	
17.0700 Tire cord and fabrics	2296	27.0100 Industrial inorganic and organic chemicals	281 (excl. *2819), 2865, 2869
17.0900 Cordage and twine	2298		
17.1001 Nonwoven fabrics	2297		
17.1100 Textile goods, n.e.c.	2299	27.0401 Gum and wood chemicals	2861
		27.0402 Adhesives and sealants	2891
18 Apparel:		27.0403 Explosives	2892
18.0101 Women's hosiery, except socks	2251	27.0404 Printing ink	2893
18.0102 Hosiery, n.e.c.	2252	27.0405 Carbon black	2895
18.0201 Knit outerwear mills	2253	27.0406 Chemicals and chemical preparations, n.e.c..	2899
18.0202 Knit underwear and nightwear mills	2254		
18.0203 Knitting mills, n.e.c.	2259	**27B Agricultural fertilizers and chemicals:**	
18.0300 Knit fabric mills	2257-8	27.0201 Nitrogenous and phosphatic fertilizers	2873-4
18.0400 Apparel made from purchased materials ...	231-8, *3999	27.0202 Fertilizers, mixing only	2875
		27.0300 Pesticides and agricultural chemicals, n.e.c..	2879
19 Miscellaneous fabricated textile products:			
19.0100 Curtains and draperies	2391	**28 Plastics and synthetic materials:**	
19.0200 Housefurnishings, n.e.c.	2392	28.0100 Plastics materials and resins	2821
19.0301 Textile bags	2393	28.0200 Synthetic rubber	2822
19.0302 Canvas and related products	2394	28.0300 Cellulosic manmade fibers	2823
19.0303 Pleating and stitching	2395	28.0400 Manmade organic fibers, except cellulosic	2824
19.0304 Automotive and apparel trimmings	2396		
19.0305 Schiffli machine embroideries	2397	**29A Drugs:**	
19.0306 Fabricated textile products, n.e.c.	2399	29.0100 Drugs	283
20+21 Lumber and wood products:		**29B Cleaning and toilet preparations:**	
20.0100 Logging	241	29.0201 Soap and other detergents	2841
20.0200 Sawmills and planing mills, general	2421	29.0202 Polishes and sanitation goods	2842
20.0300 Hardwood dimension and flooring mills	2426	29.0203 Surface active agents	2843
20.0400 Special product sawmills, n.e.c.	2429	29.0300 Toilet preparations	2844
20.0501 Millwork	2431		
20.0502 Wood kitchen cabinets	2434	**30 Paints and allied products:**	
20.0600 Veneer and plywood	2435-6	30.0000 Paints and allied products	285
20.0701 Structural wood members, n.e.c.	2439		
20.0702 Prefabricated wood buildings and components.	2452	**31 Petroleum refining and related products:**	
		31.0101 Petroleum refining	291
20.0703 Mobile homes	2451	31.0102 Lubricating oils and greases	2992
20.0800 Wood preserving	2491	31.0103 Products of petroleum and coal, n.e.c.	2999
20.0901 Wood pallets and skids	2448	31.0200 Asphalt paving mixtures and blocks	2951
20.0903 Wood products, n.e.c.	2499	31.0300 Asphalt felts and coatings	2952
20.0904 Reconstituted wood products	2493		
20.1000 Wood containers, n.e.c.	2441, 2449	**32 Rubber and miscellaneous plastics products:**	
		32.0100 Tires and inner tubes	301
22+23 Furniture and fixtures:		32.0200 Rubber and plastics footwear	302
22.0101 Wood household furniture, except upholstered.	2511	32.0300 Fabricated rubber products, n.e.c.	306
		32.0400 Miscellaneous plastics products, n.e.c.	308
22.0102 Household furniture, n.e.c.	2519	32.0500 Rubber and plastics hose and belting	3052
22.0103 Wood television and radio cabinets	2517	32.0600 Gaskets, packing, and sealing devices	3053
22.0200 Upholstered household furniture	2512		
22.0300 Metal household furniture	2514	**33+34 Footwear, leather, and leather products:**	
22.0400 Mattresses and bedsprings	2515	33.0001 Leather tanning and finishing	311
23.0100 Wood office furniture	2521	34.0100 Boot and shoe cut stock and findings	313
23.0200 Office furniture, except wood	2522	34.0201 Shoes, except rubber	3143-4, 3149
23.0300 Public building and related furniture	253	34.0202 House slippers	3142
23.0400 Wood partitions and fixtures	2541	34.0301 Leather gloves and mittens	315
23.0500 Partitions and fixtures, except wood	2542	34.0302 Luggage	316
23.0600 Drapery hardware and window blinds and shades.	2591	34.0303 Women's handbags and purses	3171
		34.0304 Personal leather goods, n.e.c.	3172
23.0700 Furniture and fixtures, n.e.c.	2599	34.0305 Leather goods, n.e.c.	319
24 Paper and allied products, except containers:		**35 Glass and glass products:**	
24.0100 Pulp mills	261	35.0100 Glass and glass products, except containers.	321, 3229, 323
24.0400 Envelopes	2677		
24.0500 Sanitary paper products	2676	35.0200 Glass containers	3221
24.0701 Paper coating and glazing	2671-2		
24.0702 Bags, except textile	2673-4	**36 Stone and clay products:**	
24.0703 Die-cut paper and paperboard and cardboard.	2675	36.0100 Cement, hydraulic	324
		36.0200 Brick and structural clay tile	3251
24.0705 Stationery, tablets, and related products ...	2678	36.0300 Ceramic wall and floor tile	3253
24.0706 Converted paper products, n.e.c.	2679	36.0400 Clay refractories	3255
24.0800 Paper and paperboard mills	262-3	36.0500 Structural clay products, n.e.c.	3259
		36.0600 Vitreous china plumbing fixtures	3261
25 Paperboard containers and boxes:		36.0701 Vitreous china table and kitchenware	3262
25.0000 Paperboard containers and boxes	265	36.0702 Fine earthenware table and kitchenware ...	3263
		36.0800 Porcelain electrical supplies	3264
26A Newspapers and periodicals:		36.0900 Pottery products, n.e.c.	3269
26.0100 Newspapers	271	36.1000 Concrete block and brick	3271
26.0200 Periodicals	272	36.1100 Concrete products, except block and brick	3272
		36.1200 Ready-mixed concrete	3273
26B Other printing and publishing:		36.1300 Lime	3274
26.0301 Book publishing	2731	36.1400 Gypsum products	3275
26.0302 Book printing	2732	36.1500 Cut stone and stone products	328
26.0400 Miscellaneous publishing	274	36.1600 Abrasive products	3291
26.0501 Commercial printing	275	36.1700 Asbestos products	3292
26.0601 Manifold business forms	276		
26.0602 Blankbooks, looseleaf binders and devices	2782		

Appendix B.—Detailed Industries for Which Multipliers Are Available—Continued

I-O industry number and title	Related 1987 SIC codes
36.1900 Minerals, ground or treated	3295
36.2000 Mineral wool	3296
36.2100 Nonclay refractories	3297
36.2200 Nonmetallic mineral products, n.e.c.	3299
37 **Primary iron and steel manufacturing:**	
37.0101 Blast furnaces and steel mills	3312
37.0102 Electrometallurgical products, except steel	3313
37.0103 Steel wiredrawing and steel nails and spikes.	3315
37.0104 Cold-rolled steel sheet, strip, and bars	3316
37.0105 Steel pipe and tubes	3317
37.0200 Iron and steel foundries	332
37.0300 Iron and steel forgings	3462
37.0401 Metal heat treating	3398
37.0402 Primary metal products, n.e.c.	3399
38 **Primary nonferrous metals manufacturing:**	
38.0100 Primary smelting and refining of copper	3331
38.0400 Primary aluminum	3334, *2819
38.0501 Primary nonferrous metals, n.e.c.	3339
38.0600 Secondary nonferrous metals	334
38.0700 Rolling, drawing, and extruding of copper ..	3351
38.0800 Aluminum rolling and drawing	3353-5
38.0900 Nonferrous rolling and drawing, n.e.c.	3356
38.1000 Nonferrous wiredrawing and insulating	3357
38.1100 Aluminum castings	3363, 3365
38.1200 Copper foundries	3366
38.1300 Nonferrous castings, n.e.c.	3364, 3369
38.1400 Nonferrous forgings	3463
39 **Metal containers:**	
39.0100 Metal cans	3411
39.0200 Metal shipping barrels, drums, kegs, and pails.	3412
40 **Heating, plumbing, and fabricated structural metal products:**	
40.0100 Enameled iron and metal sanitary ware	3431
40.0200 Plumbing fixture fittings and trim	3432
40.0300 Heating equipment, except electric and warm air furnaces.	3433
40.0400 Fabricated structural metal	3441
40.0500 Metal doors, sash, frames, molding, and trim.	3442
40.0600 Fabricated plate work (boiler shops)	3443
40.0700 Sheet metal work	3444
40.0800 Architectural and ornamental metal work	3446
40.0901 Prefabricated metal buildings and components.	3448
40.0902 Miscellaneous structural metal work	3449
41 **Screw machine products and stampings:**	
41.0100 Screw machine products, bolts, etc.	3451-2
41.0201 Automotive stampings	3465
41.0202 Crowns and closures	3466
41.0203 Metal stampings, n.e.c.	3469
42 **Other fabricated metal products:**	
42.0100 Cutlery	3421
42.0201 Hand and edge tools, except machine tools and handsaws.	3423
42.0202 Saw blades and handsaws	3425
42.0300 Hardware, n.e.c.	3429
42.0401 Plating and polishing	3471
42.0402 Coating, engraving, and allied services, n.e.c.	3479
42.0500 Miscellaneous fabricated wire products	3495-6
42.0700 Steel springs, except wire	3493
42.0800 Pipe, valves, and pipe fittings	3491-2, 3494, 3498
42.1000 Metal foil and leaf	3497
42.1100 Fabricated metal products, n.e.c.	3499
43 **Engines and turbines:**	
43.0100 Turbines and turbine generator sets	3511
43.0200 Internal combustion engines, n.e.c.	3519
44+45 **Farm, construction, and mining machinery:**	
44.0001 Farm machinery and equipment	3523
44.0002 Lawn and garden equipment	3524
45.0100 Construction machinery and equipment	3531
45.0200 Mining machinery, except oil field	3532
45.0300 Oil and gas field machinery and equipment.	3533
46 **Materials handling machinery and equipment:**	
46.0100 Elevators and moving stairways	3534
46.0200 Conveyors and conveying equipment	3535
46.0300 Hoists, cranes, and monorails	3536
46.0400 Industrial trucks and tractors	3537

I-O industry number and title	Related 1987 SIC codes
47 **Metalworking machinery and equipment:**	
47.0100 Machine tools, metal cutting types	3541
47.0200 Machine tools, metal forming types	3542
47.0300 Special dies and tools and machine tool accessories.	3544-5
47.0401 Power-driven handtools	3546
47.0402 Rolling mill machinery and equipment	3547
47.0404 Electric and gas welding and soldering equipment.	3548
47.0405 Industrial patterns	3543
47.0500 Metalworking machinery, n.e.c.	3549
48 **Special industry machinery and equipment:**	
48.0100 Food products machinery	3556
48.0200 Textile machinery	3552
48.0300 Woodworking machinery	3553
48.0400 Paper industries machinery	3554
48.0500 Printing trades machinery and equipment	3555
48.0600 Special industry machinery, n.e.c.	3559
49 **General industrial machinery and equipment:**	
49.0100 Pumps and compressors	3561, 3563
49.0200 Ball and roller bearings	3562
49.0300 Blowers and fans	3564
49.0500 Mechanical power transmission equipment	3566, 3568
49.0600 Industrial process furnaces and ovens	3567
49.0700 General industrial machinery and equipment, n.e.c..	3569
49.0800 Packaging machinery	3565
50 **Miscellaneous machinery, except electrical:**	
50.0100 Carburetors, pistons, rings, and valves	3592
50.0200 Fluid power equipment	3593-4
50.0300 Scales and balances, except laboratory	3596
50.0400 Industrial and commercial machinery and equipment, n.e.c.	3599
51 **Computer and office equipment:**	
51.0102 Calculating and accounting machines	3578
51.0103 Electronic computers	3571
51.0104 Computer peripheral equipment	3572, 3575, 3577
51.0400 Office machines, n.e.c.	3579
52 **Service industry machinery:**	
52.0100 Automatic vending machines	3581
52.0200 Commercial laundry equipment	3582
52.0300 Refrigeration and heating equipment	3585
52.0400 Measuring and dispensing pumps	3586
52.0500 Service industry machinery, n.e.c.	3589
53 **Electrical industrial equipment and apparatus:**	
53.0200 Power, distribution, and specialty transformers.	3612
53.0300 Switchgear and switchboard apparatus	3613
53.0400 Motors and generators	3621
53.0500 Relays and industrial controls	3625
53.0700 Carbon and graphite products	3624
53.0800 Electrical industrial apparatus, n.e.c.	3629
54 **Household appliances:**	
54.0100 Household cooking equipment	3631
54.0200 Household refrigerators and freezers	3632
54.0300 Household laundry equipment	3633
54.0400 Electric housewares and fans	3634
54.0500 Household vacuum cleaners	3635
54.0700 Household appliances, n.e.c.	3639
55 **Electric lighting and wiring equipment:**	
55.0100 Electric lamp bulbs and tubes	3641
55.0200 Lighting fixtures and equipment	3645-8
55.0300 Wiring devices	3643-4
56 **Audio, video, and communication equipment:**	
56.0100 Household audio and video equipment	3651
56.0200 Prerecorded records and tapes	3652
56.0300 Telephone and telegraph apparatus	3661
56.0500 Communication equipment	3663, 3669
57 **Electronic components and accessories:**	
57.0100 Electron tubes	3671
57.0200 Semiconductors and related devices	3674
57.0300 Other electronic components	3672, 3675-9
58 **Miscellaneous electrical machinery and supplies:**	
58.0100 Storage batteries	3691
58.0200 Primary batteries, dry and wet	3692
58.0400 Electrical equipment for internal combustion engines.	3694
58.0600 Magnetic and optical recording media	3695

Appendix B.—Detailed Industries for Which Multipliers Are Available—Continued

I-O industry number and title	Related 1987 SIC codes
58.0700 Electrical machinery, equipment, and supplies, n.e.c..	3699
59A Motor vehicles (passenger cars and trucks):	
59.0301 Motor vehicles and passenger car bodies	3711
59B Truck and bus bodies, trailers, and motor vehicles parts:	
59.0100 Truck and bus bodies	3713
59.0200 Truck trailers	3715
59.0302 Motor vehicle parts and accessories	3714
60 Aircraft and parts:	
60.0100 Aircraft	3721
60.0200 Aircraft and missile engines and engine parts.	3724, 3764
60.0400 Aircraft and missile equipment, n.e.c.	3728, 3769
61 Other transportation equipment:	
61.0100 Ship building and repairing	3731
61.0200 Boat building and repairing	3732
61.0300 Railroad equipment	374
61.0500 Motorcycles, bicycles, and parts	375
61.0601 Travel trailers and campers	3792
61.0603 Motor homes	3716
61.0700 Transportation equipment, n.e.c.	3799
62 Scientific and controlling instruments:	
62.0101 Search and navigation equipment	381
62.0102 Laboratory apparatus and furniture	3821
62.0200 Mechanical measuring devices	3823-4, 3829
62.0300 Environmental controls	3822
62.0400 Surgical and medical instruments and apparatus.	3841
62.0500 Surgical appliances and supplies	3842
62.0600 Dental equipment and supplies	3843
62.0700 Watches, clocks, watchcases, and parts	387
62.0800 X-ray apparatus and tubes	3844
62.0900 Electromedical and electrotherapeutic apparatus.	3845
62.1000 Laboratory and optical instruments	3826-7
62.1100 Instruments to measure electricity	3825
63 Ophthalmic and photographic equipment:	
63.0200 Ophthalmic goods	385
63.0300 Photographic equipment and supplies	386
64 Miscellaneous manufacturing:	
64.0101 Jewelry, precious metal	3911
64.0102 Jewelers' materials and lapidary work	3915
64.0104 Silverware and plated ware	3914
64.0105 Costume jewelry	3961
64.0200 Musical instruments	393
64.0301 Games, toys, and children's vehicles	3944
64.0302 Dolls and stuffed toys	3942
64.0400 Sporting and athletic goods, n.e.c.	3949
64.0501 Pens, mechanical pencils, and parts	3951
64.0502 Lead pencils and art goods	3952
64.0503 Marking devices	3953
64.0504 Carbon paper and inked ribbons	3955
64.0700 Fasteners, buttons, needles, and pins	3965
64.0800 Brooms and brushes	3991
64.0900 Hard surface floor coverings, n.e.c.	3996
64.1000 Burial caskets	3995
64.1100 Signs and advertising specialties	3993
64.1200 Manufacturing industries, n.e.c.	*3999

TRANSPORTATION, COMMUNICATIONS, AND UTILITIES

I-O industry number and title	Related 1987 SIC codes
65A Railroads and related services; passenger ground transportation:	
65.0100 Railroads and related services	40, 474, *4789
65.0200 Local and suburban transit and interurban highway passenger transportation.	41
65B Motor freight transportation and warehousing:	
65.0300 Motor freight transportation and warehousing.	42, *4789
65C Water transportation:	
65.0400 Water transportation	44
65D Air transportation:	
65.0500 Air transportation	45
65E Pipelines, freight forwarders, and related services:	
65.0600 Pipelines, except natural gas	46
65.0701 Freight forwarders and other transportation services.	473, 4783, 4785, *4789

I-O industry number and title	Related 1987 SIC codes
65.0702 Arrangement of passenger transportation	472
66 Communications, except radio and TV:	
66.0000 Communications, except radio and TV	481-2, 484, 489
67 Radio and TV broadcasting:	
67.0000 Radio and TV broadcasting	483
68A Electric services (utilities):	
68.0100 Electric services (utilities)	491, *493
68B Gas production and distribution (utilities):	
68.0200 Gas production and distribution (utilities)	492, *493
68C Water and sanitary services:	
68.0301 Water supply and sewerage systems	494, 4952
68.0302 Sanitary services, steam supply, and irrigation systems.	4953, 4959, 496-7, *493

WHOLESALE AND RETAIL TRADE

I-O industry number and title	Related 1987 SIC codes
69A Wholesale trade:	
69.0100 Wholesale trade	50, 51
69B Retail trade:	
69.0200 Retail trade, except eating and drinking	52-7 (excl. *546), 59, *7389, 8042

FINANCE, INSURANCE, AND REAL ESTATE

I-O industry number and title	Related 1987 SIC codes
70A Finance:	
70.0150 Banking and credit agencies	60, 61, 67 (excl. 6732)
70.0300 Security and commodity brokers	62
70B Insurance:	
70.0400 Insurance carriers	63
70.0500 Insurance agents, brokers, and services	64
71A Owner-occupied dwellings:	
71.0100 Owner-occupied dwellings	
71B Real estate and royalties:	
71.0201 Real estate agents, managers, operators, and lessors.	65 (excl. 6552)
71.0202 Royalties	

SERVICES

I-O industry number and title	Related 1987 SIC codes
72A Hotels and lodging places:	
72.0100 Hotels and lodging places	70
72B Personal and repair services (except auto):	
72.0201 Laundry, cleaning, garment services, and shoe repair.	721, 725
72.0202 Funeral service and crematories	726
72.0203 Portrait photographic studios, and other miscellaneous personal services.	722, 729
72.0204 Electrical repair shops	762
72.0205 Watch, clock, jewelry, and furniture repair	763-4
72.0300 Beauty and barber shops	723-4
73A Computer and data processing services:	
73.0104 Computer and data processing services	737
73B Legal, engineering, accounting, and related services:	
73.0301 Legal services	81
73.0302 Engineering, architectural, and surveying services.	871
73.0303 Accounting, auditing and bookkeeping, and miscellaneous services, n.e.c.	872, 89
73C Other business and professional services, except medical:	
73.0101 Miscellaneous repair shops	769
73.0102 Services to dwellings and other buildings	734
73.0103 Personnel supply services	736
73.0105 Management and consulting services, testing and research labs.	874, 8731-2, 8734
73.0106 Detective and protective services	7381-2
73.0107 Miscellaneous equipment rental and leasing.	735
73.0108 Photofinishing labs and commercial photography.	7384, 7335-6
73.0109 Other business services	732, 7383, *7389, 7331, 7334, 7338
73D Advertising:	
73.0200 Advertising	731

Appendix B.—Detailed Industries for Which Multipliers Are Available—Continued

I-O industry number and title	Related 1987 SIC codes	I-O industry number and title	Related 1987 SIC codes
74 **Eating and drinking places:**		77.0401 Elementary and secondary schools	821
74.0000 Eating and drinking places	58	77.0402 Colleges, universities, and professional schools.	822
75 **Automotive repair and services:**		77.0403 Private libraries, vocational schools, and educational services, n.e.c.	823-4, 829
75.0001 Automotive rental and leasing, without drivers.	751	77.0501 Business associations and professional membership organizations.	861-2
75.0002 Automotive repair shops and services	753, 7549	77.0502 Labor organizations, civic, social, and fraternal associations.	863-4
75.0003 Automobile parking and car washes	752, 7542	77.0503 Religious organizations	866
76 **Amusements:**		77.0504 Other membership organizations	84, 865, 869, 8733, 6732
76.0101 Motion picture services and theaters	781-3	77.0600 Job training and related services	833
76.0102 Video tape rental	784	77.0700 Child day care services	835
76.0201 Theatrical producers (except motion picture), bands, orchestras and entertainers.	792	77.0800 Residential care	836
76.0202 Bowling centers	793	77.0900 Social services, n.e.c.	832, 839
76.0203 Professional sports clubs and promoters	7941	**GOVERNMENT ENTERPRISES**	
76.0204 Racing, including track operation	7948	**78** **Federal Government enterprises:**	
76.0205 Physical fitness facilities and membership sports and recreation clubs.	7991, 7997	78.0100 U.S. Postal Service	43
76.0206 Other amusement and recreation services	791, 7992-3, 7996, 7999	78.0200 Federal electric utilities	(¹)
		78.0500 Other Federal Government enterprises	(¹)
77A **Health services:**		**79** **State and local government enterprises:**	
77.0100 Doctors and dentists	801-3, 8041	79.0000 State and local government enterprises	(¹)
77.0200 Hospitals	806	**SPECIAL INDUSTRIES**	
77.0301 Nursing and personal care facilities	805	**91** **Household industry:**	
77.0302 Other medical and health services, including veterinarians.	074, 8043, 8049, 807-9	91.0000 Household industry	(²)
77B **Educational and social services, and membership organizations:**			

1. The SIC assigns the same codes to activities of both private firms and government agencies, but the SIC codes in the I-O accounts are used only for classifying private activities.

2. Industry output is defined as the compensation of domestic household workers.

Appendix C:
Industry Aggregations for Which
Multipliers Are Available

Appendix C.—Industry Aggregations for Which Multipliers Are Available

Numerical designation of industry aggregation	Industry aggregation	Numerical designation of component detailed industries[1]
	Farm and agricultural services, forestry, and fishing:	
1	Farm products and agricultural, forestry, and fishing services	1.0100–2.0702, 4.0001–4.0002
2	Forestry and fishing products	3.0001–3.0002
	Mining:	
3	Coal mining	7.0000
4	Oil and gas extraction	8.0000
5	Metal mining and nonmetallic minerals, except fuels	5.0000–6.0200, 9.0001–10.0000
	Construction:	
6	Construction	11.0000–12.0215
	Manufacturing:	
7	Food and kindred products and tobacco products	14.0103–15.0200
8	Textile mill products	16.0100–18.0300
9	Apparel and other textile products	18.0400–19.0306
10	Paper and allied products	24.0100–25.0000
11	Printing and publishing	26.0100–26.0806
12	Chemicals and allied products and petroleum and coal products	27.0100–31.0300
13	Rubber and miscellaneous plastics products and leather and leather products	32.0100–34.0305
14	Lumber and wood products and furniture and fixtures	20.0100–23.0700
15	Stone, clay, and glass products	35.0100–36.2200
16	Primary metal industries	37.0101–38.1400
17	Fabricated metal products	13.0200, 13.0500–13.0700, 39.0100–42.1100
18	Industrial machinery and equipment	43.0100–52.0500
19	Electronic and other electric equipment	53.0200–58.0700
20	Motor vehicles and equipment	59.0100–59.0302
21	Other transportation equipment	13.0100, 13.0300, 60.0100–61.0700
22	Instruments and related products	62.0101–63.0300
23	Miscellaneous manufacturing industries	64.0101–64.1200
	Transportation and public utilities:[*]	
24	Transportation	65.0100–65.0702, 78.0100
25	Communications	66.0000–67.0000
26	Electric, gas, and sanitary services	68.0100–68.0302, 78.0200
	Wholesale and retail trade:	
27	Wholesale trade	69.0100
28	Retail trade	69.0200
	Finance, insurance, and real estate:	
29	Depository and nondepository institutions and security and commodity brokers	70.0150–70.0300
30	Insurance	70.0400–70.0500
31	Real estate	71.0100–71.0202
	Services:	
32	Hotels and other lodging places, amusement and recreation services, and motion pictures.	72.0100, 76.0101–76.0206
33	Personal services	72.0201–72.0300
34	Business services	73.0101–73.0303
35	Eating and drinking places	74.0000
36	Health services	77.0100–77.0302
37	Miscellaneous services	75.0001–75.0003, 77.0401–77.0900, 78.0500, 79.0000
38	Private households	91.0000

[*] Includes Federal Government enterprises.
1. Appendix B indentifies these industries.

Appendix D:
Sample Tables From RIMS II

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area

[Dollars]

	1.0100	1.0200	1.0301	1.0302	2.0100	2.0201	2.0202	2.0203	2.0300	2.0401	2.0402	2.0501	2.0502	2.0503	2.0600	2.0701
1	1.5957	1.2644	1.9012	1.3775	1.1519	1.1665	1.1064	1.1119	1.0469	1.0875	1.0699	1.0616	1.0000	1.0366	1.1114	1.0205
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	.0001	.0001	.0001	.0001	.0001	0	.0003	.0002	.0002	.0001	0	0	.0002	.0002	0
4	.0003	.0003	.0003	.0003	.0003	.0004	.0004	.0003	.0002	.0002	.0002	.0002	0	.0002	.0002	.0001
5	.0038	.0014	.0031	.0022	.0024	.0076	.0069	.0007	.0036	.0017	.0012	.0015	0	.0047	.0016	.0002
6	.0429	.0296	.0461	.0331	.0308	.0418	.0353	.0131	.0402	.0251	.0207	.0215	0	.0207	.0352	.0125
7	.1780	.5404	.1867	.3033	.0319	.0313	.0292	.0194	.0314	.0324	.0286	.0260	0	.0220	.0287	.0166
8	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0006	.0002	.0001	.0001	0	.0001	.0001	.0001
9	.0089	.0081	.0098	.0081	.0070	.0067	.0061	.0060	.0071	.0089	.0083	.0075	0	.0053	.0064	.0040
10	.0091	.0194	.0092	.0084	.0071	.0061	.0061	.0374	.0067	.0259	.0408	.0276	0	.0041	.0055	.0028
11	.0227	.0212	.0246	.0204	.0176	.0193	.0173	.0101	.0205	.0182	.0146	.0136	0	.0123	.0182	.0088
12	.0723	.0712	.0664	.0551	.0845	.1001	.0935	.0323	.0595	.0690	.0399	.0373	0	.0532	.0582	.0154
13	.0114	.0177	.0124	.0173	.0076	.0087	.0099	.0050	.0160	.0088	.0071	.0085	0	.0057	.0077	.0060
14	.0026	.0020	.0027	.0022	.0018	.0021	.0019	.0013	.0023	.0273	.0016	.0015	0	.0014	.0018	.0010
15	.0030	.0021	.0031	.0023	.0025	.0032	.0028	.0012	.0025	.0026	.0021	.0017	0	.0031	.0023	.0009
16	.0043	.0030	.0043	.0037	.0026	.0035	.0044	.0014	.0049	.0025	.0021	.0021	0	.0020	.0030	.0014
17	.0093	.0063	.0083	.0067	.0054	.0064	.0076	.0031	.0071	.0053	.0044	.0042	0	.0039	.0056	.0027
18	.0092	.0057	.0108	.0111	.0059	.0107	.0109	.0027	.0212	.0059	.0050	.0051	0	.0053	.0094	.0042
19	.0060	.0041	.0069	.0067	.0041	.0064	.0063	.0018	.0114	.0042	.0035	.0035	0	.0034	.0058	.0027
20	.0165	.0140	.0184	.0158	.0127	.0132	.0123	.0083	.0156	.0138	.0124	.0113	0	.0100	.0126	.0077
21	.0009	.0008	.0010	.0008	.0007	.0007	.0006	.0004	.0008	.0007	.0007	.0006	0	.0005	.0006	.0004
22	.0020	.0019	.0023	.0019	.0015	.0015	.0014	.0010	.0016	.0017	.0015	.0014	0	.0012	.0015	.0009
23	.0013	.0012	.0015	.0012	.0010	.0011	.0010	.0007	.0011	.0011	.0010	.0009	0	.0008	.0010	.0006
24	.1188	.1041	.1130	.1004	.0556	.0815	.0684	.0488	.0624	.0577	.0467	.0467	0	.0494	.0501	.0268
25	.0377	.0325	.0417	.0339	.0272	.0305	.0274	.0186	.0331	.0288	.0254	.0234	0	.0210	.0282	.0164
26	.0535	.0499	.0463	.0506	.0406	.0398	.0352	.0220	.0271	.0350	.0288	.0268	0	.0302	.0333	.0121
27	.1481	.1112	.1443	.1157	.0822	.0989	.0893	.0537	.1240	.0998	.0593	.0592	0	.0496	.0794	.0314
28	.0793	.0688	.0868	.0716	.0592	.0628	.0567	.0408	.0692	.0650	.0584	.0531	0	.0463	.0569	.0352
29	.0646	.0459	.0706	.0510	.0492	.0576	.0462	.0248	.0558	.0450	.0425	.0365	0	.0392	.0546	.0294
30	.0514	.0382	.0643	.0463	.0475	.0626	.0568	.0214	.0685	.0455	.0351	.0324	0	.0363	.0931	.0244
31	.2017	.1341	.2417	.1609	.1679	.2467	.1926	.0710	.2433	.1354	.1159	.1240	0	.1148	.2214	.0860
32	.0146	.0133	.0159	.0129	.0130	.0115	.0103	.0071	.0124	.0126	.0110	.0100	0	.0085	.0109	.0063
33	.0137	.0120	.0150	.0126	.0116	.0111	.0101	.0066	.0132	.0117	.0102	.0094	0	.0081	.0104	.0060
34	.0743	.0608	.0816	.0690	.0569	.0676	.0613	.0295	.0854	.0558	.0458	.0443	0	.0413	.0619	.0287
35	.0419	.0362	.0462	.0377	.0319	.0330	.0296	.0209	.0350	.0347	.0305	.0279	0	.0244	.0315	.0184
36	.0752	.0730	.0914	.0714	.0540	.0534	.0485	.0368	.0563	.0601	.0543	.0491	0	.0422	.0509	.0325
37	.0664	.0574	.0712	.0594	.0509	.0512	.0468	.0300	.0528	.0517	.0453	.0424	0	.0372	.0475	.0261
38	.7000	.6145	.7745	.6384	.5354	.5287	.4798	.3659	.5594	.5975	.5390	.4874	0	.4193	.5055	.3230
Total	**3.0415**	**2.8523**	**3.4491**	**2.7718**	**2.1272**	**2.3457**	**2.1395**	**1.6901**	**2.2399**	**2.0819**	**1.8749**	**1.8225**	**1.0000**	**1.7449**	**2.1469**	**1.4888**

	2.0702	3.0001	3.0002	4.0001	4.0002	5.0000	6.0100	6.0200	7.0000	8.0000	9.0001	9.0002	9.0003	9.0004	10.0000	11.0000
1	1.0439	0.1511	0	1.0791	1.0765	0	0	0	0.0122	0.0053	0.0129	0.0126	0	0.0137	0.0116	0.0232
2	0	1.0003	1.0000	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	0	0	.0001	.0001	0	0	0	1.0024	0	.0001	.0001	0	.0002	.0005	.0001
4	.0002	.0002	0	.0008	.0005	0	0	0	.0001	1.0015	.0002	.0002	0	.0003	.0008	.0002
5	.0009	.0010	0	.0042	.0018	1.0000	1.0000	1.0000	.0006	.0002	1.0103	1.0089	1.0000	1.0015	1.0039	.0087
6	.0185	.0315	0	.0445	.0411	0	0	0	.0272	.0092	.0281	.0292	0	.0275	.0271	1.0235
7	.0268	.0950	0	.0601	.0614	0	0	0	.0254	.0112	.0266	.0261	0	.0284	.0230	.0365
8	.0001	.0002	0	.0005	.0002	0	0	0	.0001	0	.0001	.0001	0	.0001	.0001	.0001
9	.0066	.0059	0	.0137	.0152	0	0	0	.0066	.0028	.0069	.0066	0	.0075	.0058	.0092
10	.0043	.0068	0	.0270	.0097	0	0	0	.0046	.0020	.0073	.0093	0	.0113	.0053	.0091
11	.0126	.0225	0	.0288	.0328	0	0	0	.0143	.0110	.0160	.0142	0	.0264	.0148	.0223
12	.0211	.0417	0	.2268	.0813	0	0	0	.0171	.0106	.0288	.0137	0	.0147	.0170	.0340
13	.0079	.0065	0	.0131	.0137	0	0	0	.0125	.0029	.0140	.0070	0	.0126	.0103	.0205
14	.0014	.0014	0	.0026	.0029	0	0	0	.0027	.0006	.0016	.0015	0	.0017	.0015	.0231
15	.0013	.0020	0	.0032	.0030	0	0	0	.0031	.0029	.0027	.0049	0	.0027	.0021	.0480
16	.0017	.0060	0	.0037	.0035	0	0	0	.0065	.0033	.0063	.0055	0	.0088	.0100	.0255
17	.0037	.0171	0	.0088	.0079	0	0	0	.0125	.0045	.0156	.0125	0	.0099	.0064	.0588
18	.0036	.0056	0	.0051	.0075	0	0	0	.0395	.0033	.0133	.0125	0	.0229	.0100	.0130
19	.0029	.0027	0	.0046	.0052	0	0	0	.0041	.0016	.0047	.0037	0	.0046	.0037	.0203
20	.0118	.0091	0	.0199	.0276	0	0	0	.0116	.0048	.0119	.0116	0	.0137	.0105	.0163
21	.0006	.0005	0	.0018	.0015	0	0	0	.0006	.0003	.0006	.0006	0	.0007	.0006	.0008
22	.0014	.0014	0	.0026	.0033	0	0	0	.0015	.0007	.0017	.0015	0	.0017	.0014	.0026
23	.0009	.0009	0	.0020	.0020	0	0	0	.0009	.0005	.0011	.0010	0	.0011	.0009	.0015
24	.0464	.0419	0	.1164	.0928	0	0	0	.0631	.0156	.0591	.0486	0	.0599	.0591	.0649
25	.0236	.0197	0	.0379	.0485	0	0	0	.0218	.0127	.0247	.0226	0	.0255	.0225	.0373
26	.0366	.0209	0	.0531	.0486	0	0	0	.0420	.0280	.0713	.0730	0	.0711	.1190	.0348
27	.0624	.0576	0	.1483	.1241	0	0	0	.0619	.0197	.0562	.0483	0	.0635	.0473	.0962
28	.0569	.0429	0	.0946	.1330	0	0	0	.0545	.0231	.0565	.0555	0	.0608	.0489	.1164
29	.0330	.0441	0	.0649	.0692	0	0	0	.0368	.0155	.0476	.0371	0	.0409	.0748	.0565
30	.0257	.0293	0	.0437	.0556	0	0	0	.0237	.0097	.0242	.0230	0	.0267	.0219	.0358
31	.0972	.0753	0	.1481	.2150	0	0	0	.1082	.2103	.0985	.1024	0	.0999	.0887	.1292
32	.0098	.0108	0	.0433	.0217	0	0	0	.0093	.0044	.0168	.0146	0	.0137	.0120	.0146
33	.0092	.0102	0	.0332	.0208	0	0	0	.0089	.0039	.0118	.0104	0	.0111	.0083	.0131
34	.0382	.1237	0	.0959	.0996	0	0	0	.0503	.0310	.0685	.0564	0	.0588	.0603	.1560
35	.0295	.0249	0	.0526	.0715	0	0	0	.0291	.0129	.0317	.0307	0	.0330	.0270	.0440
36	.0534	.0394	0	.0857	.1230	0	0	0	.0509	.0219	.0527	.0519	0	.0570	.0454	.0722
37	.0427	.0449	0	.0982	.1170	0	0	0	.0502	.0216	.0494	.0479	0	.0500	.0480	.0685
38	.5310	.3903	0	.8494	1.2242	0	0	0	.5066	.2178	.5239	.5165	0	.5668	.4519	.7185
Total	**1.7369**	**1.9952**	**1.0000**	**2.6688**	**2.6391**	**1.0000**	**1.0000**	**1.0000**	**1.8169**	**1.5094**	**1.8798**	**1.8058**	**1.0000**	**1.8839**	**1.8504**	**2.3369**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	11.0601	11.0602	11.0603	12.0215	13.0100	13.0200	13.0300	13.0500	13.0600	13.0700	14.0103	14.0105	14.0250	14.0400	14.0500	14.0600
1	0.0239	0.0188	0.0113	0.0240	0.0132	0.0150	0	0.0148	0.0141	0	1.4037	0.1493	0.3621	0.2432	0.0929	0.4160
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	.0001	.0001	.0001	0	.0001	0	.0001	.0001	0	.0001	.0001	.0001	0	.0001	.0001
4	.0003	.0002	.0001	.0003	.0001	.0004	0	.0002	.0002	0	.0003	.0001	.0002	.0002	.0002	.0002
5	.0010	.0003	.0004	.0014	.0002	.0004	0	.0004	.0004	0	.0024	.0003	.0010	.0007	.0004	.0011
6	1.0284	1.0196	1.0118	1.0261	.0212	.0284	0	.0254	.0273	0	.0427	.0162	.0186	.0176	.0198	.0215
7	.0504	.0398	.0240	.0508	.0278	.0308	0	.0308	.0290	0	1.3232	1.1346	1.1908	1.0707	1.1562	1.0929
8	.0001	.0001	.0001	.0002	.0001	.0001	0	.0001	.0001	0	.0001	.0001	.0001	.0001	.0001	.0001
9	.0126	.0100	.0060	.0128	.0069	.0100	0	.0076	.0073	0	.0102	.0049	.0046	.0041	.0051	.0053
10	.0077	.0054	.0034	.0081	.0045	.0076	0	.0081	.0201	0	.0191	.0316	.0348	.0322	.0957	.0377
11	.0233	.0246	.0106	.0229	.0216	.0415	0	.0339	.0306	0	.0400	.0190	.0361	.0327	.0238	.0272
12	.0300	.0180	.0219	.0407	.0119	.0319	0	.0166	.0493	0	.0553	.0165	.0249	.0199	.0178	.0304
13	.0108	.0081	.0053	.0218	.0097	.0120	0	.0104	.0287	0	.0159	.0067	.0136	.0183	.0196	.0263
14	.0023	.0017	.0011	.0047	.0014	.0021	0	.0030	.0025	0	.0027	.0011	.0013	.0012	.0062	.0014
15	.0195	.0015	.0009	.0193	.0016	.0031	0	.0026	.0025	0	.0029	.0011	.0013	.0013	.0014	.0016
16	.0689	.0047	.0066	.0191	.0057	.0451	0	.0506	.0263	0	.0045	.0017	.0024	.0076	.0022	.0029
17	.0301	.0090	.0078	.0325	.0067	1.0947	0	1.0405	1.0466	1.0000	.0100	.0043	.0058	.0245	.0049	.0082
18	.0085	.0089	.0285	.0054	.0041	.0122	0	.0104	.0086	0	.0089	.0020	.0034	.0061	.0030	.0038
19	.0042	.0030	.0021	.0065	.0342	.0091	0	.0031	.0030	0	.0061	.0018	.0024	.0022	.0022	.0027
20	.0217	.0171	.0104	.0220	.0119	.0133	0	.0133	.0127	0	.0188	.0084	.0082	.0074	.0090	.0095
21	.0011	.0009	.0005	.0012	1.0061	.0008	1.0000	.0007	.0007	0	.0010	.0004	.0004	.0004	.0005	.0005
22	.0027	.0021	.0013	.0029	.0044	.0038	0	.0018	.0017	0	.0024	.0012	.0013	.0013	.0014	.0013
23	.0016	.0013	.0007	.0016	.0010	.0017	0	.0014	.0013	0	.0016	.0008	.0008	.0008	.0009	.0010
24	.0702	.0345	.0255	.0848	.0304	.0630	0	.0620	.0568	0	.1117	.0387	.0518	.0432	.0492	.0540
25	.0406	.0342	.0178	.0399	.0317	.0397	0	.0355	.0328	0	.0461	.0214	.0223	.0237	.0253	.0284
26	.0438	.0289	.0188	.0419	.0266	.0514	0	.0404	.0418	0	.0509	.0316	.0312	.0323	.0385	.0356
27	.0919	.0462	.0341	.0830	.0441	.0715	0	.0792	.0699	0	.1739	.0751	.1196	.0794	.0908	.0971
28	.1065	.0841	.0508	.1065	.0581	.0651	0	.0648	.0614	0	.0897	.0414	.0397	.0360	.0438	.0461
29	.0549	.0424	.0258	.0576	.0319	.0408	0	.0369	.0344	0	.0673	.0256	.0298	.0313	.0283	.0332
30	.0418	.0327	.0197	.0430	.0238	.0287	0	.0282	.0266	0	.0578	.0180	.0208	.0181	.0202	.0241
31	.1732	.2014	.0779	.1652	.1005	.1075	0	.1048	.0977	0	.2205	.0703	.0828	.0730	.0793	.0966
32	.0174	.0140	.0082	.0176	.0105	.0140	0	.0135	.0123	0	.0168	.0076	.0078	.0074	.0084	.0092
33	.0169	.0131	.0079	.0174	.0094	.0122	0	.0115	.0109	0	.0155	.0077	.0076	.0071	.0092	.0085
34	.0640	.0508	.0281	.0734	.0584	.0824	0	.0746	.0627	0	.0857	.0377	.0461	.0411	.0520	.0511
35	.0548	.0430	.0260	.0553	.0330	.0381	0	.0374	.0345	0	.0485	.0233	.0227	.0203	.0252	.0258
36	.1020	.0811	.0489	.1020	.0555	.0608	0	.0610	.0575	0	.0915	.0399	.0371	.0336	.0406	.0435
37	.0760	.0577	.0350	.0774	.0425	.0535	0	.0548	.0517	0	.0737	.0346	.0352	.0326	.0414	.0401
38	1.0145	.8074	.4868	1.0151	.5521	.6053	0	.6072	.5717	0	.8110	.3845	.3587	.3273	.4017	.4200
Total	**2.3032**	**1.9591**	**1.5795**	**2.2891**	**1.7506**	**2.0928**	**1.0000**	**1.9808**	**1.9643**	**1.0000**	**4.1213**	**1.8749**	**2.2687**	**1.9716**	**2.0156**	**2.2852**

	14.0700	14.0800	14.0900	14.1000	14.1100	14.1200	14.1301	14.1302	14.1401	14.1402	14.1403	14.1501	14.1502	14.1600	14.1700	14.1801
1	0	0	0.0236	0	0.0316	0	0.0218	0.1553	0.6079	0.2422	0.2634	0.1538	0.4042	0	0.5649	0.0535
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	.0001	0	.0001	0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	0	.0003	.0001
4	0	0	.0002	0	.0002	0	.0002	.0002	.0003	.0002	.0002	.0002	.0003	0	.0005	.0002
5	0	0	.0002	0	.0003	0	.0003	.0006	.0041	.0017	.0018	.0008	.0022	0	.0028	.0004
6	0	0	.0167	0	.0157	0	.0182	.0214	.0406	.0266	.0271	.0212	.0312	0	.0377	.0194
7	1.0000	1.0000	1.0409	1.0000	1.0735	1.0000	1.0316	1.2406	1.0942	1.0448	1.1800	1.1867	1.5889	1.0000	1.0882	1.1115
8	0	0	.0001	0	.0002	0	.0001	.0001	.0001	.0001	.0001	.0002	.0001	0	.0001	.0001
9	0	0	.0044	0	.0046	0	.0051	.0061	.0083	.0055	.0060	.0079	.0075	0	.0068	.0063
10	0	0	.0281	0	.0244	0	.0519	.0725	.0351	.0601	.0523	.0527	.0187	0	.0211	.0268
11	0	0	.0292	0	.0806	0	.0348	.0334	.0305	.0447	.0345	.0652	.0261	0	.0364	.0357
12	0	0	.0120	0	.0240	0	.0182	.0244	.0615	.0310	.0328	.0383	.1154	0	.0490	.0157
13	0	0	.0066	0	.0798	0	.0448	.0478	.0101	.0090	.0106	.0283	.0150	0	.0091	.0114
14	0	0	.0023	0	.0012	0	.0015	.0015	.0022	.0015	.0016	.0015	.0019	0	.0020	.0013
15	0	0	.0012	0	.0014	0	.0014	.0017	.0028	.0019	.0020	.0016	.0022	0	.0025	.0014
16	0	0	.0209	0	.0020	0	.0064	.0024	.0032	.0027	.0023	.0166	.0029	0	.0033	.0017
17	0	0	.0732	0	.0057	0	.0173	.0052	.0062	.0058	.0044	.0567	.0062	0	.0063	.0036
18	0	0	.0030	0	.0030	0	.0026	.0037	.0077	.0043	.0042	.0041	.0057	0	.0083	.0033
19	0	0	.0019	0	.0021	0	.0021	.0026	.0049	.0029	.0031	.0026	.0040	0	.0047	.0025
20	0	0	.0078	0	.0087	0	.0089	.0102	.0131	.0098	.0105	.0092	.0124	0	.0128	.0110
21	0	0	.0004	0	.0004	0	.0005	.0005	.0008	.0005	.0006	.0005	.0007	0	.0007	.0006
22	0	0	.0012	0	.0014	0	.0014	.0016	.0017	.0015	.0015	.0014	.0018	0	.0016	.0017
23	0	0	.0008	0	.0012	0	.0011	.0011	.0013	.0013	.0012	.0014	.0011	0	.0013	.0012
24	0	0	.0671	0	.0711	0	.0820	.0660	.1433	.0761	.0958	.0675	.1341	0	.1059	.0508
25	0	0	.0236	0	.0316	0	.0292	.0303	.0361	.0355	.0329	.0376	.0330	0	.0350	.0337
26	0	0	.0326	0	.0446	0	.0414	.0370	.0523	.0309	.0349	.0379	.0458	0	.0822	.0326
27	0	0	.1235	0	.0717	0	.1209	.1175	.1620	.1107	.1091	.1023	.1592	0	.1467	.0639
28	0	0	.0384	0	.0395	0	.0439	.0498	.0637	.0479	.0512	.0447	.0603	0	.0608	.0537
29	0	0	.0255	0	.0271	0	.0273	.0320	.0513	.0344	.0370	.0335	.0467	0	.0472	.0346
30	0	0	.0190	0	.0218	0	.0205	.0252	.0472	.0285	.0311	.0269	.0447	0	.0502	.0259
31	0	0	.0662	0	.0686	0	.0746	.0916	.1769	.1099	.1177	.0917	.1399	0	.1553	.0962
32	0	0	.0077	0	.0088	0	.0089	.0099	.0129	.0152	.0156	.0178	.0118	0	.0167	.0108
33	0	0	.0075	0	.0089	0	.0083	.0093	.0115	.0086	.0109	.0085	.0107	0	.0112	.0092
34	0	0	.0462	0	.0524	0	.0525	.0565	.0743	.0629	.0609	.0643	.0706	0	.0727	.0796
35	0	0	.0228	0	.0228	0	.0252	.0281	.0361	.0273	.0289	.0261	.0338	0	.0338	.0310
36	0	0	.0349	0	.0359	0	.0400	.0467	.0559	.0434	.0463	.0410	.0537	0	.0539	.0498
37	0	0	.0370	0	.0361	0	.0413	.0435	.0573	.0417	.0446	.0408	.0546	0	.0634	.0485
38	0	0	.3471	0	.3569	0	.3982	.4567	.5550	.4310	.4597	.4055	.5321	0	.5352	.4956
Total	**1.0000**	**1.0000**	**1.8268**	**1.0000**	**1.9030**	**1.0000**	**1.8860**	**2.2765**	**2.9173**	**2.1712**	**2.3572**	**2.2914**	**3.1470**	**1.0000**	**2.7955**	**1.9296**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	14.1802	14.1803	14.1900	14.2001	14.2002	14.2003	14.2004	14.2101	14.2102	14.2103	14.2104	14.2200	14.2300	14.2400	14.2500	14.2600
1	0.0580	0.0613	0	0.0573	0	0	0.2249	0.0154	0	0.0159	0.0236	0.0350	0.0421	0	0.7917	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	.0001	0	.0001	0	0	0	.0001	0	0	0	.0001	0	0	.0001	0
4	.0002	.0002	0	.0001	0	0	.0001	.0002	0	.0001	.0001	.0002	.0001	0	.0003	0
5	.0004	.0005	0	.0003	0	0	.0005	.0003	0	.0002	.0002	.0004	.0005	0	.0013	0
6	.0178	.0239	0	.0172	0	0	.0186	.0163	0	.0126	.0058	.0232	.0138	0	.0360	0
7	1.1081	1.1356	1.0000	1.0602	1.0000	1.0000	1.0484	1.0187	1.0000	1.0181	1.0372	1.0814	1.0828	1.0000	1.1470	1.0000
8	.0001	.0002	0	.0001	0	0	.0001	.0001	0	.0001	0	.0002	.0001	0	.0001	0
9	.0056	.0069	0	.0047	0	0	.0045	.0039	0	.0038	.0017	.0050	.0036	0	.0073	0
10	.0729	.0740	0	.0660	0	0	.0253	.0318	0	.0176	.0046	.0199	.0135	0	.0103	0
11	.0318	.0481	0	.0253	0	0	.0258	.0564	0	.0680	.0196	.0412	.0898	0	.0265	0
12	.0190	.0299	0	.0165	0	0	.0209	.0128	0	.0093	.0051	.0226	.0381	0	.0478	0
13	.0248	.0824	0	.0145	0	0	.0134	.0083	0	.0057	.0051	.0731	.0104	0	.0124	0
14	.0013	.0017	0	.0012	0	0	.0012	.0011	0	.0012	.0023	.0016	.0010	0	.0022	0
15	.0014	.0020	0	.0012	0	0	.0013	.0011	0	.0009	.0004	.0019	.0010	0	.0024	0
16	.0018	.0028	0	.0021	0	0	.0043	.0383	0	.0011	.0006	.0326	.0049	0	.0030	0
17	.0037	.0053	0	.0049	0	0	.0127	.1354	0	.0029	.0013	.1149	.0159	0	.0062	0
18	.0040	.0044	0	.0030	0	0	.0040	.0036	0	.0023	.0013	.0040	.0026	0	.0084	0
19	.0023	.0028	0	.0019	0	0	.0024	.0017	0	.0015	.0007	.0024	.0017	0	.0052	0
20	.0099	.0114	0	.0083	0	0	.0080	.0068	0	.0067	.0030	.0087	.0064	0	.0137	0
21	.0005	.0006	0	.0004	0	0	.0004	.0004	0	.0004	.0002	.0005	.0003	0	.0007	0
22	.0018	.0019	0	.0016	0	0	.0013	.0010	0	.0010	.0004	.0014	.0011	0	.0017	0
23	.0011	.0014	0	.0009	0	0	.0009	.0011	0	.0011	.0004	.0012	.0017	0	.0012	0
24	.0504	.0647	0	.0503	0	0	.0510	.0497	0	.0531	.0241	.0550	.0488	0	.0844	0
25	.0297	.0386	0	.0240	0	0	.0241	.0287	0	.0296	.0115	.0309	.0449	0	.0350	0
26	.0311	.0453	0	.0285	0	0	.0252	.0292	0	.0214	.0103	.0304	.0210	0	.0512	0
27	.0793	.1068	0	.0818	0	0	.0919	.0515	0	.1095	.0599	.0940	.0718	0	.1781	0
28	.0476	.0554	0	.0404	0	0	.0385	.0335	0	.0330	.0148	.0427	.0312	0	.0643	0
29	.0309	.0353	0	.0277	0	0	.0306	.0275	0	.0289	.0115	.0312	.0265	0	.0598	0
30	.0236	.0283	0	.0209	0	0	.0310	.0195	0	.0174	.0098	.0211	.0169	0	.0789	0
31	.0855	.0975	0	.0743	0	0	.0902	.0563	0	.0580	.0271	.0745	.0609	0	.1968	0
32	.0094	.0115	0	.0078	0	0	.0077	.0080	0	.0081	.0034	.0094	.0104	0	.0130	0
33	.0083	.0109	0	.0071	0	0	.0069	.0059	0	.0062	.0027	.0082	.0060	0	.0122	0
34	.0642	.0678	0	.0522	0	0	.0558	.0508	0	.0480	.0202	.0606	.0656	0	.0740	0
35	.0279	.0315	0	.0235	0	0	.0228	.0195	0	.0201	.0088	.0255	.0189	0	.0365	0
36	.0445	.0514	0	.0375	0	0	.0352	.0308	0	.0302	.0135	.0393	.0287	0	.0579	0
37	.0426	.0488	0	.0354	0	0	.0345	.0346	0	.0303	.0132	.0377	.0290	0	.0567	0
38	.4425	.5112	0	.3732	0	0	.3499	.3063	0	.3007	.1344	.3907	.2852	0	.5751	0
Total	**1.9416**	**2.1913**	**1.0000**	**1.7990**	**1.0000**	**1.0000**	**1.9646**	**1.8001**	**1.0000**	**1.6643**	**1.3443**	**2.0317**	**1.8121**	**1.0000**	**3.1242**	**1.0000**

	14.2700	14.2800	14.2900	14.3000	14.3100	14.3201	14.3202	15.0101	15.0102	15.0103	15.0200	16.0100	16.0200	16.0300	16.0400	17.0100
1	0.1099	0.0064	0.3070	0.0153	0.1293	0.0549	0.0900	0	0	0.0109	0	0.0194	0.0127	0.0212	0	0
2	0	0	0	0	0	0	.0001	0	0	0	0	0	0	0	0	0
3	.0001	0	.0001	.0002	.0001	0	.0001	0	0	0	0	.0001	.0001	.0001	0	0
4	.0005	.0001	.0003	.0002	.0002	.0002	.0002	0	0	.0001	0	.0002	.0002	.0002	0	0
5	.0004	.0001	.0007	.0003	.0010	.0005	.0005	0	0	.0002	0	.0003	.0002	.0002	0	0
6	.0234	.0088	.0253	.0252	.0276	.0181	.0194	0	0	.0106	0	.0175	.0220	.0167	0	0
7	1.2279	1.0125	1.4438	1.0360	1.2441	1.0508	1.0635	1.0000	1.0000	1.0156	1.0000	.0191	.0266	.0190	0	0
8	.0003	0	.0001	.0002	.0002	.0002	.0002	0	0	.0001	0	1.0075	1.0006	1.0007	1.0000	1.0000
9	.0058	.0028	.0056	.0079	.0064	.0051	.0053	0	0	.0048	0	.0054	.0069	.0046	0	0
10	.0099	.0143	.0387	.1192	.0933	.0725	.0452	0	0	.0335	0	.0086	.0054	.0045	0	0
11	.0246	.0169	.0365	.0311	.0288	.0336	.0408	0	0	.0404	0	.0130	.0459	.0103	0	0
12	.0283	.0068	.0313	.0233	.0329	.0260	.0283	0	0	.0165	0	.0142	.0136	.0125	0	0
13	.1397	.0135	.0465	.0145	.0802	.0655	.0843	0	0	.0167	0	.0106	.0208	.0047	0	0
14	.0016	.0007	.0016	.0015	.0017	.0013	.0014	0	0	.0008	0	.0012	.0014	.0010	0	0
15	.0027	.0007	.0018	.0018	.0021	.0016	.0017	0	0	.0008	0	.0041	.0029	.0011	0	0
16	.0022	.0041	.0042	.0020	.0025	.0020	.0030	0	0	.0018	0	.0013	.0017	.0012	0	0
17	.0060	.0138	.0121	.0044	.0053	.0042	.0079	0	0	.0041	0	.0030	.0039	.0026	0	0
18	.0041	.0010	.0047	.0055	.0040	.0031	.0038	0	0	.0029	0	.0024	.0029	.0021	0	0
19	.0027	.0011	.0032	.0029	.0030	.0023	.0025	0	0	.0017	0	.0017	.0024	.0016	0	0
20	.0099	.0052	.0102	.0134	.0109	.0089	.0092	0	0	.0066	0	.0079	.0113	.0078	0	0
21	.0005	.0003	.0006	.0007	.0006	.0005	.0005	0	0	.0003	0	.0004	.0006	.0004	0	0
22	.0015	.0007	.0014	.0021	.0016	.0021	.0016	0	0	.0014	0	.0011	.0017	.0010	0	0
23	.0011	.0005	.0011	.0014	.0012	.0009	.0011	0	0	.0009	0	.0007	.0014	.0006	0	0
24	.0554	.1415	.1092	.0514	.0813	.0687	.0697	0	0	.0316	0	.0338	.0438	.0301	0	0
25	.0284	.0148	.0308	.0334	.0315	.0253	.0271	0	0	.0259	0	.0179	.0391	.0164	0	0
26	.0668	.0165	.0464	.0752	.0427	.0296	.0335	0	0	.0188	0	.0423	.0402	.0486	0	0
27	.0826	.0710	.1199	.0466	.1074	.0938	.1015	0	0	.0423	0	.0747	.0584	.0646	0	0
28	.0484	.0271	.0497	.0656	.0532	.0437	.0451	0	0	.0320	0	.0383	.0555	.0381	0	0
29	.0319	.0162	.0385	.0390	.0352	.0277	.0306	0	0	.0290	0	.0245	.0328	.0237	0	0
30	.0234	.0119	.0391	.0302	.0279	.0211	.0244	0	0	.0153	0	.0171	.0238	.0174	0	0
31	.0853	.0423	.1132	.1211	.1031	.0774	.0861	0	0	.0583	0	.0623	.0939	.0613	0	0
32	.0092	.0047	.0101	.0120	.0104	.0084	.0091	0	0	.0075	0	.0067	.0120	.0065	0	0
33	.0090	.0043	.0091	.0195	.0098	.0096	.0106	0	0	.0060	0	.0109	.0191	.0128	0	0
34	.0511	.0242	.0575	.0765	.0595	.0520	.0598	0	0	.0869	0	.0461	.0633	.0338	0	0
35	.0272	.0142	.0279	.0410	.0311	.0264	.0281	0	0	.0193	0	.0222	.0329	.0223	0	0
36	.0454	.0224	.0450	.0623	.0490	.0402	.0415	0	0	.0297	0	.0358	.0523	.0356	0	0
37	.0433	.0239	.0445	.0642	.0450	.0380	.0408	0	0	.0334	0	.0350	.0497	.0356	0	0
38	.4449	.2224	.4434	.6199	.4871	.4000	.4119	0	0	.2956	0	.3552	.5206	.3535	0	0
Total	**2.2105**	**1.5453**	**2.7175**	**2.0471**	**2.3641**	**1.9163**	**2.0186**	**1.0000**	**1.0000**	**1.6070**	**1.0000**	**1.6074**	**1.8019**	**1.5609**	**1.0000**	**1.0000**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	17.0600	17.0700	17.0900	17.1001	17.1100	18.0101	18.0102	18.0201	18.0202	18.0203	18.0300	18.0400	19.0100	19.0200	19.0301	19.0302
1	0.0102	0	0	0	0.0131	0	0	0.0134	0	0	0	0.0144	0.0105	0.0076	0.0105	0.0129
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	0	0	0	.0001	0	0	.0001	0	0	0	0	0	0	0	0
4	.0002	0	0	0	.0002	0	0	.0002	0	0	0	.0001	.0002	.0001	.0001	.0002
5	.0004	0	0	0	.0003	0	0	.0002	0	0	0	.0002	.0002	.0001	.0002	.0003
6	.0157	0	0	0	.0200	0	0	.0152	0	0	0	.0143	.0143	.0118	.0142	.0192
7	.0210	0	0	0	.0323	0	0	.0247	0	0	0	.0257	.0220	.0156	.0216	.0275
8	1.0111	1.0000	1.0000	1.0000	1.0021	1.0000	1.0000	1.0018	1.0000	1.0000	1.0000	.0051	.0084	.0111	.0213	.0366
9	.0066	0	0	0	.0061	0	0	.0329	0	0	0	1.1177	1.0269	1.0138	1.0094	1.0202
10	.0066	0	0	0	.0157	0	0	.0083	0	0	0	.0079	.0107	.0252	.0116	.0095
11	.0318	0	0	0	.0378	0	0	.0130	0	0	0	.0209	.0167	.0158	.0172	.0244
12	.0757	0	0	0	.0387	0	0	.0177	0	0	0	.0094	.0087	.0078	.0102	.0277
13	.0166	0	0	0	.0094	0	0	.0548	0	0	0	.0117	.0063	.0071	.0098	.0127
14	.0011	0	0	0	.0018	0	0	.0012	0	0	0	.0011	.0012	.0055	.0011	.0014
15	.0012	0	0	0	.0018	0	0	.0013	0	0	0	.0010	.0011	.0011	.0011	.0015
16	.0014	0	0	0	.0016	0	0	.0014	0	0	0	.0012	.0012	.0011	.0011	.0016
17	.0034	0	0	0	.0039	0	0	.0036	0	0	0	.0028	.0027	.0026	.0027	.0037
18	.0022	0	0	0	.0027	0	0	.0021	0	0	0	.0019	.0018	.0015	.0018	.0027
19	.0019	0	0	0	.0021	0	0	.0021	0	0	0	.0019	.0018	.0014	.0018	.0023
20	.0088	0	0	0	.0103	0	0	.0105	0	0	0	.0097	.0091	.0068	.0091	.0111
21	.0005	0	0	0	.0005	0	0	.0005	0	0	0	.0005	.0005	.0003	.0005	.0006
22	.0016	0	0	0	.0014	0	0	.0015	0	0	0	.0017	.0016	.0013	.0021	.0018
23	.0010	0	0	0	.0012	0	0	.0015	0	0	0	.0013	.0008	.0007	.0009	.0029
24	.0546	0	0	0	.0530	0	0	.0388	0	0	0	.0317	.0346	.0324	.0489	.0381
25	.0288	0	0	0	.0328	0	0	.0207	0	0	0	.0239	.0214	.0179	.0225	.0293
26	.0369	0	0	0	.0428	0	0	.0302	0	0	0	.0235	.0220	.0269	.0245	.0273
27	.0679	0	0	0	.0521	0	0	.0546	0	0	0	.0671	.0789	.0974	.0598	.0867
28	.0430	0	0	0	.0505	0	0	.0513	0	0	0	.0474	.0448	.0323	.0452	.0545
29	.0275	0	0	0	.0302	0	0	.0287	0	0	0	.0317	.0381	.0235	.0263	.0330
30	.0192	0	0	0	.0224	0	0	.0219	0	0	0	.0208	.0198	.0157	.0208	.0247
31	.0726	0	0	0	.0869	0	0	.0860	0	0	0	.0811	.0772	.0569	.0761	.0951
32	.0086	0	0	0	.0099	0	0	.0089	0	0	0	.0087	.0087	.0066	.0079	.0103
33	.0102	0	0	0	.0140	0	0	.0128	0	0	0	.0099	.0083	.0073	.0108	.0106
34	.0581	0	0	0	.0573	0	0	.0381	0	0	0	.0435	.0437	.0355	.0419	.0537
35	.0245	0	0	0	.0294	0	0	.0286	0	0	0	.0287	.0278	.0204	.0271	.0343
36	.0401	0	0	0	.0471	0	0	.0488	0	0	0	.0449	.0426	.0302	.0425	.0519
37	.0377	0	0	0	.0435	0	0	.0406	0	0	0	.0400	.0350	.0294	.0345	.0427
38	.3994	0	0	0	.4689	0	0	.4854	0	0	0	.4460	.4239	.3007	.4232	.5158
Total	**1.7489**	**1.0000**	**1.0000**	**1.0000**	**1.7753**	**1.0000**	**1.0000**	**1.7181**	**1.0000**	**1.0000**	**1.0000**	**1.7534**	**1.6496**	**1.5710**	**1.6370**	**1.8128**

	19.0303	19.0304	19.0305	19.0306	20.0100	20.0200	20.0300	20.0400	20.0501	20.0502	20.0600	20.0701	20.0702	20.0703	20.0800	20.0901
1	0.0120	0.0363	0	0.0108	0.1012	0.0132	0.0156	0.0163	0.0136	0.0161	0.0134	0.0139	0.0142	0	0.0100	0.0148
2	0	0	0	0	.0034	0	0	0	0	0	0	0	0	0	0	0
3	0	.0001	0	0	0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	0	.0001	.0001
4	.0001	.0002	0	.0002	.0002	.0002	.0002	.0001	.0002	.0002	.0003	.0002	.0002	0	.0003	.0002
5	.0002	.0003	0	.0003	.0005	.0002	.0003	.0006	.0003	.0003	.0003	.0003	.0005	0	.0005	.0003
6	.0159	.0184	0	.0161	.0138	.0215	.0275	.0646	.0232	.0258	.0202	.0228	.0311	0	.0180	.0262
7	.0251	.0479	0	.0226	.0175	.0201	.0312	.0274	.0274	.0328	.0228	.0286	.0293	0	.0184	.0291
8	.0013	.0280	0	.0142	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	0	.0001	.0001
9	1.0736	1.0189	1.0000	1.0201	.0043	.0049	.0078	.0069	.0067	.0081	.0056	.0071	.0072	0	.0045	.0071
10	.0084	.0179	0	.0275	.0045	.0046	.0139	.0052	.0124	.0245	.0068	.0108	.0091	0	.0070	.0099
11	.0182	.0258	0	.0259	.0099	.0126	.0222	.0171	.0314	.0311	.0175	.0211	.0442	0	.0244	.0253
12	.0395	.0385	0	.0271	.0310	.0116	.0180	.0122	.0284	.0451	.0389	.0212	.0160	0	.0402	.0272
13	.0208	.1306	0	.0226	.0205	.0063	.0147	.0147	.0148	.0171	.0097	.0097	.0101	0	.0052	.0073
14	.0012	.0016	0	.0014	1.0054	1.0215	1.0407	1.0308	1.0266	1.0439	1.0312	1.0299	1.0661	1.0000	1.0350	1.0292
15	.0012	.0018	0	.0016	.0011	.0016	.0021	.0035	.0091	.0030	.0020	.0020	.0187	0	.0016	.0022
16	.0014	.0019	0	.0016	.0127	.0024	.0023	.0028	.0091	.0061	.0021	.0079	.0139	0	.0021	.0037
17	.0034	.0049	0	.0036	.0280	.0079	.0057	.0066	.0568	.0391	.0064	.0411	.0666	0	.0069	.0110
18	.0020	.0026	0	.0024	.0118	.0035	.0039	.0029	.0050	.0042	.0036	.0032	.0070	0	.0032	.0050
19	.0023	.0025	0	.0020	.0038	.0020	.0030	.0032	.0034	.0034	.0024	.0029	.0057	0	.0018	.0026
20	.0105	.0110	0	.0092	.0078	.0088	.0142	.0125	.0118	.0141	.0098	.0124	.0126	0	.0076	.0122
21	.0006	.0006	0	.0005	.0006	.0005	.0007	.0006	.0006	.0007	.0005	.0007	.0007	0	.0004	.0007
22	.0016	.0024	0	.0037	.0010	.0013	.0019	.0015	.0018	.0021	.0015	.0016	.0018	0	.0012	.0018
23	.0015	.0013	0	.0018	.0007	.0007	.0012	.0010	.0013	.0014	.0009	.0011	.0015	0	.0009	.0012
24	.0350	.0475	0	.0402	.0309	.0547	.0646	.0565	.0675	.0623	.0604	.0725	.0719	0	.0714	.0747
25	.0244	.0263	0	.0252	.0148	.0193	.0305	.0258	.0330	.0352	.0227	.0280	.0392	0	.0242	.0295
26	.0267	.0305	0	.0267	.0185	.0387	.0450	.0335	.0334	.0362	.0504	.0297	.0343	0	.0339	.0384
27	.0501	.0803	0	.1002	.0448	.0614	.1199	.1025	.1267	.1003	.0774	.1339	.1219	0	.1108	.1151
28	.0514	.0538	0	.0449	.0355	.0432	.0681	.0612	.0576	.0688	.0481	.0609	.0614	0	.0379	.0603
29	.0541	.0398	0	.0341	.0241	.0314	.0396	.0392	.0384	.0412	.0363	.0376	.0458	0	.0322	.0410
30	.0222	.0242	0	.0210	.0191	.0217	.0310	.0269	.0263	.0303	.0236	.0260	.0292	0	.0192	.0269
31	.0899	.0920	0	.0815	.0582	.0680	.1084	.0973	.0986	.1176	.0769	.1021	.1030	0	.0638	.0997
32	.0110	.0107	0	.0087	.0058	.0074	.0115	.0102	.0112	.0125	.0087	.0109	.0135	0	.0078	.0110
33	.0309	.0160	0	.0104	.0059	.0074	.0117	.0119	.0100	.0113	.0081	.0107	.0111	0	.0072	.0110
34	.0434	.0551	0	.0506	.0318	.0399	.0580	.0536	.0608	.0638	.0445	.0560	.0790	0	.0624	.0642
35	.0295	.0314	0	.0287	.0190	.0257	.0384	.0318	.0345	.0394	.0283	.0343	.0377	0	.0241	.0380
36	.0490	.0510	0	.0424	.0309	.0393	.0613	.0550	.0536	.0645	.0442	.0567	.0570	0	.0343	.0560
37	.0387	.0531	0	.0414	.0489	.0406	.0708	.0584	.0479	.0560	.0408	.0499	.0517	0	.0344	.0545
38	.4873	.5062	0	.4221	.3071	.3911	.6103	.5472	.5332	.6413	.4401	.5644	.5672	0	.3415	.5566
Total	**1.7971**	**2.0053**	**1.0000**	**1.7710**	**1.6681**	**1.6444**	**1.9791**	**1.8946**	**1.9836**	**2.0587**	**1.7661**	**1.9458**	**2.1135**	**1.0000**	**1.7528**	**1.9375**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued
[Dollars]

	20.0903	20.0904	21.0000	22.0101	22.0102	22.0103	22.0200	22.0300	22.0400	23.0100	23.0200	23.0300	23.0400	23.0500	23.0600	23.0700
1	0.0159	0	0.0163	0.0151	0.0148	0	0.0231	0.0140	0.0131	0.0156	0.0133	0.0127	0.0159	0.0153	0.0122	0.0148
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	0	.0001	.0001	.0001	0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0001	.0001
4	.0004	0	.0002	.0002	.0002	0	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0003	.0002	.0002
5	.0003	0	.0003	.0004	.0004	0	.0003	.0004	.0003	.0003	.0004	.0004	.0004	.0006	.0004	.0004
6	.0276	0	.0285	.0313	.0240	0	.0267	.0269	.0245	.0293	.0242	.0272	.0267	.0304	.0270	.0246
7	.0323	0	.0335	.0312	.0301	0	.0378	.0291	.0272	.0312	.0278	.0264	.0331	.0318	.0249	.0311
8	.0001	0	.0001	.0003	.0002	0	.0142	.0151	.0048	.0092	.0159	.0385	.0015	.0007	.0269	.0079
9	.0079	0	.0082	.0076	.0077	0	.0088	.0099	.0107	.0074	.0069	.0073	.0081	.0077	.0063	.0080
10	.0190	0	.0443	.0348	.0476	0	.0140	.0359	.0148	.0215	.0251	.0145	.0179	.0222	.0099	.0145
11	.0331	0	.0216	.0347	.0175	0	.0233	.0315	.0302	.0231	.0262	.0242	.0299	.0303	.0242	.0301
12	.0311	0	.0174	.0346	.1394	0	.0267	.0291	.0193	.0244	.0278	.0235	.0319	.0338	.0181	.0205
13	.0241	0	.0081	.0122	.0165	0	.0830	.0437	.0633	.0235	.0330	.0396	.0513	.0165	.0382	.0201
14	1.0320	1.0000	1.0454	1.0520	1.0158	1.0000	1.0469	1.0072	1.0278	1.0224	1.0046	1.0049	1.0245	1.0114	1.0265	1.0170
15	.0039	0	.0020	.0081	.0065	0	.0030	.0073	.0027	.0030	.0023	.0030	.0038	.0032	.0025	.0026
16	.0078	0	.0023	.0045	.0029	0	.0104	.0865	.0686	.0147	.0661	.0762	.0182	.1476	.0979	.0520
17	.0372	0	.0050	.0238	.0091	0	.0308	.0301	.1219	.0185	.0289	.0278	.0311	.0338	.0168	.0396
18	.0052	0	.0039	.0054	.0034	0	.0044	.0043	.0058	.0031	.0038	.0042	.0044	.0067	.0039	.0120
19	.0035	0	.0029	.0033	.0029	0	.0032	.0034	.0031	.0032	.0032	.0032	.0041	.0041	.0026	.0134
20	.0140	0	.0143	.0133	.0130	0	.0128	.0124	.0117	.0129	.0119	.0113	.0141	.0139	.0106	.0135
21	.0007	0	.0008	.0007	.0007	0	.0007	.0007	.0006	.0007	.0006	.0006	.0007	.0007	.0006	.0008
22	.0022	0	.0020	.0022	.0018	0	.0021	.0020	.0019	.0019	.0018	.0019	.0022	.0020	.0017	.0020
23	.0014	0	.0012	.0014	.0010	0	.0018	.0013	.0016	.0012	.0012	.0011	.0014	.0013	.0012	.0013
24	.0654	0	.0729	.0641	.0931	0	.0565	.0590	.0492	.0497	.0486	.0601	.0603	.0656	.0499	.0498
25	.0359	0	.0321	.0354	.0288	0	.0300	.0374	.0317	.0304	.0316	.0299	.0337	.0364	.0289	.0339
26	.0589	0	.0401	.0411	.0476	0	.0331	.0401	.0318	.0343	.0357	.0349	.0392	.0545	.0324	.0365
27	.1078	0	.1273	.1145	.1056	0	.1014	.0990	.0932	.0901	.0908	.0993	.0894	.1044	.0830	.1160
28	.0678	0	.0701	.0650	.0638	0	.0619	.0609	.0565	.0632	.0581	.0549	.0686	.0666	.0520	.0649
29	.0436	0	.0466	.0414	.0398	0	.0589	.0412	.0402	.0422	.0522	.0411	.0464	.0466	.0315	.0395
30	.0306	0	.0294	.0290	.0291	0	.0281	.0264	.0248	.0267	.0254	.0245	.0304	.0301	.0232	.0290
31	.1122	0	.1155	.1072	.1043	0	.1033	.1061	.1021	.1072	.0984	.0931	.1189	.1114	.0888	.1134
32	.0128	0	.0124	.0126	.0110	0	.0115	.0128	.0110	.0114	.0109	.0103	.0129	.0126	.0097	.0125
33	.0114	0	.0131	.0112	.0131	0	.0105	.0109	.0101	.0127	.0104	.0102	.0122	.0119	.0095	.0118
34	.0669	0	.0632	.0879	.0637	0	.0622	.0740	.0907	.0992	.1128	.0954	.0836	.0894	.0532	.0622
35	.0405	0	.0402	.0413	.0367	0	.0393	.0359	.0339	.0373	.0337	.0341	.0415	.0393	.0313	.0380
36	.0632	0	.0661	.0602	.0582	0	.0576	.0568	.0530	.0591	.0546	.0510	.0644	.0620	.0483	.0610
37	.0593	0	.0579	.0570	.0667	0	.0529	.0569	.0513	.0526	.0482	.0526	.0636	.0584	.0450	.0542
38	.6284	0	.6575	.5986	.5787	0	.5722	.5652	.5273	.5880	.5427	.5072	.6406	.6165	.4806	.6071
Total	**2.0760**	**1.0000**	**2.0449**	**2.0849**	**2.1173**	**1.0000**	**2.0816**	**2.1086**	**2.1336**	**1.9834**	**2.0367**	**2.0400**	**2.0870**	**2.2039**	**1.9390**	**2.0492**

	24.0100	24.0400	24.0500	24.0701	24.0702	24.0703	24.0705	24.0706	24.0800	25.0000	26.0100	26.0200	26.0301	26.0302	26.0400	26.0501
1	0	0.0131	0.0068	0.0124	0.0109	0.0101	0.0103	0.0111	0.0142	0.0101	0.0137	0.0138	0.0115	0.0169	0.0123	0.0151
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	.0001	0	.0001	.0001	0	.0001	.0001	.0003	.0001	0	0	.0001	.0001	0	.0001
4	0	.0001	.0001	.0002	.0002	.0001	.0001	.0002	.0005	.0002	.0001	.0001	.0001	.0002	.0001	.0002
5	0	.0002	.0001	.0004	.0003	.0002	.0002	.0003	.0007	.0002	.0002	.0003	.0002	.0003	.0002	.0003
6	0	.0204	.0113	.0177	.0186	.0167	.0175	.0181	.0256	.0173	.0210	.0194	.0165	.0233	.0167	.0214
7	0	.0272	.0139	.0249	.0222	.0210	.0215	.0228	.0262	.0207	.0288	.0287	.0238	.0339	.0258	.0313
8	0	.0001	.0005	.0002	.0003	.0001	.0003	.0001	.0003	.0001	.0001	.0001	.0003	.0004	.0002	.0002
9	0	.0067	.0037	.0054	.0054	.0052	.0054	.0056	.0052	.0051	.0070	.0069	.0058	.0079	.0062	.0076
10	1.0000	1.0472	1.0536	1.0318	1.0389	1.0565	1.0587	1.0455	1.0106	1.0307	.0117	.0124	.0177	.0206	.0129	.0218
11	0	.0187	.0198	.0241	.0198	.0199	.0171	.0219	.0161	.0122	1.0441	1.2119	1.2050	1.0764	1.1443	1.0798
12	0	.0253	.0204	.0774	.1043	.0164	.0153	.0365	.0295	.0374	.0190	.0240	.0180	.0403	.0226	.0525
13	0	.0071	.0245	.0534	.0347	.0055	.0058	.0162	.0272	.0085	.0072	.0114	.0093	.0326	.0271	.0323
14	0	.0015	.0009	.0021	.0013	.0013	.0013	.0015	.0089	.0013	.0014	.0015	.0012	.0016	.0013	.0016
15	0	.0015	.0010	.0017	.0015	.0012	.0012	.0014	.0018	.0013	.0014	.0014	.0012	.0017	.0013	.0017
16	0	.0018	.0012	.0043	.0022	.0014	.0014	.0017	.0037	.0045	.0016	.0017	.0015	.0022	.0016	.0021
17	0	.0040	.0027	.0046	.0041	.0031	.0032	.0038	.0096	.0039	.0038	.0039	.0033	.0047	.0038	.0049
18	0	.0040	.0022	.0039	.0036	.0025	.0025	.0037	.0038	.0029	.0025	.0040	.0028	.0054	.0039	.0051
19	0	.0023	.0014	.0022	.0023	.0018	.0019	.0021	.0022	.0019	.0025	.0029	.0021	.0029	.0023	.0028
20	0	.0116	.0063	.0094	.0097	.0090	.0094	.0098	.0092	.0090	.0123	.0121	.0101	.0138	.0109	.0133
21	0	.0006	.0003	.0005	.0005	.0005	.0005	.0005	.0005	.0005	.0006	.0006	.0005	.0007	.0006	.0007
22	0	.0017	.0013	.0018	.0015	.0013	.0014	.0015	.0013	.0012	.0024	.0028	.0019	.0043	.0021	.0039
23	0	.0010	.0007	.0009	.0009	.0008	.0008	.0009	.0008	.0007	.0011	.0015	.0012	.0013	.0012	.0012
24	0	.0638	.0480	.0738	.0812	.0664	.0623	.0650	.0716	.0647	.0650	.0945	.0620	.0678	.0500	.0690
25	0	.0287	.0184	.0248	.0235	.0228	.0227	.0251	.0215	.0207	.0306	.0375	.0305	.0318	.0286	.0294
26	0	.0340	.0220	.0352	.0417	.0255	.0284	.0383	.0791	.0299	.0273	.0257	.0217	.0372	.0229	.0355
27	0	.0844	.0543	.0867	.0645	.0663	.0719	.0940	.0773	.0663	.0482	.0588	.0795	.0645	.0614	.0758
28	0	.0568	.0301	.0455	.0469	.0440	.0454	.0478	.0444	.0440	.0603	.0587	.0487	.0666	.0526	.0648
29	0	.0334	.0207	.0291	.0291	.0258	.0268	.0295	.0299	.0256	.0363	.0445	.0374	.0423	.0361	.0403
30	0	.0260	.0163	.0219	.0224	.0197	.0214	.0226	.0229	.0203	.0256	.0273	.0227	.0289	.0249	.0295
31	0	.0947	.0505	.0745	.0765	.0739	.0756	.0816	.0695	.0718	.1030	.1219	.1072	.1186	.0919	.1088
32	0	.0118	.0080	.0105	.0102	.0095	.0100	.0111	.0083	.0074	.0107	.0146	.0125	.0119	.0131	.0140
33	0	.0104	.0054	.0081	.0138	.0076	.0080	.0087	.0087	.0075	.0101	.0123	.0086	.0120	.0093	.0109
34	0	.0531	.0321	.0476	.0457	.0398	.0416	.0582	.0454	.0401	.0858	.1600	.0612	.0635	.0637	.0646
35	0	.0332	.0169	.0268	.0266	.0249	.0255	.0284	.0245	.0249	.0359	.0379	.0311	.0408	.0362	.0408
36	0	.0531	.0271	.0416	.0428	.0411	.0420	.0440	.0395	.0403	.0566	.0550	.0456	.0631	.0485	.0601
37	0	.0494	.0326	.0416	.0447	.0372	.0405	.0476	.0553	.0404	.0514	.0545	.0441	.0545	.0522	.0611
38	0	.5277	.2696	.4138	.4256	.4086	.4175	.4373	.3928	.4013	.5635	.5466	.4535	.6272	.4828	.5977
Total	**1.0000**	**1.8287**	**1.5551**	**1.8472**	**1.8530**	**1.6793**	**1.6982**	**1.8068**	**1.7960**	**1.6738**	**1.8296**	**2.1646**	**1.9467**	**1.9951**	**1.8887**	**2.0044**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	26.0601	26.0602	26.0700	26.0802	26.0803	26.0806	27.0100	27.0201	27.0202	27.0300	27.0401	27.0402	27.0403	27.0404	27.0405	27.0406
1	0.0103	0.0147	0.0110	0.0204	0.0196	0.0197	0.0100	0.0143	0.0140	0.0179	0	0.0167	0.0203	0.0131	0	0.0272
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	.0001	0	.0001	.0001	.0001	.0002	.0002	.0001	.0001	0	.0001	.0001	.0001	0	.0001
4	.0001	.0002	.0001	.0002	.0002	.0002	.0011	.0058	.0014	.0003	0	.0003	.0007	.0003	0	.0004
5	.0002	.0003	.0002	.0004	.0003	.0003	.0023	.0360	.0089	.0028	0	.0014	.0021	.0012	0	.0054
6	.0167	.0218	.0153	.0287	.0263	.0265	.0247	.0362	.0268	.0190	0	.0205	.0361	.0219	0	.0235
7	.0214	.0307	.0233	.0428	.0415	.0414	.0205	.0271	.0285	.0355	0	.0312	.0425	.0273	0	.0560
8	.0001	.0036	.0001	.0092	.0001	.0001	.0001	.0001	.0001	.0001	0	.0001	.0001	.0001	0	.0001
9	.0052	.0075	.0056	.0104	.0101	.0102	.0047	.0065	.0065	.0050	0	.0054	.0105	.0053	0	.0061
10	.0282	.0289	.0200	.0217	.0094	.0097	.0123	.0087	.0309	.0151	0	.0263	.0155	.0052	0	.0216
11	1.0376	1.1022	1.1756	1.0376	1.0505	1.1429	.0192	.0173	.0164	.0620	0	.0165	.0218	.0137	0	.0209
12	.0259	.0245	.0203	.0604	.0217	.0203	1.0543	1.3697	1.3412	1.0478	1.0000	1.0994	1.1222	1.1464	1.0000	1.0885
13	.0067	.0388	.0196	.0198	.0138	.0133	.0184	.0176	.0147	.0147	0	.0111	.0134	.0087	0	.0164
14	.0012	.0017	.0013	.0020	.0019	.0019	.0013	.0019	.0016	.0013	0	.0013	.0026	.0013	0	.0022
15	.0012	.0017	.0012	.0022	.0020	.0022	.0020	.0023	.0019	.0025	0	.0017	.0026	.0018	0	.0024
16	.0014	.0044	.0015	.0036	.0066	.0026	.0048	.0033	.0026	.0035	0	.0055	.0028	.0045	0	.0048
17	.0032	.0120	.0034	.0077	.0056	.0056	.0104	.0066	.0050	.0120	0	.0186	.0061	.0155	0	.0133
18	.0029	.0045	.0040	.0063	.0168	.0037	.0044	.0042	.0041	.0030	0	.0028	.0065	.0020	0	.0027
19	.0020	.0027	.0021	.0035	.0038	.0037	.0021	.0030	.0026	.0021	0	.0021	.0037	.0022	0	.0023
20	.0092	.0131	.0098	.0177	.0175	.0180	.0082	.0119	.0111	.0091	0	.0095	.0182	.0092	0	.0104
21	.0005	.0007	.0005	.0009	.0009	.0009	.0005	.0007	.0006	.0005	0	.0005	.0010	.0005	0	.0006
22	.0015	.0020	.0016	.0027	.0101	.0138	.0014	.0017	.0016	.0015	0	.0014	.0023	.0015	0	.0015
23	.0008	.0013	.0012	.0016	.0017	.0021	.0008	.0010	.0009	.0011	0	.0008	.0013	.0007	0	.0009
24	.0567	.0512	.0413	.0620	.0520	.0610	.0582	.2479	.1255	.0694	0	.0913	.0663	.0676	0	.0899
25	.0239	.0309	.0267	.0384	.0401	.0403	.0229	.0296	.0376	.0295	0	.0248	.0428	.0227	0	.0271
26	.0270	.0321	.0240	.0426	.0377	.0456	.0809	.1470	.0626	.0471	0	.0378	.0690	.0301	0	.0468
27	.0679	.0638	.0808	.0630	.0733	.0790	.0639	.1065	.1036	.0935	0	.0691	.0651	.0737	0	.0869
28	.0447	.0636	.0474	.0866	.0852	.0870	.0409	.0605	.0550	.0434	0	.0469	.0897	.0457	0	.0519
29	.0296	.0374	.0327	.0490	.0509	.0518	.0272	.0392	.0346	.0633	0	.0279	.0478	.0261	0	.0343
30	.0205	.0299	.0219	.0366	.0373	.0391	.0198	.0289	.0244	.0227	0	.0210	.0361	.0193	0	.0231
31	.0746	.1064	.0802	.1505	.1449	.1468	.0704	.0957	.0917	.0756	0	.0784	.1442	.0772	0	.0865
32	.0100	.0130	.0118	.0172	.0179	.0183	.0080	.0103	.0096	.0091	0	.0085	.0150	.0080	0	.0094
33	.0079	.0109	.0087	.0153	.0151	.0152	.0073	.0099	.0093	.0078	0	.0079	.0144	.0075	0	.0086
34	.0615	.0634	.0590	.0864	.0869	.0809	.0777	.0680	.0678	.0992	0	.0619	.0874	.0495	0	.0631
35	.0270	.0394	.0312	.0550	.0543	.0513	.0246	.0323	.0304	.0263	0	.0267	.0492	.0256	0	.0293
36	.0414	.0596	.0442	.0822	.0802	.0814	.0375	.0521	.0501	.0397	0	.0430	.0851	.0425	0	.0478
37	.0405	.0548	.0479	.0682	.0754	.0780	.0424	.0654	.0498	.0418	0	.0388	.0669	.0359	0	.0446
38	.4115	.5932	.4397	.8174	.7976	.8102	.3725	.5186	.4982	.3949	0	.4278	.8465	.4226	0	.4747
Total	**1.7095**	**1.9735**	**1.8757**	**2.1528**	**2.1115**	**2.2151**	**1.7851**	**2.5692**	**2.2734**	**1.9254**	**1.0000**	**1.8573**	**2.2113**	**1.8137**	**1.0000**	**1.9566**

	28.0100	28.0200	28.0300	28.0400	29.0100	29.0201	29.0202	29.0203	29.0300	30.0000	31.0101	31.0102	31.0103	31.0200	31.0300	32.0100
1	0.0108	0	0	0	0.0140	0.0146	0.0113	0.0172	0.0143	0.0156	0.0038	0.0137	0	0.0105	0.0108	0.0112
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	0	0	0	.0001	.0001	0	.0001	0	0	0	0	0	.0001	.0001	.0001
4	.0005	0	0	0	.0002	.0002	.0002	.0006	.0001	.0003	.0138	.0004	0	.0006	.0007	.0002
5	.0017	0	0	0	.0003	.0008	.0005	.0012	.0003	.0013	.0002	.0005	0	.0207	.0047	.0006
6	.0194	0	0	0	.0187	.0159	.0158	.0176	.0143	.0183	.0159	.0169	0	.0166	.0185	.0176
7	.0214	0	0	0	.0265	.0316	.0213	.0365	.0308	.0290	.0078	.0291	0	.0214	.0224	.0229
8	.0001	0	0	0	.0001	.0001	.0001	.0001	.0001	.0001	0	.0001	0	.0001	.0004	.0001
9	.0044	0	0	0	.0059	.0046	.0047	.0045	.0047	.0049	.0021	.0049	0	.0053	.0056	.0057
10	.0147	0	0	0	.0182	.0570	.0389	.0187	.0382	.0047	.0022	.0248	0	.0192	.0187	.0072
11	.0184	0	0	0	.0254	.0485	.0318	.0170	.0313	.0166	.0062	.0199	0	.0181	.0195	.0223
12	1.0928	1.0000	1.0000	1.0000	1.1088	1.0659	1.0678	1.0990	1.0308	1.1089	1.0084	1.0488	1.0000	1.0497	1.0151	.0277
13	.0621	0	0	0	.0260	.0546	.0558	.0401	.0653	.0089	.0045	.0440	0	.0222	.0203	1.0186
14	.0012	0	0	0	.0013	.0012	.0013	.0012	.0012	.0011	.0008	.0014	0	.0063	.0020	.0012
15	.0019	0	0	0	.0016	.0016	.0015	.0014	.0017	.0051	.0009	.0015	0	.0102	.0370	.0016
16	.0020	0	0	0	.0025	.0028	.0110	.0046	.0058	.0105	.0013	.0103	0	.0019	.0023	.0095
17	.0045	0	0	0	.0075	.0068	.0476	.0183	.0236	.0372	.0030	.0405	0	.0058	.0058	.0168
18	.0043	0	0	0	.0024	.0067	.0029	.0024	.0025	.0019	.0014	.0025	0	.0021	.0021	.0030
19	.0021	0	0	0	.0025	.0020	.0021	.0018	.0020	.0020	.0011	.0021	0	.0020	.0022	.0022
20	.0077	0	0	0	.0103	.0080	.0082	.0079	.0082	.0086	.0033	.0140	0	.0094	.0098	.0100
21	.0004	0	0	0	.0005	.0004	.0004	.0004	.0004	.0005	.0002	.0005	0	.0005	.0005	.0005
22	.0015	0	0	0	.0020	.0014	.0015	.0013	.0014	.0013	.0005	.0013	0	.0013	.0015	.0015
23	.0008	0	0	0	.0010	.0011	.0010	.0008	.0010	.0007	.0003	.0009	0	.0009	.0009	.0010
24	.0596	0	0	0	.0347	.0529	.0508	.0562	.0417	.0701	.0596	.0551	0	.0638	.0539	.0759
25	.0217	0	0	0	.0279	.0256	.0253	.0208	.0269	.0222	.0094	.0256	0	.0254	.0285	.0255
26	.0600	0	0	0	.0313	.0305	.0263	.0530	.0240	.0296	.0299	.0270	0	.0439	.0478	.0408
27	.0733	0	0	0	.0750	.0949	.0717	.0775	.0713	.0604	.0548	.1077	0	.1036	.1233	.0805
28	.0372	0	0	0	.0504	.0391	.0400	.0387	.0396	.0423	.0165	.0413	0	.0460	.0473	.0490
29	.0253	0	0	0	.0345	.0258	.0255	.0245	.0259	.0249	.0213	.0301	0	.0296	.0316	.0337
30	.0185	0	0	0	.0218	.0189	.0188	.0179	.0187	.0183	.0111	.0190	0	.0205	.0215	.0226
31	.0641	0	0	0	.0890	.0676	.0690	.0642	.0700	.0715	.0339	.0713	0	.0768	.0793	.0791
32	.0072	0	0	0	.0095	.0084	.0083	.0073	.0085	.0077	.0034	.0081	0	.0087	.0092	.0092
33	.0094	0	0	0	.0099	.0070	.0095	.0069	.0070	.0070	.0032	.0073	0	.0083	.0086	.0082
34	.0856	0	0	0	.1260	.0500	.0527	.0422	.0641	.0433	.0280	.0438	0	.0487	.0521	.0637
35	.0217	0	0	0	.0296	.0235	.0241	.0214	.0239	.0238	.0096	.0235	0	.0253	.0270	.0266
36	.0342	0	0	0	.0476	.0364	.0372	.0357	.0371	.0393	.0149	.0385	0	.0422	.0441	.0448
37	.0388	0	0	0	.0466	.0355	.0356	.0364	.0346	.0343	.0175	.0345	0	.0399	.0425	.0463
38	.3399	0	0	0	.4728	.3615	.3702	.3551	.3688	.3907	.1485	.3823	0	.4201	.4389	.4456
Total	**1.8294**	**1.0000**	**1.0000**	**1.0000**	**1.9094**	**1.8418**	**1.8208**	**1.7951**	**1.7717**	**1.7722**	**1.3911**	**1.8109**	**1.0000**	**1.8079**	**1.8179**	**1.7874**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	32.0200	32.0300	32.0400	32.0500	32.0600	33.0001	34.0100	34.0201	34.0202	34.0301	34.0302	34.0303	34.0304	34.0305	35.0100	35.0200
1	0	0.0147	0.0126	0.0127	0.0149	0.5809	0.1168	0.1116	0	0.1608	0.0402	0	0.0772	0.0913	0.0130	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	0	.0001	0	0	.0001	.0001	.0001	0
4	0	.0003	.0003	.0003	.0003	.0003	.0002	.0002	0	.0003	.0001	0	.0002	.0002	.0006	0
5	0	.0006	.0006	.0004	.0005	.0018	.0005	.0005	0	.0006	.0003	0	.0004	.0005	.0025	0
6	0	.0246	.0228	.0218	.0250	.0344	.0240	.0231	0	.0248	.0173	0	.0236	.0231	.0283	0
7	0	.0300	.0256	.0265	.0309	.5520	.1238	.1200	0	.1681	.0508	0	.0895	.1015	.0267	0
8	0	.0005	.0003	.0017	.0001	.0001	.0011	.0111	0	.0009	.0203	0	.0196	.0047	.0001	0
9	0	.0074	.0064	.0068	.0076	.0087	.0072	.0079	0	.0083	.0067	0	.0088	.0076	.0067	0
10	0	.0248	.0231	.0159	.0243	.0172	.0147	.0204	0	.0320	.0092	0	.0138	.0165	.0230	0
11	0	.0296	.0176	.0236	.0267	.0289	.0194	.0313	0	.0311	.0162	0	.0254	.0224	.0268	0
12	0	.0380	.1184	.0302	.0315	.0576	.0298	.0353	0	.0319	.0195	0	.0434	.0384	.0331	0
13	1.0000	1.0340	1.0620	1.0362	1.0773	1.0675	1.1910	1.2148	1.0000	1.2631	1.0699	1.0000	1.1320	1.1805	.0175	0
14	0	.0016	.0019	.0015	.0038	.0022	.0091	.0022	0	.0017	.0052	0	.0018	.0080	.0136	0
15	0	.0051	.0056	.0019	.0067	.0024	.0018	.0018	0	.0018	.0014	0	.0019	.0019	1.0502	1.0000
16	0	.0151	.0036	.0124	.0107	.0031	.0020	.0023	0	.0022	.0029	0	.0032	.0046	.0031	0
17	0	.0302	.0111	.0102	.0155	.0072	.0053	.0057	0	.0049	.0218	0	.0116	.0268	.0078	0
18	0	.0071	.0066	.0043	.0075	.0055	.0037	.0039	0	.0044	.0022	0	.0037	.0039	.0054	0
19	0	.0031	.0041	.0026	.0032	.0042	.0026	.0029	0	.0031	.0026	0	.0030	.0031	.0030	0
20	0	.0131	.0107	.0112	.0132	.0152	.0121	.0133	0	.0139	.0105	0	.0139	.0129	.0116	0
21	0	.0007	.0006	.0006	.0007	.0008	.0006	.0007	0	.0007	.0006	0	.0007	.0007	.0006	0
22	0	.0021	.0018	.0021	.0021	.0021	.0018	.0021	0	.0020	.0017	0	.0021	.0018	.0020	0
23	0	.0013	.0010	.0011	.0013	.0013	.0010	.0020	0	.0012	.0013	0	.0014	.0025	.0012	0
24	0	.0759	.0766	.0573	.0670	.0979	.0589	.0609	0	.1230	.0367	0	.0601	.0522	.0655	0
25	0	.0328	.0264	.0302	.0331	.0382	.0276	.0358	0	.0355	.0244	0	.0347	.0306	.0377	0
26	0	.0553	.0499	.0480	.0483	.0513	.0360	.0353	0	.0462	.0269	0	.0368	.0358	.0724	0
27	0	.0817	.0900	.0817	.0856	.1733	.0825	.0923	0	.1071	.0735	0	.0767	.0859	.0855	0
28	0	.0630	.0527	.0550	.0640	.0739	.0591	.0651	0	.0677	.0514	0	.0679	.0629	.0563	0
29	0	.0421	.0337	.0387	.0421	.0514	.0351	.0455	0	.0459	.0347	0	.0447	.0390	.0367	0
30	0	.0300	.0245	.0256	.0300	.0405	.0268	.0296	0	.0334	.0219	0	.0303	.0278	.0250	0
31	0	.1031	.0898	.0922	.1080	.1511	.1025	.1143	0	.1199	.0870	0	.1194	.1120	.0924	0
32	0	.0117	.0092	.0099	.0121	.0194	.0115	.0134	0	.0281	.0122	0	.0197	.0180	.0109	0
33	0	.0111	.0105	.0107	.0116	.0150	.0119	.0122	0	.0166	.0091	0	.0123	.0118	.0100	0
34	0	.0772	.0581	.0620	.0686	.0751	.0503	.0672	0	.0723	.0471	0	.0868	.0695	.0564	0
35	0	.0366	.0310	.0319	.0402	.0413	.0344	.0385	0	.0452	.0293	0	.0421	.0385	.0323	0
36	0	.0576	.0487	.0515	.0598	.0717	.0564	.0622	0	.0645	.0491	0	.0647	.0599	.0521	0
37	0	.0617	.0494	.0487	.0555	.0671	.0491	.0517	0	.0603	.0392	0	.0533	.0499	.0532	0
38	0	.5725	.4842	.5125	.5945	.6730	.5535	.6115	0	.6311	.4861	0	.6387	.5908	.5187	0
Total	**1.0000**	**2.0238**	**1.9872**	**1.8676**	**2.0298**	**3.3606**	**2.2107**	**2.3370**	**1.0000**	**2.6237**	**1.8431**	**1.0000**	**2.2266**	**2.2466**	**1.9633**	**1.0000**

	36.0100	36.0200	36.0300	36.0400	36.0500	36.0600	36.0701	36.0702	36.0800	36.0900	36.1000	36.1100	36.1200	36.1300	36.1400	36.1500
1	0.0113	0.0144	0	0.0142	0.0161	0.0156	0	0	0	0.0182	0.0146	0.0156	0.0137	0	0.0116	0.0169
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0020	.0002	0	.0001	.0001	.0001	0	0	0	.0001	.0003	.0002	.0003	0	.0002	.0001
4	.0007	.0013	0	.0006	.0008	.0004	0	0	0	.0003	.0004	.0003	.0002	0	.0007	.0002
5	.0165	.0011	0	.0005	.0013	.0015	0	0	0	.0004	.0487	.0194	.0575	0	.0171	.1294
6	.0440	.0349	0	.0247	.0382	.0262	0	0	0	.0302	.0332	.0298	.0281	0	.0301	.0297
7	.0233	.0290	0	.0265	.0322	.0316	0	0	0	.0364	.0294	.0321	.0273	0	.0219	.0355
8	.0001	.0001	0	.0001	.0001	.0001	0	0	0	.0001	.0001	.0001	.0001	0	.0001	.0001
9	.0056	.0072	0	.0065	.0080	.0080	0	0	0	.0090	.0073	.0078	.0068	0	.0054	.0089
10	.0209	.0057	0	.0064	.0051	.0205	0	0	0	.0095	.0077	.0104	.0076	0	.0130	.0159
11	.0185	.0150	0	.0151	.0165	.0185	0	0	0	.0195	.0320	.0403	.0279	0	.0190	.0238
12	.0394	.0235	0	.0175	.0238	.0181	0	0	0	.0256	.0213	.0277	.0339	0	.0207	.0240
13	.0085	.0066	0	.0060	.0074	.0079	0	0	0	.0089	.0076	.0097	.0073	0	.0097	.0124
14	.0025	.0025	0	.0044	.0024	.0019	0	0	0	.0019	.0020	.0035	.0018	0	.0015	.0023
15	1.0359	1.0046	1.0000	1.0104	1.0256	1.0665	1.0000	1.0000	1.0000	1.0063	1.1176	1.0915	1.1648	1.0000	1.0849	1.0257
16	.0034	.0027	0	.0019	.0025	.0112	0	0	0	.0073	.0080	.0369	.0026	0	.0028	.0033
17	.0127	.0081	0	.0046	.0058	.0621	0	0	0	.0331	.0079	.0196	.0072	0	.0062	.0101
18	.0037	.0050	0	.0032	.0038	.0043	0	0	0	.0046	.0037	.0044	.0033	0	.0033	.0068
19	.0029	.0029	0	.0026	.0032	.0033	0	0	0	.0035	.0031	.0034	.0028	0	.0032	.0035
20	.0101	.0126	0	.0124	.0145	.0138	0	0	0	.0170	.0127	.0138	.0118	0	.0098	.0150
21	.0006	.0007	0	.0006	.0007	.0007	0	0	0	.0008	.0007	.0007	.0006	0	.0006	.0008
22	.0014	.0016	0	.0015	.0017	.0020	0	0	0	.0021	.0021	.0020	.0016	0	.0013	.0022
23	.0011	.0010	0	.0009	.0010	.0012	0	0	0	.0012	.0013	.0018	.0012	0	.0009	.0013
24	.1127	.0952	0	.2454	.1335	.1213	0	0	0	.1659	.1224	.0865	.1444	0	.2242	.0617
25	.0279	.0358	0	.0336	.0385	.0381	0	0	0	.0489	.0426	.0476	.0369	0	.0278	.0435
26	.1496	.1250	0	.0684	.0921	.0567	0	0	0	.0764	.0601	.0487	.0492	0	.0809	.0578
27	.0664	.0437	0	.0401	.0503	.0732	0	0	0	.0564	.0649	.0706	.0725	0	.0613	.1249
28	.0501	.0628	0	.0623	.0716	.0685	0	0	0	.0796	.0634	.0682	.0595	0	.0501	.0733
29	.0445	.0368	0	.0351	.0394	.0376	0	0	0	.0422	.0518	.0517	.0383	0	.0308	.0472
30	.0249	.0267	0	.0277	.0315	.0280	0	0	0	.0349	.0300	.0315	.0275	0	.0221	.0314
31	.0807	.0967	0	.0922	.1098	.1084	0	0	0	.1285	.1023	.1130	.0966	0	.0765	.1227
32	.0090	.0101	0	.0095	.0113	.0114	0	0	0	.0128	.0118	.0130	.0111	0	.0089	.0139
33	.0097	.0115	0	.0102	.0145	.0114	0	0	0	.0134	.0134	.0127	.0109	0	.0083	.0132
34	.0559	.0535	0	.0483	.0558	.0530	0	0	0	.0559	.0707	.0828	.0616	0	.0475	.0700
35	.0276	.0360	0	.0325	.0382	.0366	0	0	0	.0422	.0363	.0399	.0329	0	.0264	.0436
36	.0445	.0568	0	.0519	.0642	.0631	0	0	0	.0724	.0568	.0624	.0529	0	.0428	.0693
37	.0604	.0582	0	.0678	.0780	.0546	0	0	0	.0611	.0582	.0623	.0549	0	.0484	.0596
38	.4424	.5646	0	.5165	.6383	.6278	0	0	0	.7200	.5646	.6209	.5266	0	.4254	.6897
Total	**2.0291**	**1.9292**	**1.0000**	**1.9858**	**2.0394**	**2.0773**	**1.0000**	**1.0000**	**1.0000**	**2.1264**	**2.1464**	**2.1619**	**2.1576**	**1.0000**	**2.0198**	**2.2001**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	36.1600	36.1700	36.1900	36.2000	36.2100	36.2200	37.0101	37.0102	37.0103	37.0104	37.0105	37.0200	37.0300	37.0401	37.0402	38.0100
1	0.0106	0	0.0133	0.0142	0	0.0135	0.0118	0	0.0130	0.0107	0	0.0167	0.0144	0.0155	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	0	.0001	.0002	0	.0001	.0010	0	.0003	.0003	0	.0002	.0002	.0003	0	0
4	.0003	0	.0004	.0009	0	.0005	.0007	0	.0004	.0005	0	.0004	.0007	.0006	0	0
5	.0013	0	.0162	.0046	0	.0071	.0024	0	.0009	.0009	0	.0025	.0006	.0006	0	0
6	.0188	0	.0255	.0273	0	.0263	.0493	0	.0348	.0302	0	.0438	.0314	.0292	0	0
7	.0219	0	.0244	.0290	0	.0277	.0241	0	.0269	.0220	0	.0348	.0300	.0323	0	0
8	.0009	0	.0001	.0002	0	.0001	.0001	0	.0001	.0001	0	.0001	.0001	.0001	0	0
9	.0053	0	.0060	.0064	0	.0067	.0060	0	.0065	.0054	0	.0088	.0075	.0078	0	0
10	.0245	0	.0121	.0218	0	.0129	.0062	0	.0081	.0072	0	.0065	.0094	.0069	0	0
11	.0223	0	.0186	.0224	0	.0195	.0362	0	.0200	.0212	0	.0338	.0288	.0186	0	0
12	.0453	0	.0133	.0440	0	.0198	.0195	0	.0309	.0232	0	.0164	.0161	.0678	0	0
13	.0126	0	.0064	.0233	0	.0088	.0082	0	.0093	.0084	0	.0125	.0153	.0079	0	0
14	.0012	0	.0014	.0018	0	.0018	.0029	0	.0022	.0024	0	.0027	.0020	.0017	0	0
15	1.0111	1.0000	1.0221	1.0372	1.0000	1.0596	.0057	0	.0030	.0027	0	.0055	.0027	.0022	0	0
16	.0018	0	.0044	.0081	0	.0031	1.0706	1.0000	1.2319	1.2957	1.0000	1.0231	1.1932	1.0218	1.0000	1.0000
17	.0036	0	.0042	.0078	0	.0114	.0172	0	.0123	.0300	0	.0148	.0250	.0075	0	0
18	.0038	0	.0035	.0043	0	.0035	.0101	0	.0451	.0221	0	.0131	.0133	.0064	0	0
19	.0021	0	.0025	.0026	0	.0027	.0035	0	.0037	.0045	0	.0037	.0035	.0028	0	0
20	.0091	0	.0109	.0108	0	.0121	.0105	0	.0118	.0097	0	.0151	.0130	.0133	0	0
21	.0005	0	.0006	.0006	0	.0006	.0006	0	.0006	.0005	0	.0008	.0007	.0007	0	0
22	.0014	0	.0014	.0017	0	.0015	.0016	0	.0017	.0015	0	.0022	.0019	.0020	0	0
23	.0009	0	.0009	.0010	0	.0011	.0013	0	.0010	.0009	0	.0014	.0012	.0011	0	0
24	.0593	0	.2702	.0771	0	.0989	.0791	0	.0676	.0719	0	.0622	.0642	.0524	0	0
25	.0309	0	.0314	.0314	0	.0360	.0331	0	.0284	.0269	0	.0392	.0333	.0293	0	0
26	.0379	0	.0700	.1098	0	.0708	.0988	0	.0626	.0701	0	.0854	.0880	.0834	0	0
27	.0600	0	.0400	.0765	0	.0751	.1107	0	.1198	.1341	0	.0837	.1010	.0631	0	0
28	.0446	0	.0569	.0528	0	.0588	.0519	0	.0566	.0464	0	.0735	.0636	.0656	0	0
29	.0313	0	.0364	.0365	0	.0368	.0342	0	.0346	.0335	0	.0428	.0382	.0392	0	0
30	.0212	0	.0252	.0249	0	.0272	.0247	0	.0253	.0229	0	.0324	.0269	.0267	0	0
31	.0761	0	.0887	.0876	0	.1015	.0835	0	.0926	.0752	0	.1168	.1016	.1098	0	0
32	.0086	0	.0094	.0099	0	.0103	.0104	0	.0101	.0089	0	.0133	.0116	.0111	0	0
33	.0083	0	.0089	.0096	0	.0100	.0098	0	.0100	.0086	0	.0138	.0119	.0114	0	0
34	.0518	0	.0554	.0602	0	.0570	.0718	0	.0606	.0599	0	.0981	.0666	.0631	0	0
35	.0266	0	.0299	.0312	0	.0340	.0295	0	.0314	.0267	0	.0407	.0360	.0362	0	0
36	.0415	0	.0479	.0486	0	.0539	.0471	0	.0522	.0423	0	.0688	.0594	.0616	0	0
37	.0399	0	.0536	.0511	0	.0560	.0550	0	.0501	.0443	0	.0620	.0551	.0547	0	0
38	.4124	0	.4769	.4833	0	.5361	.4687	0	.5192	.4207	0	.6843	.5906	.6124	0	0
Total	**1.7373**	**1.0000**	**2.0120**	**1.9772**	**1.0000**	**1.9666**	**2.0291**	**1.0000**	**2.1661**	**2.1717**	**1.0000**	**2.0917**	**2.1685**	**1.9544**	**1.0000**	**1.0000**

	38.0400	38.0501	38.0600	38.0700	38.0800	38.0900	38.1000	38.1100	38.1200	38.1300	38.1400	39.0100	39.0200	40.0100	40.0200	40.0300
1	0.0096	0	0.0100	0	0.0091	0	0.0104	0.0154	0.0144	0.0152	0	0.0105	0.0141	0.0140	0.0104	0.0125
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0005	0	.0001	0	.0001	0	.0001	.0001	.0001	.0001	0	.0002	.0002	.0001	.0001	.0001
4	.0004	0	.0007	0	.0004	0	.0002	.0007	.0003	.0004	0	.0003	.0005	.0005	.0002	.0002
5	.0007	0	.0004	0	.0003	0	.0004	.0009	.0016	.0007	0	.0005	.0007	.0016	.0004	.0004
6	.0399	0	.0186	0	.0188	0	.0196	.0307	.0300	.0296	0	.0224	.0304	.0284	.0215	.0233
7	.0192	0	.0192	0	.0181	0	.0210	.0319	.0301	.0320	0	.0215	.0290	.0291	.0218	.0263
8	.0001	0	.0001	0	.0001	0	.0002	.0001	.0001	.0001	0	.0001	.0001	.0001	.0001	.0001
9	.0047	0	.0047	0	.0045	0	.0052	.0079	.0076	.0080	0	.0053	.0072	.0072	.0053	.0065
10	.0037	0	.0065	0	.0049	0	.0091	.0106	.0124	.0153	0	.0079	.0095	.0298	.0203	.0165
11	.0109	0	.0138	0	.0127	0	.0239	.0273	.0285	.0313	0	.0478	.0310	.0218	.0207	.0216
12	.0162	0	.0202	0	.0109	0	.0495	.0145	.0194	.0209	0	.0305	.0368	.0356	.0289	.0154
13	.0099	0	.0298	0	.0117	0	.0349	.0089	.0092	.0104	0	.0087	.0099	.0124	.0321	.0100
14	.0015	0	.0014	0	.0013	0	.0103	.0017	.0016	.0018	0	.0021	.0022	.0020	.0016	.0026
15	.0024	0	.0016	0	.0014	0	.0054	.0050	.0037	.0149	0	.0020	.0032	.0033	.0027	.0024
16	1.0658	1.0000	1.0220	1.0000	1.1553	1.0000	1.0519	1.0778	1.0367	1.0484	1.0000	.2879	.2537	.1006	.0397	.0887
17	.0049	0	.0052	0	.0088	0	.0234	.0055	.0051	.0268	0	1.0294	1.0631	1.0469	1.0907	1.0303
18	.0048	0	.0168	0	.0113	0	.0116	.0136	.0104	.0227	0	.0061	.0123	.0119	.0115	.0291
19	.0026	0	.0022	0	.0020	0	.0034	.0031	.0028	.0033	0	.0027	.0038	.0032	.0026	.0111
20	.0083	0	.0087	0	.0082	0	.0091	.0139	.0130	.0140	0	.0094	.0128	.0124	.0091	.0114
21	.0005	0	.0004	0	.0004	0	.0005	.0007	.0007	.0007	0	.0005	.0007	.0007	.0005	.0007
22	.0012	0	.0014	0	.0011	0	.0015	.0020	.0020	.0023	0	.0014	.0017	.0017	.0016	.0019
23	.0007	0	.0008	0	.0007	0	.0010	.0013	.0012	.0013	0	.0011	.0013	.0012	.0009	.0028
24	.0888	0	.1345	0	.0834	0	.0569	.0564	.0540	.0573	0	.0674	.0824	.0579	.0403	.0478
25	.0178	0	.0224	0	.0194	0	.0254	.0374	.0336	.0353	0	.0266	.0353	.0289	.0238	.0293
26	.2524	0	.0673	0	.0507	0	.0397	.0811	.0618	.0590	0	.0481	.0669	.0641	.0328	.0364
27	.0432	0	.1764	0	.1098	0	.0978	.0642	.0611	.0930	0	.1171	.1415	.0838	.0639	.0935
28	.0418	0	.0423	0	.0401	0	.0436	.0677	.0633	.0677	0	.0457	.0618	.0598	.0443	.0548
29	.0349	0	.0320	0	.0251	0	.0323	.0473	.0379	.0504	0	.0305	.0412	.0407	.0326	.0377
30	.0205	0	.0234	0	.0190	0	.0209	.0315	.0367	.0311	0	.0217	.0307	.0279	.0216	.0254
31	.0655	0	.0682	0	.0630	0	.0746	.1148	.1097	.1154	0	.0774	.1025	.0983	.0811	.0915
32	.0073	0	.0077	0	.0075	0	.0085	.0123	.0128	.0150	0	.0095	.0125	.0105	.0081	.0099
33	.0073	0	.0087	0	.0071	0	.0082	.0233	.0116	.0123	0	.0082	.0119	.0115	.0085	.0101
34	.0473	0	.0585	0	.0415	0	.0540	.0730	.0670	.0732	0	.0524	.0700	.0608	.0524	.0578
35	.0226	0	.0251	0	.0222	0	.0262	.0393	.0374	.0393	0	.0262	.0373	.0360	.0286	.0329
36	.0375	0	.0363	0	.0355	0	.0402	.0627	.0591	.0620	0	.0419	.0563	.0562	.0412	.0513
37	.0641	0	.0436	0	.0421	0	.0391	.0643	.0611	.0700	0	.0434	.0644	.0517	.0381	.0469
38	.3727	0	.3613	0	.3533	0	.4000	.6234	.5881	.6167	0	.4168	.5598	.5590	.4094	.5104
Total	**1.9590**	**1.0000**	**1.9308**	**1.0000**	**1.8484**	**1.0000**	**1.8598**	**2.0489**	**1.9379**	**2.0811**	**1.0000**	**2.1144**	**2.3393**	**2.0527**	**1.8402**	**1.9393**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	40.0400	40.0500	40.0600	40.0700	40.0800	40.0901	40.0902	41.0100	41.0201	41.0202	41.0203	42.0100	42.0201	42.0202	42.0300	42.0401
1	0.0144	0.0135	0.0161	0.0143	0.0144	0.0124	0.0128	0.0158	0.0158	0	0.0148	0.0126	0.0148	0.0148	0.0146	0.0184
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0002	.0001	.0002	.0002	.0002	.0002	.0003	.0001	.0002	0	.0002	.0001	.0001	.0002	.0001	.0001
4	.0003	.0003	.0003	.0003	.0002	.0003	.0003	.0003	.0003	0	.0003	.0002	.0003	.0003	.0002	.0004
5	.0007	.0005	.0007	.0006	.0006	.0007	.0007	.0005	.0007	0	.0008	.0004	.0004	.0005	.0007	.0008
6	.0352	.0342	.0397	.0355	.0396	.0319	.0295	.0271	.0319	0	.0472	.0227	.0260	.0283	.0583	.0406
7	.0296	.0280	.0333	.0294	.0299	.0255	.0265	.0331	.0327	0	.0304	.0265	.0307	.0307	.0300	.0383
8	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	0	.0001	.0001	.0001	.0001	.0001	.0001
9	.0073	.0069	.0082	.0072	.0074	.0063	.0066	.0082	.0106	0	.0075	.0066	.0076	.0076	.0074	.0089
10	.0067	.0127	.0085	.0120	.0243	.0061	.0092	.0097	.0093	0	.0136	.0257	.0164	.0143	.0153	.0106
11	.0206	.0299	.0224	.0215	.0192	.0192	.0221	.0332	.0236	0	.0206	.0397	.0351	.0249	.0227	.0241
12	.0209	.0157	.0200	.0250	.0238	.0236	.0190	.0166	.0198	0	.0304	.0202	.0176	.0186	.0253	.0881
13	.0145	.0151	.0137	.0172	.0357	.0087	.0081	.0095	.0114	0	.0106	.0197	.0152	.0410	.0204	.0162
14	.0021	.0025	.0023	.0026	.0023	.0058	.0025	.0020	.0024	0	.0028	.0053	.0098	.0093	.0057	.0072
15	.0030	.0192	.0036	.0057	.0051	.0086	.0043	.0029	.0029	0	.0067	.0035	.0037	.0039	.0058	.0063
16	.1999	.1376	.1436	.1823	.1528	.2180	.2831	.1282	.2328	0	.1649	.0604	.0952	.1295	.0838	.0259
17	1.1058	1.0520	1.0803	1.0668	1.0405	1.0556	1.0456	1.0382	1.0175	1.0000	1.0281	1.0344	1.0322	1.0212	1.0679	1.0230
18	.0077	.0082	.0138	.0090	.0217	.0081	.0072	.0203	.0347	0	.0135	.0083	.0093	.0112	.0092	.0106
19	.0040	.0034	.0045	.0052	.0035	.0034	.0036	.0035	.0045	0	.0055	.0028	.0032	.0034	.0124	.0038
20	.0130	.0122	.0146	.0138	.0128	.0110	.0116	.0145	.0148	0	.0138	.0112	.0131	.0132	.0129	.0157
21	.0007	.0006	.0008	.0007	.0007	.0006	.0006	.0007	.0008	0	.0007	.0006	.0007	.0007	.0007	.0008
22	.0018	.0020	.0021	.0019	.0019	.0016	.0017	.0021	.0020	0	.0019	.0017	.0019	.0018	.0019	.0025
23	.0011	.0013	.0014	.0011	.0011	.0010	.0011	.0014	.0013	0	.0011	.0027	.0014	.0012	.0014	.0014
24	.0804	.0586	.0731	.0618	.0603	.0641	.0733	.0550	.0673	0	.0642	.0434	.0508	.0523	.0530	.0647
25	.0307	.0336	.0332	.0297	.0291	.0276	.0293	.0371	.0322	0	.0327	.0354	.0377	.0351	.0346	.0411
26	.0458	.0407	.0493	.0450	.0431	.0416	.0512	.0587	.0548	0	.0502	.0394	.0459	.0541	.0432	.0720
27	.1137	.0975	.1207	.1111	.0912	.1135	.1335	.0857	.1170	0	.0991	.0651	.1079	.1095	.1011	.0822
28	.0637	.0595	.0714	.0624	.0633	.0543	.0565	.0691	.0693	0	.0648	.0546	.0643	.0644	.0639	.0768
29	.0387	.0382	.0439	.0399	.0379	.0347	.0394	.0516	.0448	0	.0384	.0338	.0390	.0385	.0394	.0467
30	.0280	.0274	.0318	.0284	.0273	.0242	.0268	.0317	.0304	0	.0288	.0236	.0284	.0280	.0277	.0339
31	.1056	.1005	.1140	.1041	.1052	.0893	.0929	.1153	.1128	0	.1061	.0925	.1066	.1044	.1014	.1265
32	.0132	.0153	.0173	.0149	.0129	.0125	.0136	.0128	.0124	0	.0114	.0108	.0126	.0115	.0114	.0135
33	.0108	.0101	.0120	.0108	.0109	.0094	.0104	.0129	.0120	0	.0135	.0098	.0114	.0117	.0128	.0153
34	.0598	.0657	.0771	.0615	.0588	.0556	.0596	.0749	.1137	0	.0657	.0604	.0665	.0613	.0677	.0764
35	.0355	.0359	.0414	.0368	.0365	.0310	.0317	.0401	.0387	0	.0368	.0323	.0375	.0374	.0364	.0449
36	.0585	.0544	.0654	.0574	.0585	.0500	.0520	.0653	.0650	0	.0597	.0515	.0606	.0608	.0589	.0712
37	.0553	.0543	.0640	.0557	.0544	.0514	.0512	.0641	.0582	0	.0589	.0493	.0541	.0548	.0516	.0715
38	.5818	.5415	.6506	.5713	.5821	.4973	.5172	.6493	.6469	0	.5939	.5127	.6030	.6048	.5862	.7081
Total	**2.2295**	**2.0878**	**2.2446**	**2.1719**	**2.1271**	**2.1078**	**2.2176**	**2.1424**	**2.2988**	**1.0000**	**2.1457**	**1.9073**	**2.0584**	**2.1004**	**2.0999**	**2.1804**

	42.0402	42.0500	42.0700	42.0800	42.1000	42.1100	43.0100	43.0200	44.0001	44.0002	45.0100	45.0200	45.0300	46.0100	46.0200	46.0300
1	0.0146	0.0144	0.0152	0.0148	0	0.0142	0	0.0122	0.0135	0.0103	0.0136	0.0149	0	0.0157	0.0162	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0003	.0002	.0002	.0001	0	.0001	0	.0001	.0001	.0001	.0001	.0001	0	.0001	.0001	0
4	.0005	.0003	.0004	.0002	0	.0002	0	.0002	.0002	.0002	.0003	.0002	0	.0002	.0002	0
5	.0009	.0006	.0006	.0005	0	.0005	0	.0004	.0004	.0004	.0005	.0005	0	.0005	.0005	0
6	.0292	.0290	.0304	.0259	0	.0287	0	.0243	.0273	.0221	.0293	.0320	0	.0326	.0318	0
7	.0300	.0301	.0316	.0309	0	.0293	0	.0255	.0279	.0213	.0282	.0309	0	.0332	.0339	0
8	.0001	.0002	.0001	.0001	0	.0001	0	.0001	.0001	.0001	.0001	.0001	0	.0002	.0001	0
9	.0072	.0075	.0079	.0081	0	.0073	0	.0065	.0069	.0053	.0070	.0077	0	.0082	.0083	0
10	.0087	.0163	.0078	.0092	0	.0095	0	.0078	.0073	.0183	.0065	.0063	0	.0095	.0080	0
11	.0375	.0211	.0243	.0316	0	.0251	0	.0186	.0310	.0280	.0251	.0319	0	.0623	.0379	0
12	.0832	.0199	.0153	.0178	0	.0185	0	.0119	.0162	.0159	.0148	.0162	0	.0177	.0171	0
13	.0275	.0602	.0117	.0187	0	.0124	0	.0186	.0221	.0404	.0188	.0122	0	.0158	.0256	0
14	.0018	.0023	.0020	.0022	0	.0057	0	.0016	.0025	.0016	.0020	.0023	0	.0023	.0024	0
15	.0031	.0027	.0026	.0024	0	.0035	0	.0026	.0023	.0020	.0026	.0038	0	.0028	.0029	0
16	.1262	.1451	.1822	.0966	0	.1183	0	.1405	.0913	.0701	.0940	.0865	0	.0909	.0728	0
17	1.0659	1.0289	1.0199	1.0430	1.0000	1.0493	0	.0281	.0181	.0499	.0913	.0994	0	.0668	.0976	0
18	.0084	.0086	.0084	.0106	0	.0095	1.0000	1.0292	1.0554	1.0485	1.0602	1.0288	1.0000	1.0241	1.0642	1.0000
19	.0035	.0034	.0035	.0044	0	.0035	0	.0139	.0062	.0115	.0044	.0046	0	.0423	.0119	0
20	.0125	.0131	.0148	.0135	0	.0129	0	.0162	.0164	.0134	.0146	.0137	0	.0153	.0148	0
21	.0007	.0007	.0007	.0007	0	.0007	0	.0007	.0009	.0006	.0007	.0008	0	.0008	.0008	0
22	.0020	.0019	.0018	.0021	0	.0019	0	.0016	.0018	.0015	.0019	.0020	0	.0024	.0023	0
23	.0014	.0012	.0012	.0014	0	.0012	0	.0010	.0012	.0011	.0014	.0022	0	.0015	.0015	0
24	.0705	.0578	.0633	.0545	0	.0643	0	.0427	.0575	.0535	.0575	.0561	0	.0617	.0545	0
25	.0363	.0303	.0338	.0370	0	.0313	0	.0266	.0339	.0288	.0320	.0375	0	.0409	.0414	0
26	.0636	.0478	.0599	.0450	0	.0452	0	.0400	.0400	.0304	.0431	.0409	0	.0405	.0434	0
27	.1006	.1021	.1197	.0950	0	.1083	0	.0963	.1139	.1263	.1096	.0872	0	.1086	.1091	0
28	.0611	.0635	.0670	.0652	0	.0620	0	.0539	.0586	.0446	.0597	.0651	0	.0701	.0707	0
29	.0404	.0411	.0441	.0499	0	.0416	0	.0347	.0359	.0294	.0390	.0411	0	.0434	.0462	0
30	.0284	.0279	.0299	.0302	0	.0274	0	.0242	.0262	.0206	.0280	.0290	0	.0318	.0322	0
31	.1045	.1049	.1077	.1066	0	.1019	0	.0875	.0957	.0740	.0966	.1052	0	.1134	.1172	0
32	.0123	.0114	.0122	.0126	0	.0116	0	.0096	.0117	.0093	.0119	.0130	0	.0133	.0142	0
33	.0113	.0108	.0117	.0112	0	.0106	0	.0109	.0105	.0086	.0118	.0120	0	.0138	.0131	0
34	.0684	.0602	.0612	.0853	0	.0617	0	.0539	.0706	.0596	.0665	.0714	0	.0816	.0770	0
35	.0359	.0365	.0378	.0376	0	.0365	0	.0305	.0343	.0270	.0352	.0386	0	.0405	.0420	0
36	.0565	.0594	.0629	.0608	0	.0575	0	.0506	.0549	.0413	.0555	.0607	0	.0645	.0665	0
37	.0575	.0549	.0622	.0586	0	.0539	0	.0452	.0477	.0374	.0498	.0519	0	.0612	.0556	0
38	.5623	.5909	.6255	.6050	0	.5720	0	.5035	.5465	.4111	.5522	.6038	0	.6416	.6614	0
Total	**2.2123**	**2.1161**	**2.1558**	**2.0844**	**1.0000**	**2.0663**	**1.0000**	**1.9685**	**2.0408**	**1.9536**	**2.1132**	**2.1065**	**1.0000**	**2.2304**	**2.3341**	**1.0000**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	46.0400	47.0100	47.0200	47.0300	47.0401	47.0402	47.0404	47.0405	47.0500	48.0100	48.0200	48.0300	48.0400	48.0500	48.0600	49.0100
1	0.0134	0	0.0171	0.0185	0.0129	0	0.0163	0.0206	0	0.0150	0	0.0142	0.0152	0.0144	0.0158	0.0147
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	0	.0001	.0001	.0001	0	.0001	.0001	0	.0001	0	.0001	.0001	.0001	.0001	.0001
4	.0002	0	.0003	.0002	.0002	0	.0003	.0002	0	.0002	0	.0002	.0002	.0002	.0002	.0002
5	.0004	0	.0004	.0004	.0003	0	.0006	.0005	0	.0004	0	.0004	.0004	.0004	.0005	.0004
6	.0313	0	.0283	.0288	.0217	0	.0265	.0322	0	.0280	0	.0257	.0258	.0262	.0279	.0256
7	.0280	0	.0361	.0387	.0269	0	.0343	.0434	0	.0313	0	.0301	.0322	.0302	.0330	.0308
8	.0001	0	.0001	.0001	.0001	0	.0001	.0001	0	.0001	0	.0001	.0001	.0001	.0001	.0001
9	.0069	0	.0089	.0096	.0066	0	.0083	.0107	0	.0077	0	.0074	.0079	.0074	.0082	.0079
10	.0066	0	.0076	.0105	.0157	0	.0149	.0073	0	.0089	0	.0210	.0063	.0060	.0081	.0104
11	.0179	0	.0236	.0266	.0295	0	.0370	.0221	0	.0280	0	.0244	.0291	.0230	.0279	.0340
12	.0136	0	.0184	.0178	.0158	0	.0596	.0187	0	.0153	0	.0133	.0137	.0130	.0182	.0141
13	.0144	0	.0121	.0137	.0333	0	.0140	.0125	0	.0223	0	.0165	.0215	.0272	.0193	.0221
14	.0026	0	.0022	.0020	.0017	0	.0025	.0055	0	.0025	0	.0020	.0020	.0017	.0021	.0020
15	.0025	0	.0040	.0050	.0030	0	.0024	.0029	0	.0029	0	.0024	.0027	.0024	.0043	.0026
16	.0814	0	.0724	.0548	.0481	0	.0921	.0330	0	.0734	0	.0853	.0495	.0475	.0538	.0709
17	.0482	0	.0418	.0124	.0697	0	.0221	.0063	0	.0386	0	.0297	.0124	.0247	.0424	.0321
18	1.0797	1.0000	1.0355	1.0353	1.0246	1.0000	1.0152	1.0258	1.0000	1.0393	1.0000	1.0315	1.0367	1.0439	1.0332	1.0532
19	.0210	0	.0144	.0042	.0111	0	.0127	.0035	0	.0116	0	.0254	.0103	.0190	.0131	.0287
20	.0132	0	.0159	.0169	.0120	0	.0146	.0186	0	.0137	0	.0141	.0140	.0131	.0145	.0138
21	.0007	0	.0009	.0009	.0007	0	.0008	.0010	0	.0008	0	.0009	.0008	.0007	.0008	.0008
22	.0019	0	.0025	.0024	.0019	0	.0020	.0023	0	.0021	0	.0020	.0022	.0021	.0023	.0021
23	.0016	0	.0013	.0014	.0012	0	.0015	.0014	0	.0013	0	.0011	.0013	.0011	.0013	.0014
24	.0491	0	.0548	.0500	.0490	0	.0713	.0476	0	.0519	0	.0482	.0488	.0434	.0529	.0506
25	.0297	0	.0375	.0372	.0335	0	.0411	.0380	0	.0337	0	.0333	.0365	.0353	.0372	.0395
26	.0355	0	.0456	.0448	.0351	0	.0456	.0470	0	.0374	0	.0387	.0379	.0335	.0405	.0411
27	.1337	0	.0987	.0695	.1000	0	.1012	.0614	0	.1039	0	.0979	.0896	.0836	.1126	.1014
28	.0588	0	.0753	.0815	.0566	0	.0701	.0909	0	.0651	0	.0625	.0667	.0632	.0692	.0646
29	.0361	0	.0480	.0463	.0393	0	.0538	.0497	0	.0434	0	.0397	.0461	.0403	.0459	.0433
30	.0253	0	.0343	.0345	.0268	0	.0332	.0372	0	.0290	0	.0273	.0296	.0270	.0306	.0296
31	.0978	0	.1214	.1351	.0952	0	.1163	.1476	0	.1086	0	.1083	.1104	.1057	.1173	.1069
32	.0110	0	.0143	.0145	.0121	0	.0178	.0156	0	.0133	0	.0124	.0134	.0120	.0138	.0139
33	.0108	0	.0142	.0136	.0106	0	.0130	.0150	0	.0116	0	.0109	.0122	.0112	.0124	.0124
34	.0610	0	.0719	.0693	.0662	0	.0752	.0678	0	.0698	0	.0640	.0701	.0621	.0706	.0736
35	.0346	0	.0449	.0463	.0343	0	.0406	.0507	0	.0396	0	.0363	.0401	.0368	.0400	.0382
36	.0550	0	.0705	.0771	.0523	0	.0646	.0870	0	.0612	0	.0589	.0630	.0597	.0651	.0607
37	.0467	0	.0668	.0658	.0553	0	.0696	.0659	0	.0537	0	.0525	.0544	.0496	.0568	.0544
38	.5476	0	.7015	.7671	.5199	0	.6425	.8657	0	.6091	0	.5864	.6267	.5943	.6480	.6040
Total	**2.0708**	**1.0000**	**2.1421**	**2.0861**	**2.0034**	**1.0000**	**2.1916**	**2.0902**	**1.0000**	**2.0655**	**1.0000**	**2.0387**	**2.0034**	**1.9679**	**2.0922**	**2.0983**

	49.0200	49.0300	49.0500	49.0600	49.0700	49.0800	50.0100	50.0200	50.0300	50.0400	51.0102	51.0103	51.0104	51.0400	52.0100	52.0200
1	0	0.0141	0.0154	0.0148	0.0146	0.0149	0	0.0170	0.0134	0.0190	0	0.0097	0.0118	0.0142	0.0150	0.0137
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	.0001	.0001	.0001	.0001	.0001	0	.0001	.0001	.0001	0	0	.0001	.0001	.0001	.0001
4	0	.0002	.0002	.0002	.0002	.0002	0	.0002	.0002	.0002	0	.0001	.0001	.0002	.0002	.0002
5	0	.0004	.0004	.0004	.0004	.0003	0	.0004	.0003	.0005	0	.0002	.0003	.0003	.0004	.0004
6	0	.0273	.0283	.0270	.0246	.0247	0	.0311	.0207	.0328	0	.0174	.0278	.0236	.0290	.0250
7	0	.0293	.0323	.0312	.0305	.0313	0	.0356	.0283	.0398	0	.0202	.0246	.0297	.0313	.0286
8	0	.0002	.0001	.0001	.0003	.0002	0	.0002	.0001	.0001	0	.0001	.0001	.0002	.0001	.0001
9	0	.0074	.0080	.0077	.0077	.0079	0	.0089	.0069	.0098	0	.0050	.0061	.0073	.0079	.0071
10	0	.0083	.0085	.0080	.0117	.0102	0	.0114	.0096	.0087	0	.0066	.0074	.0124	.0140	.0069
11	0	.0199	.0203	.0190	.0210	.0221	0	.0332	.0167	.0283	0	.0142	.0160	.0171	.0218	.0198
12	0	.0138	.0138	.0135	.0185	.0168	0	.0160	.0393	.0164	0	.0094	.0129	.0262	.0250	.0147
13	0	.0116	.0147	.0150	.0324	.0271	0	.0139	.0163	.0114	0	.0179	.0266	.0728	.0398	.0324
14	0	.0020	.0020	.0018	.0018	.0020	0	.0021	.0015	.0021	0	.0012	.0017	.0018	.0035	.0068
15	0	.0026	.0027	.0027	.0027	.0025	0	.0083	.0019	.0062	0	.0013	.0019	.0020	.0030	.0024
16	0	.0887	.0888	.0517	.0630	.0401	0	.0587	.0364	.0783	0	.0066	.0212	.0208	.0514	.0849
17	0	.0265	.0090	.0354	.0231	.0197	0	.0374	.0252	.0261	0	.0111	.0131	.0203	.0374	.0338
18	1.0000	1.0436	1.0330	1.0519	1.0352	1.0288	1.0000	1.0394	1.0202	1.0550	1.0000	1.0076	1.0091	1.0076	1.0303	1.0180
19	0	.0189	.0073	.0128	.0119	.0126	0	.0086	.0214	.0040	0	.0258	.0374	.0168	.0277	.0298
20	0	.0129	.0144	.0134	.0136	.0137	0	.0155	.0122	.0172	0	.0086	.0106	.0127	.0136	.0134
21	0	.0008	.0008	.0007	.0007	.0007	0	.0008	.0006	.0009	0	.0005	.0006	.0007	.0008	.0007
22	0	.0023	.0020	.0024	.0024	.0022	0	.0024	.0018	.0024	0	.0018	.0022	.0022	.0019	.0018
23	0	.0010	.0011	.0011	.0011	.0012	0	.0015	.0009	.0014	0	.0009	.0010	.0013	.0033	.0010
24	0	.0470	.0492	.0434	.0476	.0450	0	.0518	.0473	.0501	0	.0411	.0426	.0414	.0521	.0410
25	0	.0311	.0333	.0312	.0315	.0325	0	.0407	.0285	.0392	0	.0222	.0265	.0299	.0331	.0300
26	0	.0366	.0451	.0364	.0376	.0356	0	.0444	.0322	.0453	0	.0216	.0269	.0319	.0390	.0345
27	0	.0885	.0912	.0777	.0827	.0811	0	.0879	.0680	.0775	0	.1029	.1119	.0942	.0989	.0891
28	0	.0614	.0682	.0652	.0641	.0654	0	.0745	.0595	.0836	0	.0418	.0516	.0620	.0653	.0627
29	0	.0378	.0404	.0381	.0404	.0410	0	.0513	.0422	.0540	0	.0323	.0347	.0391	.0394	.0378
30	0	.0263	.0288	.0274	.0281	.0281	0	.0326	.0271	.0349	0	.0193	.0225	.0258	.0285	.0279
31	0	.1093	.1098	.1096	.1059	.1078	0	.1233	.0978	.1410	0	.0771	.0896	.1071	.1068	.1005
32	0	.0114	.0126	.0120	.0120	.0124	0	.0145	.0100	.0150	0	.0125	.0128	.0107	.0129	.0108
33	0	.0107	.0127	.0109	.0112	.0113	0	.0133	.0101	.0142	0	.0076	.0090	.0104	.0120	.0106
34	0	.0590	.0647	.0574	.0639	.0624	0	.0921	.0679	.0929	0	.0488	.0537	.0662	.0660	.0521
35	0	.0361	.0385	.0375	.0367	.0378	0	.0443	.0355	.0480	0	.0271	.0313	.0351	.0388	.0340
36	0	.0579	.0643	.0617	.0605	.0620	0	.0703	.0549	.0793	0	.0391	.0483	.0589	.0616	.0570
37	0	.0499	.0547	.0498	.0522	.0521	0	.0617	.0570	.0647	0	.0375	.0435	.0473	.0514	.0691
38	0	.5757	.6402	.6141	.6016	.6164	0	.6989	.5466	.7887	0	.3887	.4805	.5862	.6131	.5674
Total	**1.0000**	**1.9949**	**2.0169**	**1.9691**	**1.9917**	**1.9539**	**1.0000**	**2.1453**	**1.9121**	**2.2006**	**1.0000**	**1.6972**	**1.8372**	**1.9504**	**2.0633**	**1.9988**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	52.0300	52.0400	52.0500	53.0200	53.0300	53.0400	53.0500	53.0700	53.0800	54.0100	54.0200	54.0300	54.0400	54.0500	54.0700	55.0100
1	0.0127	0	0.0138	0.0148	0.0136	0.0150	0.0162	0	0.0149	0	0	0	0.0125	0	0.0124	0.0122
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	0	.0001	.0001	.0001	.0001	.0001	0	.0001	0	0	0	.0001	0	.0001	.0001
4	.0002	0	.0002	.0002	.0002	.0002	.0002	0	.0002	0	0	0	.0002	0	.0003	.0002
5	.0004	0	.0014	.0004	.0004	.0004	.0004	0	.0003	0	0	0	.0004	0	.0005	.0004
6	.0224	0	.0307	.0274	.0281	.0259	.0324	0	.0258	0	0	0	.0230	0	.0247	.0233
7	.0265	0	.0286	.0307	.0283	.0313	.0338	0	.0312	0	0	0	.0257	0	.0258	.0253
8	.0001	0	.0001	.0001	.0001	.0001	.0001	0	.0001	0	0	0	.0003	0	.0001	.0001
9	.0066	0	.0071	.0075	.0071	.0078	.0084	0	.0079	0	0	0	.0064	0	.0064	.0062
10	.0126	0	.0126	.0148	.0100	.0155	.0158	0	.0163	0	0	0	.0315	0	.0251	.0176
11	.0244	0	.0233	.0320	.0391	.0327	.0400	0	.0333	0	0	0	.0309	0	.0286	.0307
12	.0174	0	.0216	.0337	.0189	.0203	.0204	0	.0173	0	0	0	.0315	0	.0414	.0148
13	.0248	0	.0216	.0163	.0255	.0257	.0265	0	.0223	0	0	0	.0481	0	.0335	.0094
14	.0045	0	.0041	.0026	.0024	.0024	.0022	0	.0031	0	0	0	.0162	0	.0101	.0023
15	.0053	0	.0027	.0043	.0024	.0047	.0025	0	.0020	0	0	0	.0081	0	.0093	.0400
16	.0656	0	.0689	.1018	.0443	.0909	.0228	0	.0263	0	0	0	.0511	0	.0868	.0032
17	.0292	0	.0746	.0304	.0273	.0340	.0252	0	.0223	0	0	0	.0330	0	.0535	.0067
18	1.0397	1.0000	1.0334	.0232	.0055	.0110	.0069	0	.0043	0	0	0	.0065	0	.0063	.0058
19	.0283	0	.0155	1.0097	1.0170	1.0150	1.0211	1.0000	1.0145	1.0000	1.0000	1.0000	1.0306	1.0000	1.0176	1.0081
20	.0117	0	.0125	.0133	.0122	.0140	.0145	0	.0135	0	0	0	.0110	0	.0110	.0105
21	.0007	0	.0007	.0007	.0006	.0008	.0008	0	.0010	0	0	0	.0007	0	.0006	.0006
22	.0018	0	.0019	.0020	.0021	.0020	.0032	0	.0021	0	0	0	.0018	0	.0017	.0019
23	.0019	0	.0012	.0013	.0024	.0014	.0017	0	.0013	0	0	0	.0030	0	.0028	.0012
24	.0473	0	.0553	.0624	.0498	.0563	.0561	0	.0609	0	0	0	.0561	0	.0638	.0472
25	.0307	0	.0326	.0371	.0387	.0381	.0500	0	.0371	0	0	0	.0318	0	.0313	.0313
26	.0362	0	.0341	.0439	.0338	.0425	.0387	0	.0365	0	0	0	.0364	0	.0438	.0375
27	.1174	0	.0990	.1283	.0963	.1031	.1204	0	.0729	0	0	0	.0955	0	.1194	.1287
28	.0554	0	.0602	.0638	.0594	.0656	.0705	0	.0657	0	0	0	.0531	0	.0530	.0514
29	.0339	0	.0356	.0484	.0445	.0455	.0559	0	.0460	0	0	0	.0362	0	.0393	.0430
30	.0245	0	.0261	.0287	.0263	.0289	.0319	0	.0269	0	0	0	.0242	0	.0246	.0238
31	.0912	0	.1003	.1052	.0995	.1079	.1190	0	.1100	0	0	0	.0889	0	.0882	.0879
32	.0115	0	.0118	.0159	.0153	.0153	.0181	0	.0148	0	0	0	.0118	0	.0118	.0150
33	.0099	0	.0107	.0119	.0110	.0119	.0131	0	.0124	0	0	0	.0109	0	.0106	.0105
34	.0574	0	.0595	.0716	.0695	.0701	.0805	0	.0666	0	0	0	.0617	0	.0630	.0697
35	.0326	0	.0347	.0385	.0347	.0385	.0425	0	.0366	0	0	0	.0323	0	.0318	.0354
36	.0522	0	.0563	.0597	.0558	.0617	.0661	0	.0618	0	0	0	.0497	0	.0495	.0480
37	.0451	0	.0491	.0544	.0494	.0556	.0592	0	.0541	0	0	0	.0476	0	.0494	.0481
38	.5192	0	.5597	.5938	.5549	.6135	.6579	0	.6153	0	0	0	.4946	0	.4920	.4771
Total	1.9819	1.0000	2.0416	2.1372	1.9716	2.0922	2.1172	1.0000	1.9623	1.0000	1.0000	1.0000	2.0089	1.0000	2.0779	1.8978

	55.0200	55.0300	56.0100	56.0200	56.0300	56.0500	57.0100	57.0200	57.0300	58.0100	58.0200	58.0400	58.0600	58.0700	59.0100	59.0200
1	0.0133	0.0146	0.0084	0.0097	0.0114	0.0143	0.0157	0.0162	0.0148	0.0124	0.0104	0.0151	0	0.0165	0.0144	0.0112
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	.0001	0	0	0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	0	.0001	.0001	.0001
4	.0002	.0002	.0001	.0002	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0002	0	.0002	.0003	.0002
5	.0004	.0004	.0002	.0002	.0002	.0003	.0004	.0005	.0003	.0006	.0004	.0003	0	.0003	.0004	.0003
6	.0242	.0267	.0134	.0161	.0187	.0216	.0265	.0372	.0249	.0205	.0192	.0239	0	.0300	.0300	.0230
7	.0277	.0303	.0174	.0200	.0238	.0298	.0328	.0335	.0309	.0258	.0215	.0315	0	.0343	.0299	.0227
8	.0002	.0001	.0001	.0001	.0002	.0001	.0001	.0001	.0002	.0002	.0001	.0001	0	.0001	.0006	.0003
9	.0069	.0074	.0043	.0050	.0060	.0077	.0082	.0084	.0078	.0063	.0053	.0078	0	.0083	.0099	.0057
10	.0248	.0170	.0177	.0089	.0090	.0083	.0092	.0070	.0107	.0119	.0226	.0108	0	.0118	.0086	.0051
11	.0217	.0266	.0167	.0671	.0210	.0300	.0198	.0253	.0204	.0267	.0407	.0413	0	.0269	.0554	.0184
12	.0276	.0339	.0120	.0237	.0229	.0147	.0170	.0255	.0295	.0322	.0208	.0166	0	.0186	.0275	.0175
13	.0384	.0253	.0334	.0615	.0685	.0143	.0184	.0181	.0881	.0635	.0283	.0215	0	.0167	.0134	.0149
14	.0039	.0019	.0042	.0012	.0015	.0017	.0029	.0021	.0019	.0015	.0018	.0019	0	.0020	.0032	.0126
15	.0151	.0033	.0015	.0014	.0019	.0018	.0508	.0033	.0024	.0018	.0017	.0021	0	.0023	.0091	.0033
16	.0635	.0773	.0078	.0016	.0088	.0150	.0119	.0167	.0162	.0446	.0209	.0472	0	.0184	.0729	.1094
17	.0449	.0422	.0191	.0038	.0178	.0200	.0464	.0296	.0398	.0089	.0686	.0289	0	.0265	.0781	.0254
18	.0052	.0081	.0034	.0027	.0035	.0048	.0053	.0070	.0053	.0041	.0057	.0057	0	.0070	.0285	.0123
19	1.0309	1.0091	1.0386	1.0089	1.0739	1.0664	1.0164	1.0153	1.0233	1.0520	1.0194	1.0323	1.0000	1.0397	.0099	.0035
20	.0120	.0130	.0076	.0086	.0101	.0128	.0142	.0140	.0132	.0111	.0093	.0161	0	.0142	1.0556	1.0478
21	.0006	.0007	.0004	.0004	.0005	.0007	.0007	.0007	.0007	.0006	.0005	.0007	0	.0008	.0030	.0010
22	.0019	.0019	.0019	.0015	.0021	.0045	.0044	.0035	.0037	.0016	.0015	.0021	0	.0031	.0022	.0014
23	.0028	.0012	.0011	.0011	.0010	.0013	.0012	.0013	.0012	.0011	.0013	.0015	0	.0013	.0018	.0009
24	.0539	.0623	.0335	.0455	.0399	.0417	.0509	.0497	.0475	.0569	.0539	.0655	0	.0451	.0575	.0745
25	.0316	.0342	.0210	.0288	.0280	.0363	.0330	.0354	.0311	.0301	.0336	.0417	0	.0361	.0464	.0257
26	.0357	.0437	.0199	.0275	.0264	.0311	.0484	.0472	.0386	.0463	.0294	.0376	0	.0359	.0410	.0302
27	.0998	.1068	.1195	.0788	.0812	.0745	.0918	.0874	.0863	.1078	.0854	.1299	0	.0826	.0996	.0954
28	.0581	.0631	.0362	.0417	.0495	.0622	.0689	.0692	.0645	.0541	.0449	.0658	0	.0694	.0627	.0491
29	.0400	.0478	.0234	.0256	.0317	.0400	.0509	.0556	.0398	.0400	.0444	.0525	0	.0424	.0400	.0294
30	.0254	.0284	.0164	.0192	.0217	.0277	.0297	.0306	.0276	.0247	.0219	.0307	0	.0294	.0297	.0217
31	.0988	.1049	.0639	.0758	.0869	.1076	.1117	.1185	.1084	.0881	.0755	.1108	0	.1219	.1036	.0790
32	.0128	.0151	.0075	.0091	.0097	.0119	.0144	.0154	.0127	.0133	.0114	.0206	0	.0136	.0135	.0088
33	.0105	.0121	.0332	.0081	.0087	.0108	.0121	.0126	.0111	.0098	.0096	.0126	0	.0118	.0123	.0087
34	.0572	.0712	.0499	.0550	.0574	.0669	.0639	.0829	.0573	.0569	.0667	.0790	0	.0859	.0842	.0472
35	.0333	.0387	.0223	.0249	.0287	.0362	.0395	.0415	.0366	.0311	.0279	.0405	0	.0479	.0384	.0277
36	.0546	.0589	.0339	.0393	.0469	.0591	.0650	.0654	.0610	.0500	.0412	.0614	0	.0657	.0576	.0449
37	.0482	.0552	.0330	.0366	.0398	.0486	.0583	.0584	.0516	.0525	.0442	.0602	0	.0587	.0571	.0442
38	.5437	.5857	.3375	.3908	.4661	.5884	.6466	.6503	.6071	.4974	.4102	.6110	0	.6535	.5726	.4465
Total	2.0262	2.0838	1.7231	1.7597	1.8595	1.9250	2.0413	2.0356	2.0098	1.9894	1.8904	2.1186	1.0000	2.0256	2.1978	1.9237

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued
[Dollars]

	59.0301	59.0302	60.0100	60.0200	60.0400	61.0100	61.0200	61.0300	61.0500	61.0601	61.0603	61.0700	62.0101	62.0102	62.0200	62.0300
1	0.0102	0.0137	0.0127	0	0.0161	0	0.0124	0.0135	0.0111	0.0121	0.0123	0.0128	0.0157	0.0136	0.0150	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	.0001	.0001	0	.0001	0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	0
4	.0002	.0002	.0001	0	.0002	0	.0002	.0002	.0002	.0001	.0002	.0002	.0002	.0002	.0002	0
5	.0003	.0004	.0003	0	.0003	0	.0004	.0005	.0003	.0003	.0003	.0004	.0003	.0003	.0003	0
6	.0181	.0266	.0213	0	.0261	0	.0328	.0346	.0250	.0265	.0234	.0255	.0244	.0216	.0233	0
7	.0206	.0284	.0265	0	.0337	0	.0256	.0281	.0230	.0249	.0252	.0266	.0329	.0287	.0316	0
8	.0005	.0005	.0001	0	.0001	0	.0005	.0001	.0002	.0016	.0023	.0001	.0001	.0001	.0001	0
9	.0134	.0071	.0077	0	.0085	0	.0096	.0082	.0098	.0111	.0162	.0077	.0084	.0069	.0081	0
10	.0074	.0087	.0052	0	.0058	0	.0059	.0051	.0099	.0065	.0074	.0077	.0068	.0110	.0084	0
11	.0241	.0296	.0262	0	.0274	0	.0181	.0161	.0153	.0159	.0372	.0181	.0338	.0319	.0307	0
12	.0269	.0225	.0146	0	.0164	0	.0317	.0141	.0165	.0232	.0238	.0210	.0158	.0160	.0197	0
13	.0481	.0380	.0203	0	.0121	0	.0149	.0101	.0305	.0251	.0325	.0270	.0130	.0195	.0177	0
14	.0045	.0022	.0015	0	.0023	0	.0076	.0021	.0017	.0219	.0149	.0028	.0022	.0058	.0019	0
15	.0054	.0029	.0021	0	.0024	0	.0115	.0032	.0020	.0109	.0115	.0022	.0021	.0027	.0028	0
16	.0181	.0824	.0217	0	.0257	0	.0277	.0765	.0492	.0446	.0207	.0600	.0264	.0272	.0305	0
17	.0255	.0447	.0202	0	.0260	0	.0665	.0191	.0340	.0773	.0649	.0203	.0219	.0260	.0300	0
18	.0195	.0272	.0167	0	.0087	0	.0274	.0169	.0308	.0142	.0182	.0149	.0060	.0117	.0061	0
19	.0126	.0073	.0271	0	.0081	0	.0111	.0183	.0047	.0082	.0217	.0044	.0310	.0135	.0180	0
20	1.1330	1.0510	.0117	0	.0145	0	.0143	.0136	.0130	.0519	.2305	.0512	.0141	.0123	.0145	0
21	.0007	.0007	1.0063	1.0000	1.0029	1.0000	1.0022	1.0042	1.0016	1.0494	1.0039	1.0649	.0008	.0007	.0007	0
22	.0020	.0018	.0091	0	.0025	0	.0044	.0018	.0018	.0016	.0018	.0017	1.0074	1.0206	1.0151	1.0000
23	.0012	.0013	.0012	0	.0013	0	.0010	.0010	.0012	.0011	.0013	.0010	.0015	.0013	.0013	0
24	.0603	.0593	.0524	0	.0485	0	.0453	.0439	.0463	.0503	.0715	.0562	.0468	.0465	.0435	0
25	.0258	.0366	.0312	0	.0384	0	.0273	.0292	.0243	.0272	.0355	.0293	.0397	.0365	.0364	0
26	.0267	.0420	.0281	0	.0373	0	.0285	.0372	.0302	.0278	.0296	.0332	.0353	.0323	.0356	0
27	.1192	.1006	.0578	0	.0584	0	.1074	.0701	.1489	.1113	.1214	.1362	.0772	.0741	.0829	0
28	.0440	.0618	.0557	0	.0708	0	.0546	.0610	.0481	.0526	.0527	.0559	.0685	.0593	.0672	0
29	.0297	.0364	.0447	0	.0453	0	.0317	.0352	.0304	.0309	.0345	.0330	.0442	.0392	.0390	0
30	.0217	.0274	.0243	0	.0299	0	.0234	.0263	.0211	.0220	.0252	.0242	.0306	.0270	.0296	0
31	.0708	.0983	.0929	0	.1173	0	.1078	.0968	.0797	.0866	.0880	.0954	.1174	.0987	.1111	0
32	.0089	.0115	.0160	0	.0172	0	.0099	.0105	.0093	.0097	.0117	.0106	.0132	.0122	.0121	0
33	.0085	.0121	.0095	0	.0118	0	.0093	.0102	.0092	.0089	.0098	.0105	.0119	.0106	.0119	0
34	.0487	.0619	.0593	0	.0718	0	.0509	.0504	.0478	.0471	.0719	.0553	.0736	.0722	.0646	0
35	.0256	.0344	.0316	0	.0390	0	.0304	.0324	.0285	.0300	.0316	.0321	.0401	.0382	.0382	0
36	.0398	.0561	.0527	0	.0673	0	.0506	.0564	.0448	.0491	.0486	.0523	.0651	.0554	.0626	0
37	.0438	.0851	.0439	0	.0547	0	.0463	.0537	.0397	.0420	.0473	.0463	.0544	.0556	.0719	0
38	.3960	.5580	.5244	0	.6691	0	.5032	.5614	.4457	.4885	.4834	.5198	.6474	.5509	.6224	0
Total	**1.9654**	**2.1210**	**1.8526**	**1.0000**	**1.9489**	**1.0000**	**1.9493**	**1.9008**	**1.8904**	**2.0239**	**2.2495**	**2.0409**	**1.9831**	**1.9294**	**1.9827**	**1.0000**

	62.0400	62.0500	62.0600	62.0700	62.0800	62.0900	62.1000	62.1100	63.0200	63.0300	64.0101	64.0102	64.0104	64.0105	64.0200	64.0301
1	0.0135	0.0221	0.0127	0.0108	0	0	0.0155	0.0147	0.0160	0.0092	0.0107	0	0.0169	0.0149	0.0147	0.0121
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	.0001	.0001	0	0	0	.0001	.0001	.0001	.0001	0	0	.0001	.0001	.0001	.0001
4	.0002	.0002	.0002	.0001	0	0	.0002	.0002	.0002	.0001	.0002	0	.0003	.0002	.0002	.0002
5	.0003	.0003	.0004	.0002	0	0	.0003	.0003	.0003	.0003	.0002	0	.0003	.0003	.0003	.0003
6	.0211	.0214	.0202	.0171	0	0	.0237	.0220	.0235	.0164	.0164	0	.0293	.0232	.0243	.0185
7	.0278	.0348	.0264	.0223	0	0	.0325	.0308	.0335	.0190	.0220	0	.0357	.0308	.0304	.0241
8	.0002	.0012	.0002	.0001	0	0	.0002	.0001	.0001	.0002	.0001	0	.0001	.0002	.0003	.0016
9	.0072	.0070	.0066	.0056	0	0	.0080	.0077	.0081	.0046	.0053	0	.0088	.0090	.0075	.0089
10	.0261	.0239	.0134	.0133	0	0	.0122	.0082	.0120	.0315	.0118	0	.0391	.0160	.0090	.0487
11	.0283	.0287	.0188	.0219	0	0	.0218	.0244	.0245	.0266	.0311	0	.0376	.0590	.0419	.0342
12	.0317	.0287	.0146	.0141	0	0	.0274	.0147	.0269	.0182	.0105	0	.0163	.0157	.0166	.0519
13	.0409	.0236	.0158	.0122	0	0	.0813	.0137	.0186	.0265	.0069	0	.0089	.0231	.0194	.0493
14	.0021	.0017	.0016	.0015	0	0	.0019	.0016	.0019	.0012	.0013	0	.0020	.0087	.0092	.0125
15	.0038	.0036	.0133	.0034	0	0	.0058	.0024	.0201	.0015	.0018	0	.0029	.0048	.0021	.0018
16	.0255	.0256	.0487	.0082	0	0	.0234	.0138	.0028	.0076	.0642	0	.0286	.0089	.0030	.0098
17	.0408	.0377	.0112	.0359	0	0	.0395	.0256	.0052	.0121	.0034	0	.0159	.0053	.0055	.0134
18	.0056	.0047	.0036	.0050	0	0	.0050	.0052	.0089	.0036	.0063	0	.0085	.0054	.0051	.0039
19	.0087	.0068	.0060	.0094	0	0	.0206	.0308	.0032	.0092	.0022	0	.0032	.0028	.0139	.0056
20	.0119	.0111	.0113	.0095	0	0	.0142	.0132	.0146	.0081	.0095	0	.0157	.0133	.0128	.0102
21	.0006	.0006	.0006	.0005	0	0	.0008	.0007	.0007	.0004	.0005	0	.0008	.0007	.0007	.0016
22	1.0311	1.0395	1.0020	1.0036	1.0000	1.0000	1.0154	1.0193	1.0063	1.0050	.0015	0	.0021	.0021	.0019	.0017
23	.0012	.0012	.0012	.0021	0	0	.0013	.0012	.0013	.0010	1.0019	1.0000	1.0027	1.0038	1.0211	1.0058
24	.0460	.0440	.0480	.0364	0	0	.0507	.0359	.0579	.0381	.0439	0	.0739	.0460	.0464	.0550
25	.0329	.0321	.0296	.0263	0	0	.0353	.0347	.0359	.0244	.0288	0	.0400	.0464	.0376	.0280
26	.0368	.0327	.0301	.0264	0	0	.0374	.0328	.0404	.0239	.0278	0	.0669	.0437	.0349	.0321
27	.0805	.0795	.0809	.0836	0	0	.0794	.0792	.0707	.0640	.1206	0	.0883	.0667	.0781	.0790
28	.0571	.0540	.0555	.0461	0	0	.0683	.0644	.0697	.0392	.0452	0	.0717	.0628	.0626	.0489
29	.0350	.0369	.0325	.0293	0	0	.0456	.0366	.0452	.0341	.0323	0	.0459	.0394	.0380	.0343
30	.0258	.0243	.0235	.0231	0	0	.0301	.0258	.0446	.0186	.0248	0	.0389	.0304	.0265	.0232
31	.0994	.0949	.0943	.0787	0	0	.1176	.1114	.1201	.0667	.0799	0	.1219	.1050	.1059	.0836
32	.0111	.0110	.0105	.0104	0	0	.0134	.0114	.0184	.0088	.0106	0	.0140	.0140	.0128	.0096
33	.0102	.0098	.0095	.0087	0	0	.0118	.0110	.0126	.0070	.0096	0	.0133	.0104	.0107	.0089
34	.0628	.0665	.0559	.0504	0	0	.1276	.0587	.0833	.0547	.0669	0	.0847	.0814	.0709	.0536
35	.0357	.0328	.0319	.0282	0	0	.0392	.0368	.0482	.0237	.0321	0	.0495	.0404	.0382	.0299
36	.0534	.0506	.0522	.0436	0	0	.0640	.0615	.0630	.0368	.0418	0	.0674	.0585	.0591	.0450
37	.0508	.0523	.0488	.0426	0	0	.0616	.0484	.0799	.0377	.0440	0	.0592	.0661	.0522	.0499
38	.5309	.5031	.5196	.4338	0	0	.6362	.6117	.6266	.3664	.4153	0	.6706	.5819	.5882	.4480
Total	**1.9660**	**1.9459**	**1.8321**	**1.7308**	**1.0000**	**1.0000**	**2.1328**	**1.8994**	**2.0186**	**1.6802**	**1.8163**	**1.0000**	**2.1112**	**1.9595**	**1.9137**	**1.8969**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	64.0302	64.0400	64.0501	64.0502	64.0503	64.0504	64.0700	64.0800	64.0900	64.1000	64.1100	64.1200	65.0100	65.0200	65.0300	65.0400
1	0.0140	0.0136	0	0.0141	0.0174	0	0.0139	0.0140	0	0.0139	0.0169	0.0197	0.0163	0.0228	0.0200	0.0148
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	.0001	0	.0001	.0001	0	.0001	.0001	0	.0001	.0001	.0001	0	.0001	.0001	.0001
4	.0002	.0002	0	.0002	.0002	0	.0002	.0002	0	.0002	.0002	.0002	.0002	.0002	.0002	.0002
5	.0003	.0005	0	.0006	.0004	0	.0003	.0003	0	.0004	.0003	.0005	.0014	.0004	.0003	.0003
6	.0250	.0195	0	.0241	.0324	0	.0232	.0225	0	.0248	.0251	.0329	.1572	.0347	.0279	.0256
7	.0298	.0265	0	.0281	.0365	0	.0293	.0289	0	.0293	.0350	.0386	.0325	.0479	.0387	.0293
8	.0029	.0006	0	.0003	.0001	0	.0013	.0006	0	.0016	.0001	.0002	.0001	.0001	.0001	.0001
9	.0079	.0106	0	.0070	.0088	0	.0073	.0071	0	.0073	.0094	.0082	.0081	.0126	.0096	.0106
10	.0148	.0188	0	.0128	.0084	0	.0091	.0123	0	.0067	.0216	.0259	.0059	.0079	.0072	.0060
11	.0281	.0256	0	.0425	.0578	0	.0456	.0495	0	.0706	.0664	.0499	.0193	.0289	.0242	.0259
12	.0453	.0368	0	.0204	.0219	0	.0282	.0301	0	.0274	.0338	.0359	.0165	.0212	.0156	.0138
13	.0097	.0341	0	.0411	.0300	0	.0168	.0097	0	.0104	.0374	.0230	.0099	.0134	.0093	.0096
14	.0022	.0069	0	.0726	.0111	0	.0015	.0143	0	.0042	.0177	.0087	.0045	.0023	.0020	.0017
15	.0021	.0030	0	.0220	.0030	0	.0020	.0020	0	.0024	.0035	.0029	.0080	.0031	.0020	.0018
16	.0027	.0427	0	.0041	.0370	0	.0310	.0120	0	.0566	.0341	.0173	.0078	.0036	.0026	.0103
17	.0061	.0109	0	.0173	.0135	0	.0052	.0126	0	.0340	.0129	.0170	.0142	.0105	.0068	.0161
18	.0049	.0055	0	.0041	.0070	0	.0050	.0048	0	.0058	.0072	.0128	.0095	.0035	.0032	.0175
19	.0027	.0108	0	.0029	.0035	0	.0026	.0027	0	.0035	.0072	.0032	.0063	.0063	.0043	.0041
20	.0124	.0106	0	.0118	.0154	0	.0125	.0120	0	.0123	.0149	.0129	.0142	.0251	.0195	.0120
21	.0006	.0006	0	.0006	.0008	0	.0006	.0006	0	.0006	.0008	.0007	.0024	.0014	.0009	.0040
22	.0018	.0018	0	.0017	.0022	0	.0018	.0019	0	.0018	.0023	.0019	.0019	.0026	.0022	.0019
23	1.0096	1.0061	1.0000	1.0034	1.0039	1.0000	1.0050	1.0039	1.0000	1.0051	1.0116	1.0093	.0012	.0017	.0014	.0018
24	.0575	.0519	0	.0592	.0491	0	.0517	.0513	0	.0560	.0585	.0529	1.1198	1.0968	1.2716	1.1027
25	.0319	.0275	0	.0402	.0516	0	.0399	.0407	0	.0500	.0502	.0411	.0278	.0399	.0503	.0347
26	.0341	.0355	0	.0357	.0553	0	.0457	.0335	0	.0398	.0376	.0352	.0272	.0374	.0374	.0449
27	.0947	.0943	0	.1443	.0670	0	.0613	.0666	0	.1259	.0953	.0887	.0626	.0739	.0628	.0589
28	.0589	.0512	0	.0578	.0744	0	.0607	.0590	0	.0594	.0723	.0629	.0744	.1128	.1143	.0565
29	.0500	.0471	0	.0357	.0431	0	.0376	.0367	0	.0404	.0456	.0402	.0475	.0636	.0525	.0952
30	.0288	.0242	0	.0249	.0304	0	.0270	.0253	0	.0267	.0322	.0273	.0306	.0556	.0470	.0273
31	.1131	.0870	0	.1000	.1297	0	.1000	.0988	0	.1023	.1266	.1082	.1134	.1646	.1510	.1281
32	.0114	.0101	0	.0121	.0153	0	.0125	.0126	0	.0142	.0156	.0131	.0129	.0168	.0148	.0109
33	.0123	.0097	0	.0103	.0138	0	.0104	.0103	0	.0112	.0124	.0110	.0112	.0186	.0146	.0105
34	.0694	.0577	0	.0742	.0904	0	.0705	.0715	0	.0873	.0891	.0935	.0850	.0723	.0738	.1122
35	.0383	.0329	0	.0360	.0485	0	.0377	.0376	0	.0391	.0464	.0483	.0406	.0561	.0489	.0351
36	.0552	.0474	0	.0538	.0704	0	.0569	.0556	0	.0557	.0673	.0584	.0636	.0959	.0761	.0531
37	.0803	.0527	0	.0586	.0674	0	.0560	.0491	0	.0540	.0650	.0560	.0668	.0966	.1037	.0514
38	.5486	.4712	0	.5355	.7000	0	.5661	.5535	0	.5537	.6695	.5809	.6327	.9538	.7574	.5277
Total	**1.9590**	**1.9147**	**1.0000**	**2.0746**	**2.1178**	**1.0000**	**1.9109**	**1.8907**	**1.0000**	**2.0811**	**2.1729**	**2.0587**	**2.1208**	**2.2509**	**2.3168**	**2.0286**

	65.0500	65.0600	65.0701	65.0702	66.0000	67.0000	68.0100	68.0200	68.0301	68.0302	69.0100	69.0200	70.0150	70.0300	70.0400	70.0500
1	0.0170	0.0066	0.0238	0.0266	0.0120	0.0162	0.0084	0.0067	0.0207	0.0189	0.0173	0.0205	0.0207	0.0248	0.0228	0.0216
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	.0002	.0001	.0001	0	0	.0022	0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
4	.0003	.0006	.0002	.0002	.0001	.0001	.0007	.0133	.0002	.0012	.0002	.0002	.0002	.0002	.0002	.0002
5	.0003	.0006	.0004	.0004	.0006	.0003	.0007	.0002	.0025	.0006	.0003	.0004	.0004	.0003	.0003	.0003
6	.0256	.0626	.0337	.0383	.0664	.0290	.0799	.0230	.2529	.0387	.0277	.0408	.0351	.0291	.0305	.0276
7	.0363	.0129	.0492	.0550	.0244	.0345	.0165	.0138	.0383	.0388	.0356	.0425	.0422	.0521	.0474	.0451
8	.0001	.0002	.0001	.0001	.0001	.0001	.0001	0	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001
9	.0077	.0072	.0113	.0126	.0064	.0083	.0041	.0035	.0092	.0094	.0087	.0101	.0102	.0127	.0111	.0105
10	.0061	.0028	.0130	.0089	.0048	.0055	.0032	.0022	.0264	.0070	.0187	.0133	.0101	.0077	.0081	.0078
11	.0332	.0097	.0472	.0653	.0230	.0236	.0102	.0074	.0338	.0223	.0384	.0457	.0490	.0359	.0428	.0412
12	.0127	.0071	.0180	.0194	.0122	.0134	.0099	.0056	.0599	.0271	.0143	.0163	.0159	.0184	.0166	.0157
13	.0074	.0041	.0160	.0119	.0095	.0076	.0053	.0032	.0861	.0106	.0104	.0100	.0103	.0110	.0101	.0096
14	.0016	.0018	.0050	.0024	.0022	.0018	.0023	.0009	.0069	.0038	.0040	.0022	.0020	.0022	.0020	.0019
15	.0017	.0032	.0025	.0027	.0035	.0019	.0040	.0013	.0163	.0026	.0020	.0026	.0024	.0022	.0021	.0020
16	.0018	.0035	.0027	.0026	.0030	.0018	.0030	.0012	.0104	.0063	.0025	.0026	.0023	.0023	.0022	.0020
17	.0046	.0064	.0067	.0063	.0083	.0044	.0063	.0025	.0391	.0160	.0063	.0063	.0056	.0056	.0053	.0050
18	.0025	.0079	.0035	.0030	.0024	.0021	.0028	.0012	.0081	.0046	.0037	.0028	.0028	.0026	.0024	.0023
19	.0032	.0046	.0043	.0049	.0161	.0073	.0035	.0017	.0141	.0050	.0034	.0039	.0046	.0043	.0041	.0039
20	.0131	.0060	.0199	.0222	.0107	.0139	.0072	.0060	.0171	.0586	.0152	.0178	.0175	.0221	.0192	.0183
21	.0011	.0003	.0021	.0011	.0006	.0008	.0005	.0004	.0008	.0009	.0008	.0009	.0012	.0013	.0010	.0010
22	.0019	.0008	.0027	.0031	.0015	.0038	.0011	.0008	.0033	.0052	.0021	.0023	.0032	.0029	.0029	.0028
23	.0014	.0005	.0019	.0011	.0011	.0012	.0006	.0005	.0018	.0015	.0016	.0021	.0020	.0017	.0019	.0018
24	1.1587	1.0336	1.2050	1.0769	.0334	.0436	.0571	.0243	.0851	.0757	.0522	.0503	.1050	.1063	.0621	.0614
25	.0504	.0141	.0700	.0991	1.2810	1.0503	.0159	.0115	.0628	.0342	.0491	.0567	.0669	.0561	.0641	.0669
26	.0280	.1010	.0381	.0638	.0284	.0258	1.0523	1.2849	1.0447	1.1456	.0362	.0520	.0381	.0379	.0348	.0349
27	.0684	.0275	.0621	.0603	.0379	.0429	.0335	.0219	.0972	.0817	1.0651	.0512	.0539	.0581	.0526	.0501
28	.0646	.0298	.0973	.1068	.0527	.0681	.0376	.0301	.0844	.0878	.0732	1.0875	.1074	.0858	.0935	.0885
29	.0700	.0457	.1254	.0938	.0442	.0481	.0331	.0250	.0935	.0556	.0549	.0564	1.2365	1.1851	.1335	.0520
30	.0353	.0231	.0798	.0745	.0221	.0275	.0237	.0132	.2022	.1365	.0310	.0372	.0553	.0445	1.4459	1.0740
31	.1206	.0518	.2012	.2295	.1016	.1655	.0593	.0503	.1540	.1272	.1370	.1928	.1785	.1922	.1878	.1731
32	.0126	.0102	.0188	.0213	.0119	.1570	.0062	.0050	.0218	.0140	.0186	.0176	.0175	.0218	.0224	.0216
33	.0165	.0056	.0187	.0199	.0113	.0229	.0077	.0053	.0308	.0240	.0160	.0188	.0158	.0176	.0166	.0166
34	.0809	.0407	.1213	.1513	.0613	.0828	.0436	.0282	.1468	.0754	.1125	.1174	.1825	.1292	.1103	.1044
35	.0675	.0161	.0786	.0867	.0307	.0443	.0198	.0160	.0508	.0479	.0520	.0579	.0602	.0660	.0726	.0704
36	.0605	.0251	.0903	.1016	.0479	.0647	.0327	.0278	.0706	.0754	.0674	.0806	.0802	.1027	.0889	.0841
37	.0528	.0397	.0997	.0852	.0431	.0567	.0336	.0386	.0678	.0667	.0753	.0826	.0776	.0798	.0743	.0716
38	.6020	.2494	.8978	1.0109	.4770	.6435	.3249	.2767	.7023	.7499	.6704	.8020	.7973	1.0218	.8838	.8367
Total	**2.0664**	**1.6135**	**2.5704**	**2.5604**	**2.0166**	**2.0776**	**1.6283**	**1.6774**	**2.8611**	**2.3269**	**2.0538**	**2.2024**	**2.4913**	**2.4444**	**2.6926**	**2.1906**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	71.0100	71.0201	71.0202	72.0100	72.0201	72.0202	72.0203	72.0204	72.0205	72.0300	73.0101	73.0102	73.0103	73.0104	73.0105	73.0106
1	0.0109	0.0129	0	0.0261	0.0278	0.0224	0.0219	0.0124	0.0737	0.0281	0.0152	0.0272	0.0301	0.0222	0.0243	0.0255
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	.0001	.0001	.0001	.0001	0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
4	0	.0001	0	.0004	.0006	.0002	.0003	.0001	.0002	.0003	.0002	.0003	.0002	.0002	.0002	.0002
5	.0005	.0007	0	.0008	.0005	.0016	.0004	.0002	.0007	.0005	.0004	.0004	.0004	.0003	.0004	.0004
6	.0547	.0764	0	.0660	.0460	.0534	.0404	.0205	.0525	.0479	.0397	.0351	.0316	.0299	.0345	.0374
7	.0048	.0127	0	.0422	.0571	.0449	.0446	.0260	.0888	.0578	.0313	.0542	.0632	.0463	.0510	.0535
8	0	0	0	.0003	.0007	.0002	.0002	.0001	.0013	.0002	.0001	.0002	.0002	.0002	.0002	.0002
9	.0012	.0028	0	.0199	.0424	.0132	.0145	.0065	.0120	.0150	.0081	.0148	.0157	.0113	.0118	.0134
10	.0011	.0032	0	.0104	.0163	.0080	.0160	.0050	.0140	.0117	.0061	.0135	.0097	.0104	.0099	.0075
11	.0040	.0217	0	.0402	.0414	.0386	.1082	.0203	.0366	.0452	.0255	.0350	.0332	.0646	.0505	.0296
12	.0042	.0078	0	.0307	.0362	.0251	.0193	.0108	.0286	.0357	.0174	.0662	.0220	.0198	.0236	.0192
13	.0021	.0054	0	.0280	.0281	.0138	.0129	.0110	.1247	.0627	.0208	.0153	.0127	.0271	.0191	.0122
14	.0013	.0021	0	.0029	.0029	.0028	.0024	.0015	.0067	.0031	.0020	.0025	.0026	.0022	.0023	.0024
15	.0026	.0039	0	.0079	.0031	.0571	.0027	.0014	.0038	.0034	.0028	.0027	.0024	.0022	.0031	.0026
16	.0015	.0023	0	.0033	.0038	.0057	.0030	.0027	.0060	.0036	.0069	.0031	.0027	.0026	.0030	.0026
17	.0036	.0055	0	.0079	.0097	.0085	.0070	.0053	.0176	.0102	.0094	.0078	.0065	.0061	.0069	.0062
18	.0013	.0017	0	.0035	.0045	.0029	.0047	.0083	.0064	.0038	.0510	.0048	.0029	.0042	.0047	.0028
19	.0013	.0025	0	.0057	.0054	.0043	.0056	.0122	.0060	.0082	.0041	.0073	.0049	.0092	.0104	.0053
20	.0020	.0049	0	.0176	.0243	.0193	.0185	.0112	.0161	.0252	.0139	.0233	.0270	.0196	.0204	.0229
21	.0001	.0003	0	.0011	.0012	.0010	.0010	.0006	.0008	.0013	.0009	.0012	.0014	.0010	.0011	.0012
22	.0003	.0008	0	.0029	.0033	.0025	.0138	.0016	.0024	.0035	.0022	.0031	.0036	.0029	.0030	.0036
23	.0002	.0007	0	.0025	.0024	.0232	.0024	.0010	.0024	.0066	.0014	.0023	.0021	.0017	.0019	.0018
24	.0079	.0228	0	.0620	.0746	.0651	.0776	.0315	.0560	.0691	.0385	.0616	.0597	.0621	.1088	.0509
25	.0057	.0218	0	.0559	.0607	.0565	.0770	.0387	.0551	.0718	.0437	.0570	.0590	.0721	.0631	.0702
26	.0042	.0110	0	.0757	.0887	.0462	.0526	.0265	.0413	.0687	.0327	.0449	.0445	.0383	.0420	.0429
27	.0094	.0204	0	.0662	.0834	.0784	.0721	.0680	.1045	.0863	.0743	.0856	.0673	.0692	.0703	.0590
28	.0126	.0269	0	.0873	.1180	.0958	.0906	.0551	.0816	.1235	.0679	.1134	.1325	.0961	.0983	.1126
29	.0148	.0377	0	.0993	.0816	.0545	.0917	.0313	.0553	.0740	.0381	.0712	.0727	.0652	.0739	.0625
30	.0451	.0360	0	.0382	.0511	.0385	.0400	.0229	.0335	.0527	.0282	.0472	.0517	.0396	.0429	.0446
31	1.0559	1.1351	1.0000	.1734	.2401	.1793	.2303	.1109	.1605	.2832	.1275	.1857	.2142	.1858	.1979	.1987
32	.0022	.0073	0	1.0159	.0209	.0170	.0189	.0102	.0148	.0233	.0120	.0200	.0220	.0174	.0233	.0324
33	.0018	.0065	0	.0310	1.1046	1.0166	1.0265	1.0105	1.0168	1.0228	.0116	.0211	.0215	.0163	.0167	.0182
34	.0245	.0605	0	.1411	.1345	.0903	.4264	.0461	.0874	.0930	1.0743	1.1220	1.0973	1.1730	1.2205	1.1171
35	.0066	.0241	0	.0471	.0758	.0509	.0632	.0311	.0482	.0671	.0383	.0671	.0724	.0586	.0691	.0616
36	.0092	.0220	0	.0802	.1099	.0901	.0846	.0517	.0749	.1158	.0620	.1062	.1276	.0911	.0915	.1078
37	.0096	.0266	0	.0913	.1254	.0743	.1190	.0513	.0800	.1200	.0633	.1007	.0944	.0814	.0983	.0830
38	.0913	.2188	0	.7972	1.0927	.8962	.8412	.5146	.7409	1.1519	.6171	1.0567	1.2692	.9064	.9090	1.0727
Total	**1.3074**	**1.6271**	**1.0000**	**2.3848**	**2.7272**	**2.3022**	**2.8103**	**1.7447**	**2.4115**	**2.6452**	**1.9719**	**2.4242**	**2.4121**	**2.3503**	**2.4989**	**2.3123**

	73.0107	73.0108	73.0109	73.0200	73.0301	73.0302	73.0303	74.0000	75.0001	75.0002	75.0003	76.0101	76.0102	76.0201	76.0202	76.0203
1	0.0166	0.0189	0.0185	0.0241	0.0282	0.0246	0.0234	0.0860	0.0153	0.0141	0.0196	0.0174	0.0167	0.0206	0.0235	0.0685
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0001
4	.0002	.0002	.0002	.0002	.0003	.0002	.0002	.0001	.0002	.0004	.0002	.0003	.0002	.0002	.0004	.0004
5	.0003	.0003	.0003	.0004	.0004	.0004	.0003	.0005	.0003	.0003	.0005	.0003	.0003	.0004	.0007	.0008
6	.0266	.0288	.0271	.0358	.0375	.0307	.0291	.0329	.0266	.0257	.0525	.0280	.0282	.0393	.0734	.0689
7	.0343	.0392	.0384	.0500	.0585	.0512	.0484	.1829	.0308	.0291	.0383	.0443	.0355	.0428	.0452	.0870
8	.0001	.0001	.0001	.0002	.0002	.0002	.0001	.0001	.0001	.0001	.0001	.0002	.0001	.0002	.0001	.0003
9	.0087	.0094	.0090	.0125	.0146	.0127	.0116	.0085	.0097	.0078	.0123	.0097	.0086	.0184	.0110	.0202
10	.0068	.0080	.0112	.0098	.0120	.0096	.0101	.0143	.0085	.0057	.0078	.0064	.0058	.0083	.0090	.0128
11	.0326	.0340	.0639	.0721	.0388	.0390	.0479	.0332	.0278	.0234	.0388	.0550	.0313	.0465	.0458	.0531
12	.0139	.0149	.0176	.0198	.0222	.0192	.0190	.0172	.0206	.0183	.0159	.0172	.0138	.0170	.0218	.0316
13	.0114	.0101	.0244	.0122	.0135	.0150	.0132	.0169	.0179	.0113	.0117	.0084	.0097	.0107	.0132	.0199
14	.0017	.0019	.0019	.0023	.0028	.0023	.0021	.0020	.0018	.0018	.0024	.0024	.0018	.0045	.0030	.0041
15	.0018	.0021	.0020	.0025	.0028	.0023	.0022	.0027	.0043	.0041	.0034	.0019	.0019	.0026	.0042	.0044
16	.0028	.0024	.0037	.0026	.0032	.0027	.0026	.0026	.0068	.0078	.0045	.0019	.0024	.0027	.0038	.0045
17	.0087	.0054	.0096	.0063	.0078	.0066	.0057	.0062	.0270	.0274	.0086	.0046	.0069	.0062	.0086	.0110
18	.0078	.0031	.0085	.0030	.0034	.0037	.0038	.0033	.0210	.0054	.0043	.0022	.0051	.0031	.0061	.0050
19	.0038	.0065	.0044	.0045	.0055	.0049	.0093	.0035	.0067	.0105	.0293	.0031	.0035	.0074	.0057	.0070
20	.0144	.0162	.0156	.0214	.0263	.0218	.0201	.0146	.0256	.0576	.0158	.0146	.0146	.0178	.0183	.0349
21	.0008	.0008	.0008	.0011	.0013	.0011	.0010	.0008	.0013	.0007	.0008	.0010	.0008	.0009	.0010	.0018
22	.0030	.0165	.0041	.0030	.0047	.0032	.0033	.0019	.0020	.0018	.0025	.0033	.0022	.0029	.0029	.0048
23	.0024	.0015	.0019	.0019	.0023	.0020	.0027	.0017	.0014	.0012	.0022	.0017	.0020	.0019	.0051	.0052
24	.0544	.0648	.0609	.0572	.0916	.0575	.0575	.0527	.0756	.0386	.0614	.0477	.0442	.0541	.0669	.1001
25	.0475	.0527	.0572	.0794	.0673	.0559	.0554	.0387	.0404	.0388	.0476	.0511	.0514	.0553	.0546	.0797
26	.0349	.0341	.0338	.0383	.0465	.0397	.0373	.0472	.0362	.0337	.0551	.0330	.0343	.0499	.0966	.0742
27	.0495	.0553	.0583	.0602	.0734	.0610	.0680	.0952	.0887	.0709	.0623	.0439	.0439	.0580	.0627	.1020
28	.0705	.0796	.0768	.1035	.1247	.1067	.0981	.0718	.0936	.1034	.0795	.0714	.0717	.0867	.0910	.1725
29	.0569	.0590	.0568	.0662	.0710	.0773	.0677	.0522	.1344	.0364	.0618	.0470	.0485	.0582	.0737	.1119
30	.0508	.0331	.0326	.0435	.0546	.0436	.0407	.0311	.0930	.0256	.0366	.0302	.0411	.0359	.0397	.0709
31	.1479	.1634	.1444	.2285	.2554	.2092	.2097	.1600	.1262	.1346	.2917	.1486	.1566	.1890	.2356	.3500
32	.0140	.0162	.0165	.0314	.0417	.0254	.0208	.0149	.0135	.0111	.0165	1.2181	1.1418	1.0646	1.0185	1.4303
33	.0152	.0140	.0132	.0198	.0235	.0197	.0202	.0146	.0191	.0293	.0205	.0121	.0133	.0169	.0501	.0329
34	1.2039	1.2753	1.1128	1.1048	1.1440	1.4094	1.4130	.0866	.1262	.0543	.2250	.0809	.1333	.3351	.2783	.1888
35	.0458	.0546	.0580	.0663	.0706	.0624	.0658	1.0422	.0495	.0348	.0628	.0432	.0428	.0561	.0677	.0998
36	.0666	.0752	.0721	.0973	.1163	.1019	.0935	.0681	.0563	.0578	.0700	.0675	.0681	.0820	.0847	.1632
37	.0637	.0704	.0729	.0963	.1213	.0892	.0801	.0613	1.1080	1.0520	1.0958	.0604	.0590	.0969	.0925	.1322
38	.6625	.7484	.7170	.9678	1.1556	1.0134	.9300	.6724	.5598	.6962	.5754	.6713	.6776	.8161	.8420	1.6237
Total	**2.1202**	**2.2680**	**2.1296**	**2.3785**	**2.5882**	**2.6124**	**2.5843**	**2.2686**	**2.3168**	**1.9756**	**2.4585**	**2.1787**	**2.1413**	**2.4933**	**2.6153**	**3.5548**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 1.1—Final-Demand Output Multipliers, Kansas City, MO-KS Economic Area—Continued

[Dollars]

	76.0204	76.0205	76.0206	77.0100	77.0200	77.0301	77.0302	77.0401	77.0402	77.0403	77.0501	77.0502	77.0503	77.0504	77.0600	77.0700
1	0.0349	0.0363	0.0426	0.0226	0.0326	0.0370	0.0203	0.0324	0.0275	0.0354	0.0202	0.0216	0.0252	0.0242	0.0217	0.0346
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
4	.0002	.0002	.0002	.0002	.0003	.0004	.0002	.0002	.0002	.0003	.0002	.0003	.0002	.0002	.0002	.0003
5	.0004	.0006	.0005	.0004	.0005	.0008	.0006	.0017	.0009	.0004	.0005	.0008	.0010	.0005	.0004	.0004
6	.0322	.0545	.0452	.0305	.0360	.0828	.0284	.1801	.1000	.0324	.0411	.0855	.1064	.0466	.0336	.0261
7	.0384	.0387	.0517	.0468	.0617	.0693	.0409	.0557	.0464	.0427	.0412	.0399	.0461	.0416	.0422	.0638
8	.0001	.0001	.0001	.0002	.0003	.0002	.0002	.0001	.0001	.0002	.0001	.0002	.0002	.0002	.0004	.0001
9	.0075	.0115	.0103	.0118	.0167	.0157	.0103	.0117	.0116	.0103	.0098	.0099	.0175	.0098	.0104	.0064
10	.0070	.0076	.0083	.0116	.0128	.0102	.0093	.0116	.0108	.0173	.0162	.0225	.0105	.0193	.0145	.0115
11	.0457	.0425	.0399	.0318	.0376	.0320	.0274	.0403	.0511	.1234	.3476	.1765	.0310	.1945	.0367	.0549
12	.0141	.0183	.0202	.0266	.0568	.0465	.0639	.0258	.0227	.0235	.0260	.0247	.0189	.0255	.0246	.0172
13	.0154	.0097	.0270	.0186	.0463	.0248	.0384	.0140	.0129	.0161	.0166	.0145	.0112	.0142	.0400	.0418
14	.0018	.0024	.0023	.0023	.0024	.0035	.0022	.0054	.0036	.0022	.0023	.0037	.0037	.0023	.0191	.0016
15	.0020	.0031	.0029	.0027	.0037	.0049	.0036	.0100	.0061	.0052	.0027	.0048	.0057	.0032	.0027	.0018
16	.0022	.0028	.0034	.0028	.0032	.0040	.0026	.0060	.0043	.0041	.0026	.0045	.0040	.0030	.0121	.0021
17	.0054	.0066	.0072	.0073	.0083	.0096	.0063	.0143	.0098	.0089	.0065	.0101	.0097	.0070	.0349	.0054
18	.0028	.0032	.0035	.0029	.0032	.0038	.0029	.0044	.0043	.0036	.0036	.0041	.0033	.0041	.0037	.0021
19	.0032	.0044	.0046	.0042	.0052	.0065	.0043	.0088	.0072	.0094	.0045	.0056	.0054	.0042	.0045	.0089
20	.0130	.0161	.0168	.0202	.0205	.0220	.0173	.0203	.0203	.0191	.0171	.0162	.0199	.0168	.0179	.0112
21	.0007	.0018	.0033	.0011	.0011	.0011	.0009	.0011	.0012	.0010	.0009	.0009	.0010	.0009	.0009	.0006
22	.0021	.0033	.0026	.0104	.0195	.0080	.0117	.0034	.0047	.0035	.0033	.0034	.0033	.0029	.0026	.0031
23	.0032	.0029	.0041	.0017	.0018	.0018	.0016	.0025	.0025	.0028	.0033	.0031	.0034	.0019	.0054	.0030
24	.0517	.0496	.0548	.0603	.0551	.0591	.0595	.0585	.0795	.0709	.1863	.1304	.0554	.1108	.0583	.0909
25	.0404	.0487	.0485	.0521	.0443	.0471	.0450	.0467	.0525	.0710	.0472	.0511	.0475	.0484	.0440	.0476
26	.0391	.0743	.0390	.0392	.0525	.0685	.0361	.0490	.0452	.0442	.0599	.0614	.0416	.0487	.0442	.0427
27	.0495	.0514	.0595	.0652	.0850	.0802	.0783	.0743	.0684	.0751	.0829	.0712	.0636	.0763	.0789	.0570
28	.0644	.0802	.0834	.0993	.1006	.1093	.0847	.1054	.0996	.0892	.0839	.0795	.1003	.0814	.0875	.0543
29	.0718	.0520	.0563	.0618	.0561	.0637	.0539	.0599	.0638	.0897	.0672	.0528	.0581	.0556	.0696	.0453
30	.0283	.0334	.0355	.0493	.0443	.0460	.0358	.0474	.0481	.0495	.0378	.0399	.0585	.0431	.0418	.0235
31	.1790	.1714	.2209	.1943	.2526	.2150	.1836	.2611	.3208	.2087	.1617	.2625	.3359	.1960	.2003	.1384
32	1.2343	1.0149	1.0194	.0181	.0174	.0184	.0164	.0193	.0187	.0317	.0174	.0375	.0257	.0301	.0190	.0154
33	.0178	.0204	.0242	.0164	.0214	.0224	.0145	.0179	.0188	.0162	.0191	.0167	.0174	.0179	.0182	.0115
34	.1375	.1496	.1411	.1112	.1043	.1052	.0997	.1301	.1172	.1838	.1211	.1544	.0877	.1293	.1294	.0845
35	.0444	.0518	.0539	.0538	.0622	.0645	.0481	.0640	.0577	.0558	.0562	.0648	.0546	.0539	.0506	.0351
36	.0596	.0747	.0779	1.1445	1.0952	1.1012	1.0801	.0934	.0823	.0781	.0720	.0916	.0741	.0916	.0832	.0510
37	.0670	.0767	.0752	.0858	.0825	.0972	.0711	1.0888	1.0883	1.0886	1.0971	1.0833	1.0840	1.0858	1.0688	1.0473
38	.5929	.7431	.7741	.9336	.9469	1.0057	.7972	.9286	.9078	.8179	.7770	.7154	.9109	.7365	.8275	.5063
Total	**2.3169**	**2.2157**	**2.2867**	**2.3080**	**2.4442**	**2.4826**	**2.2000**	**2.5656**	**2.5182**	**2.5185**	**2.6824**	**2.6301**	**2.4497**	**2.4743**	**2.3226**	**2.0414**

	77.0800	77.0900	78.0100	78.0200	78.0500	79.0000	91.0000
1	0.1049	0.0387	0.0253	0	0.0466	0.0185	0.0330
2	0	0	0	0	0	0	0
3	.0001	.0001	.0001	0	0	.0005	.0001
4	.0005	.0005	.0002	0	.0002	.0009	.0003
5	.0005	.0008	.0004	0	.0002	.0025	.0004
6	.0383	.0757	.0325	0	.0151	.2577	.0313
7	.1778	.0718	.0524	0	.0794	.0321	.0704
8	.0002	.0002	.0002	0	.0001	.0001	.0002
9	.0176	.0108	.0138	0	.0065	.0083	.0177
10	.0109	.0121	.0081	0	.0061	.0066	.0090
11	.0294	.1285	.0333	0	.0285	.0207	.0282
12	.0311	.0247	.0197	0	.0127	.0276	.0240
13	.0192	.0229	.0115	0	.0121	.0116	.0136
14	.0022	.0031	.0023	0	.0012	.0066	.0028
15	.0025	.0043	.0024	0	.0012	.0126	.0025
16	.0026	.0035	.0028	0	.0039	.0082	.0027
17	.0063	.0083	.0065	0	.0180	.0174	.0068
18	.0031	.0034	.0032	0	.0043	.0116	.0029
19	.0041	.0053	.0048	0	.0043	.0110	.0050
20	.0170	.0187	.0268	0	.0116	.0150	.0304
21	.0009	.0010	.0012	0	.0014	.0011	.0016
22	.0025	.0031	.0029	0	.0017	.0020	.0036
23	.0034	.0040	.0018	0	.0009	.0013	.0021
24	.0608	.0784	1.1456	0	.0369	.0559	.0556
25	.0473	.0871	.0426	0	.0358	.0324	.0491
26	.0601	.0599	.0449	1.0000	.0367	.1198	.0471
27	.0918	.0712	.0623	0	.0527	.0740	.0721
28	.0837	.0929	.1128	0	.0551	.0765	.1490
29	.0508	.1053	.0580	0	.0372	.0474	.0738
30	.0368	.0392	.0457	0	.0229	.0376	.0570
31	.2169	.1896	.1856	0	.0875	.1181	.2246
32	.0167	.0274	.0183	0	.0135	.0125	.0236
33	.0162	.0173	.0179	0	.0092	.0114	.0229
34	.1254	.1514	.0746	0	.0468	.1232	.0740
35	.0502	.0597	.0591	0	.0338	.0380	.0754
36	.0796	.0867	.1060	0	.0527	.0633	.1440
37	1.0675	1.0738	.0968	0	1.0721	1.0677	.1001
38	.7857	.8613	1.0544	0	.5224	.6299	1.4331
Total	**2.4787**	**2.5814**	**2.3223**	**1.0000**	**1.8490**	**2.3515**	**1.4569**

NOTE.—The column industries are identified in appendix B, and the row industries are identified in appendix C.

Each entry measures the change in output in each row industry that results from a $1 change in output delivered to final demand by the column industry. Each column total is the sum of the entries in rows 1-37; these entries include earnings paid to households employed in industries 1-37. Each column total excludes the entry in row 38; this entry is the sum of earnings paid to households. Column entries may not sum to totals due to rounding.

Table 2.4.—Total Multipliers for Output, Earnings, and Employment by Industry Aggregation
Jackson County, MO

	Final-demand multiplier			Direct-effect multiplier	
	Output [1] (Dollars)	Earnings [2] (Dollars)	Employment [3] (Jobs)	Earnings [4] (Dollars)	Employment [5] (Jobs)
	(1)	(2)	(3)	(4)	(5)
Farm and agricultural services, forestry, and fishing:					
Farm products and agricultural, forestry, and fishing services	1.7944	0.5693	57.6	1.4820	1.200
Forestry and fishing products	1.4646	.2058	10.5	2.6452	3.233
Mining:					
Coal mining	1.0000	0	0	0	0
Oil and gas extraction	1.4591	.1584	6.7	1.7424	2.109
Metal mining and nonmetallic minerals, except fuels	1.5680	.3337	12.6	1.6527	2.002
Construction:					
Construction	1.8723	.4528	21.4	1.9280	1.988
Manufacturing:					
Food and kindred products and tobacco products	1.5222	.2060	8.5	2.3723	3.008
Textile mill products	1.4834	.2795	16.6	1.6702	1.472
Apparel and other textile products	1.4528	.2776	16.5	1.6071	1.459
Paper and allied products	1.4647	.2763	10.7	1.6510	1.904
Printing and publishing	1.6296	.3174	12.6	1.8263	2.123
Chemicals and allied products and petroleum and coal products	1.6214	.2812	9.5	2.0873	3.214
Rubber and miscellaneous plastics products and leather and leather products	1.5946	.3112	14.5	1.7915	1.784
Lumber and wood products and furniture and fixtures	1.6863	.3702	17.6	1.7619	1.715
Stone, clay, and glass products	1.7749	.3348	14.0	2.0747	2.244
Primary metal industries	1.7600	.3125	11.7	2.1557	2.661
Fabricated metal products	1.7173	.3722	14.1	1.7836	2.124
Industrial machinery and equipment	1.7207	.3916	15.3	1.7314	1.970
Electronic and other electric equipment	1.6214	.3334	13.9	1.7426	1.893
Motor vehicles and equipment	1.6967	.3160	10.7	2.0014	3.012
Other transportation equipment	1.5913	.3769	12.0	1.5801	2.203
Instruments and related products	1.6120	.3556	12.8	1.6637	2.090
Miscellaneous manufacturing industries	1.7072	.3744	20.2	1.7844	1.626
Transportation and public utilities: [*]					
Transportation	1.8649	.5455	22.3	1.6545	1.883
Communications	1.7956	.3262	10.8	2.0660	3.209
Electric, gas, and sanitary services	1.5292	.2176	7.5	2.0277	2.940
Wholesale and retail trade:					
Wholesale trade	1.7245	.4446	17.3	1.6393	2.024
Retail trade	1.8285	.5281	33.8	1.5506	1.395
Finance, insurance, and real estate:					
Depository and nondepository institutions and security and commodity brokers	2.0713	.5620	23.1	1.9347	2.218
Insurance	2.2921	.5846	23.2	2.2017	2.601
Real estate	1.3669	.0945	6.1	5.7340	2.771
Services:					
Hotels and other lodging places, amusement and recreation services, and motion pictures	2.0903	.5817	35.3	1.8397	1.668
Personal services	2.0362	.5768	41.5	1.7482	1.432
Business services	1.9597	.6355	30.3	1.6021	1.662
Eating and drinking places	1.7608	.4157	35.9	1.6371	1.277
Health services	1.8793	.6052	25.1	1.4845	1.648
Miscellaneous services	1.9062	.4247	24.3	1.9406	1.707
Private households	1.0997	.2587	13.7	....	....

[*] Includes Federal Government enterprises.

1. Each entry in column 1 measures the total dollar change in output in all row industries that results from a $1 change in output delivered to final demand by the industry corresponding to the entry.

2. Each entry in column 2 measures the total dollar change in earnings of households employed by all row industries that results from a $1 change in output delivered to final demand by the industry corresponding to the entry.

3. Each entry in column 3 measures the total change in number of jobs in all row industries

that results from a $1 million change in output delivered to final demand by the industry corresponding to the entry. Because the employment multipliers are based on 1992 data, the output delivered to final demand should be in 1992 dollars.

4. Each entry in column 4 measures the total dollar change in earnings of households employed by all row industries that results from a $1 change in earnings paid directly to households employed by the industry corresponding to the entry.

5. Each entry in column 5 measures the total change in number of jobs in all row industries that results from a change of one job in the industry corresponding to the entry.

Table 2.4.—Total Multipliers for Output, Earnings, and Employment by Industry Aggregation—Continued
Kansas City, MO-KS Metropolitan Area

	Final-demand multiplier			Direct-effect multiplier	
	Output [1] (Dollars)	Earnings [2] (Dollars)	Employment [3] (Jobs)	Earnings [4] (Dollars)	Employment [5] (Jobs)
	(1)	(2)	(3)	(4)	(5)
Farm and agricultural services, forestry, and fishing:					
Farm products and agricultural, forestry, and fishing services	2.1363	0.6123	42.4	2.0926	1.680
Forestry and fishing products	1.7180	.3255	20.4	3.2339	2.393
Mining:					
Coal mining	1.0000	0	0	0	0
Oil and gas extraction	1.5642	.2336	15.3	1.9865	1.660
Metal mining and nonmetallic minerals, except fuels	1.8199	.4938	20.2	1.9398	2.384
Construction:					
Construction	2.2521	.6887	33.3	2.2660	2.350
Manufacturing:					
Food and kindred products and tobacco products	2.0154	.3950	19.0	3.5390	4.887
Textile mill products	1.6974	.3892	22.8	2.0687	1.726
Apparel and other textile products	1.6512	.4112	23.9	1.8517	1.681
Paper and allied products	1.7074	.4182	17.1	1.9650	2.358
Printing and publishing	1.8940	.4986	21.3	2.0931	2.446
Chemicals and allied products and petroleum and coal products	1.8357	.4087	15.1	2.4798	4.037
Rubber and miscellaneous plastics products and leather and leather products	1.9662	.4913	22.3	2.2264	2.306
Lumber and wood products and furniture and fixtures	1.9772	.5556	27.3	2.0602	2.015
Stone, clay, and glass products	2.0127	.4994	21.3	2.3445	2.671
Primary metal industries	2.0070	.4744	19.2	2.5448	3.233
Fabricated metal products	2.0087	.5551	22.5	2.0880	2.552
Industrial machinery and equipment	1.9927	.5759	23.7	2.0130	2.391
Electronic and other electric equipment	1.9033	.5209	22.5	2.0141	2.272
Motor vehicles and equipment	1.7921	.3443	13.0	2.8307	4.533
Other transportation equipment	1.9214	.5280	18.7	2.0030	2.992
Instruments and related products	1.8665	.5374	20.9	1.8972	2.446
Miscellaneous manufacturing industries	1.9511	.5296	28.4	2.1032	1.908
Transportation and public utilities: *					
Transportation	2.1793	.7167	30.4	2.0106	2.434
Communications	1.9948	.4760	17.2	2.3372	3.757
Electric, gas, and sanitary services	1.6890	.3371	12.7	2.3559	3.668
Wholesale and retail trade:					
Wholesale trade	2.0276	.6605	27.5	1.8827	2.381
Retail trade	2.1561	.7749	49.3	1.7591	1.545
Finance, insurance, and real estate:					
Depository and nondepository institutions and security and commodity brokers	2.4879	.8293	36.8	2.2942	2.648
Insurance	2.6027	.8503	35.7	2.4179	2.941
Real estate	1.4374	.1395	8.8	6.8454	3.089
Services:					
Hotels and other lodging places, amusement and recreation services, and motion pictures	2.3668	.7959	50.1	2.0633	1.768
Personal services	2.3700	.8355	59.3	1.9482	1.547
Business services	2.3783	.9184	45.2	1.8730	1.946
Eating and drinking places	2.0982	.6267	50.7	1.9078	1.419
Health services	2.2912	.9003	38.9	1.7035	1.955
Miscellaneous services	2.2065	.6257	36.3	2.2868	1.945
Private households	1.3747	.4063	21.7	....	....

* Includes Federal Government enterprises.

1. Each entry in column 1 measures the total dollar change in output in all row industries that results from a $1 change in output delivered to final demand by the industry corresponding to the entry.

2. Each entry in column 2 measures the total dollar change in earnings of households employed by all row industries that results from a $1 change in output delivered to final demand by the industry corresponding to the entry.

3. Each entry in column 3 measures the total change in number of jobs in all row industries that results from a $1 million change in output delivered to final demand by the industry corresponding to the entry. Because the employment multipliers are based on 1992 data, the output delivered to final demand should be in 1992 dollars.

4. Each entry in column 4 measures the total dollar change in earnings of households employed by all row industries that results from a $1 change in earnings paid directly to households employed by the industry corresponding to the entry.

5. Each entry in column 5 measures the total change in number of jobs in all row industries that results from a change of one job in the industry corresponding to the entry.

Table 2.4.—Total Multipliers for Output, Earnings, and Employment by Industry Aggregation—Continued
Kansas City, MO-KS Economic Area

	Final-demand multiplier			Direct-effect multiplier	
	Output [1] (Dollars)	Earnings [2] (Dollars)	Employment [3] (Jobs)	Earnings [4] (Dollars)	Employment [5] (Jobs)
	(1)	(2)	(3)	(4)	(5)
Farm and agricultural services, forestry, and fishing:					
Farm products and agricultural, forestry, and fishing services	2.6533	0.6479	43.1	2.9133	2.246
Forestry and fishing products	1.9748	.3783	23.5	3.7088	2.714
Mining:					
Coal mining	1.8218	.5080	15.4	1.8689	4.002
Oil and gas extraction	1.5807	.2391	15.6	2.0064	1.671
Metal mining and nonmetallic minerals, except fuels	1.8689	.5117	21.0	1.9655	2.422
Construction:					
Construction	2.3270	.7122	34.4	2.3114	2.397
Manufacturing:					
Food and kindred products and tobacco products	2.6498	.5265	27.4	4.9032	7.317
Textile mill products	1.6891	.3851	22.7	2.0726	1.739
Apparel and other textile products	1.7359	.4302	25.0	1.9530	1.767
Paper and allied products	1.7251	.4215	17.3	1.9943	2.403
Printing and publishing	1.9207	.5086	21.8	2.1092	2.470
Chemicals and allied products and petroleum and coal products	1.8983	.4244	15.8	2.5636	4.204
Rubber and miscellaneous plastics products and leather and leather products	2.0466	.5081	23.2	2.3103	2.413
Lumber and wood products and furniture and fixtures	2.0294	.5705	28.0	2.1081	2.063
Stone, clay, and glass products	2.0524	.5187	22.2	2.3529	2.687
Primary metal industries	2.0308	.4913	19.9	2.5000	3.180
Fabricated metal products	2.0989	.5762	23.4	2.1798	2.674
Industrial machinery and equipment	2.0785	.5955	24.6	2.0959	2.496
Electronic and other electric equipment	1.9596	.5183	22.4	2.1379	2.418
Motor vehicles and equipment	1.9636	.3907	14.8	3.0353	4.888
Other transportation equipment	1.9878	.5345	19.2	2.1003	3.178
Instruments and related products	1.9246	.5534	21.7	1.9423	2.518
Miscellaneous manufacturing industries	2.0076	.5450	29.1	2.1500	1.946
Transportation and public utilities: [*]					
Transportation	2.2263	.7393	31.5	2.0200	2.451
Communications	2.0209	.4866	17.6	2.3470	3.784
Electric, gas, and sanitary services	1.7034	.3414	12.9	2.3892	3.742
Wholesale and retail trade:					
Wholesale trade	2.0623	.6737	28.1	1.8949	2.401
Retail trade	2.1917	.7888	50.2	1.7669	1.552
Finance, insurance, and real estate:					
Depository and nondepository institutions and security and commodity brokers	2.4733	.8177	36.3	2.2753	2.629
Insurance	2.6292	.8620	36.3	2.4143	2.942
Real estate	1.4322	.1371	8.6	7.0028	3.135
Services:					
Hotels and other lodging places, amusement and recreation services, and motion pictures	2.3923	.8017	50.4	2.0596	1.761
Personal services	2.4157	.8541	60.5	1.9549	1.551
Business services	2.4058	.9273	45.6	1.8729	1.948
Eating and drinking places	2.2618	.6659	53.2	2.0005	1.468
Health services	2.3624	.9261	40.1	1.7256	1.986
Miscellaneous services	2.2759	.6561	38.1	2.2691	1.933
Private households	1.4576	.4272	22.9	....	....

[*] Includes Federal Government enterprises.

1. Each entry in column 1 measures the total dollar change in output in all row industries that results from a $1 change in output delivered to final demand by the industry corresponding to the entry.

2. Each entry in column 2 measures the total dollar change in earnings of households employed by all row industries that results from a $1 change in output delivered to final demand by the industry corresponding to the entry.

3. Each entry in column 3 measures the total change in number of jobs in all row industries that results from a $1 million change in output delivered to final demand by the industry corresponding to the entry. Because the employment multipliers are based on 1992 data, the output delivered to final demand should be in 1992 dollars.

4. Each entry in column 4 measures the total dollar change in earnings of households employed by all row industries that results from a $1 change in earnings paid directly to households employed by the industry corresponding to the entry.

5. Each entry in column 5 measures the total change in number of jobs in all row industries that results from a change of one job in the industry corresponding to the entry.

Appendix E:
BEA Economic Areas

BEA Economic Areas and Associated Metropolitan Areas

Code	Area name	Code	Area name
001	Bangor, ME Bangor, ME (NECMA)		Fayetteville, NC
002	Portland, ME Lewiston–Auburn, ME (NECMA) Portland, ME (NECMA)	023	Charlotte–Gastonia–Rock Hill, NC–SC Charlotte–Gastonia–Rock Hill, NC–SC
003	Boston–Worcester–Lawrence–Lowell–Brockton, MA–NH–RI–VT Barnstable–Yarmouth, MA (NECMA) Boston–Worcester–Lawrence–Lowell–Brockton, MA–NH (NECMA) Providence–Warwick–Pawtucket, RI (NECMA)	024	Columbia, SC Columbia, SC Sumter, SC
004	Burlington, VT–NY Burlington, VT (NECMA)	025	Wilmington, NC–SC Florence, SC Myrtle Beach, SC Wilmington, NC
005	Albany–Schenectady–Troy, NY Albany–Schenectady–Troy, NY Glens Falls, NY	026	Charleston–North Charleston, SC Charleston–North Charleston, SC
006	Syracuse, NY–PA Binghamton, NY Syracuse, NY Utica–Rome, NY	027	Augusta–Aiken, GA–SC Augusta–Aiken, GA–SC
007	Rochester, NY–PA Elmira, NY Rochester, NY	028	Savannah, GA–SC Savannah, GA
008	Buffalo–Niagara Falls, NY–PA Buffalo–Niagara Falls, NY Jamestown, NY	029	Jacksonville, FL–GA Gainesville, FL Jacksonville, FL
009	State College, PA Altoona, PA Johnstown, PA State College, PA	030	Orlando, FL Daytona Beach, FL Lakeland–Winter Haven, FL Melbourne–Titusville–Palm Bay, FL Ocala, FL Orlando, FL
010	New York–Northern New Jersey–Long Island, NY–NJ–CT–PA–MA–VT Allentown–Bethlehem–Easton, PA Bergen–Passaic, NJ (PMSA) Dutchess County, NY (PMSA) Hartford, CT (NECMA) Jersey City, NJ (PMSA) Middlesex–Somerset–Hunterdon, NJ (PMSA) Monmouth–Ocean, NJ (PMSA) Nassau–Suffolk, NY (PMSA) New Haven–Bridgeport–Stamford–Danbury–Waterbury, CT (PMSA) New London–Norwich, CT (NECMA) New York, NY (PMSA) Newark, NJ (PMSA) Newburgh, NY–PA (PMSA) Pittsfield, MA (NECMA) Scranton–Wilkes-Barre–Hazleton, PA Springfield, MA (NECMA) Trenton, NJ (PMSA) Williamsport, PA	031	Miami–Fort Lauderdale, FL Fort Lauderdale, FL (PMSA) Fort Pierce–Port St. Lucie, FL Miami, FL (PMSA) West Palm Beach–Boca Raton, FL
		032	Fort Myers–Cape Coral, FL Fort Myers–Cape Coral, FL Naples, FL
		033	Sarasota–Bradenton, FL Punta Gorda, FL Sarasota–Bradenton, FL
		034	Tampa–St. Petersburg–Clearwater, FL Tampa–St. Petersburg–Clearwater, FL
		035	Tallahassee, FL–GA Panama City, FL Tallahassee, FL
		036	Dothan, AL–FL–GA Dothan, AL
		037	Albany, GA Albany, GA
		038	Macon, GA Macon, GA
011	Harrisburg–Lebanon–Carlisle, PA Harrisburg–Lebanon–Carlisle, PA York, PA	039	Columbus, GA–AL Columbus, GA–AL
012	Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD Atlantic–Cape May, NJ (PMSA) Dover, DE Lancaster, PA Philadelphia, PA–NJ (PMSA) Reading, PA Vineland–Millville–Bridgeton, NJ (PMSA) Wilmington–Newark, DE–MD (PMSA)	040	Atlanta, GA–AL–NC Athens, GA Atlanta, GA
		041	Greenville–Spartanburg–Anderson, SC–NC Greenville–Spartanburg–Anderson, SC
		042	Asheville, NC Asheville, NC
013	Washington–Baltimore, DC–MD–VA–WV–PA Baltimore, MD (PMSA) Cumberland, MD–WV Hagerstown, MD (PMSA) Washington, DC–MD–VA–WV (PMSA)	043	Chattanooga, TN–GA Chattanooga, TN–GA
		044	Knoxville, TN Knoxville, TN
014	Salisbury, MD–DE–VA	045	Johnson City–Kingsport–Bristol, TN–VA Johnson City–Kingsport–Bristol, TN–VA
015	Richmond–Petersburg, VA Charlottesville, VA Richmond–Petersburg, VA	046	Hickory–Morganton, NC–TN Hickory–Morganton–Lenoir, NC
016	Staunton, VA–WV	047	Lexington, KY–TN–VA–WV Lexington, KY
017	Roanoke, VA–NC–WV Lynchburg, VA Roanoke, VA	048	Charleston, WV–KY–OH Charleston, WV Huntington–Ashland, WV–KY–OH Parkersburg–Marietta, WV–OH
018	Greensboro–Winston-Salem–High Point, NC–VA Danville, VA Greensboro–Winston-Salem–High Point, NC	049	Cincinnati–Hamilton, OH–KY–IN Cincinnati, OH–KY–IN (PMSA) Hamilton–Middletown, OH (PMSA)
019	Raleigh–Durham–Chapel Hill, NC Raleigh–Durham–Chapel Hill, NC Rocky Mount, NC	050	Dayton–Springfield, OH Dayton–Springfield, OH
020	Norfolk–Virginia Beach–Newport News, VA–NC Norfolk–Virginia Beach–Newport News, VA–NC	051	Columbus, OH Columbus, OH
021	Greenville, NC Goldsboro, NC Greenville, NC Jacksonville, NC	052	Wheeling, WV–OH Steubenville–Weirton, OH–WV Wheeling, WV–OH
022	Fayetteville, NC		

See note at end of table.

BEA Economic Areas and Associated Metropolitan Areas

Code	Area name	Code	Area name
001	Bangor, ME Bangor, ME (NECMA)		Fayetteville, NC
002	Portland, ME Lewiston–Auburn, ME (NECMA) Portland, ME (NECMA)	023	Charlotte–Gastonia–Rock Hill, NC–SC Charlotte–Gastonia–Rock Hill, NC–SC
003	Boston–Worcester–Lawrence–Lowell–Brockton, MA–NH–RI–VT Barnstable–Yarmouth, MA (NECMA) Boston–Worcester–Lawrence–Lowell–Brockton, MA–NH (NECMA) Providence–Warwick–Pawtucket, RI (NECMA)	024	Columbia, SC Columbia, SC Sumter, SC
004	Burlington, VT–NY Burlington, VT (NECMA)	025	Wilmington, NC–SC Florence, SC Myrtle Beach, SC Wilmington, NC
005	Albany–Schenectady–Troy, NY Albany–Schenectady–Troy, NY Glens Falls, NY	026	Charleston–North Charleston, SC Charleston–North Charleston, SC
006	Syracuse, NY–PA Binghamton, NY Syracuse, NY Utica–Rome, NY	027	Augusta–Aiken, GA–SC Augusta–Aiken, GA–SC
007	Rochester, NY–PA Elmira, NY Rochester, NY	028	Savannah, GA–SC Savannah, GA
008	Buffalo–Niagara Falls, NY–PA Buffalo–Niagara Falls, NY Jamestown, NY	029	Jacksonville, FL–GA Gainesville, FL Jacksonville, FL
009	State College, PA Altoona, PA Johnstown, PA State College, PA	030	Orlando, FL Daytona Beach, FL Lakeland–Winter Haven, FL Melbourne–Titusville–Palm Bay, FL Ocala, FL Orlando, FL
010	New York–Northern New Jersey–Long Island, NY–NJ–CT–PA–MA–VT Allentown–Bethlehem–Easton, PA Bergen–Passaic, NJ (PMSA) Dutchess County, NY (PMSA) Hartford, CT (NECMA) Jersey City, NJ (PMSA) Middlesex–Somerset–Hunterdon, NJ (PMSA) Monmouth–Ocean, NJ (PMSA) Nassau–Suffolk, NY (PMSA) New Haven–Bridgeport–Stamford–Danbury–Waterbury, CT (PMSA) New London–Norwich, CT (NECMA) New York, NY (PMSA) Newark, NJ (PMSA) Newburgh, NY–PA (PMSA) Pittsfield, MA (NECMA) Scranton–Wilkes-Barre–Hazleton, PA Springfield, MA (NECMA) Trenton, NJ (PMSA) Williamsport, PA	031	Miami–Fort Lauderdale, FL Fort Lauderdale, FL (PMSA) Fort Pierce–Port St. Lucie, FL Miami, FL (PMSA) West Palm Beach–Boca Raton, FL
		032	Fort Myers–Cape Coral, FL Fort Myers–Cape Coral, FL Naples, FL
		033	Sarasota–Bradenton, FL Punta Gorda, FL Sarasota–Bradenton, FL
		034	Tampa–St. Petersburg–Clearwater, FL Tampa–St. Petersburg–Clearwater, FL
		035	Tallahassee, FL–GA Panama City, FL Tallahassee, FL
011	Harrisburg–Lebanon–Carlisle, PA Harrisburg–Lebanon–Carlisle, PA York, PA	036	Dothan, AL–FL–GA Dothan, AL
012	Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD Atlantic–Cape May, NJ (PMSA) Dover, DE Lancaster, PA Philadelphia, PA–NJ (PMSA) Reading, PA Vineland–Millville–Bridgeton, NJ (PMSA) Wilmington–Newark, DE–MD (PMSA)	037	Albany, GA Albany, GA
		038	Macon, GA Macon, GA
		039	Columbus, GA–AL Columbus, GA–AL
013	Washington–Baltimore, DC–MD–VA–WV–PA Baltimore, MD (PMSA) Cumberland, MD–WV Hagerstown, MD (PMSA) Washington, DC–MD–VA–WV (PMSA)	040	Atlanta, GA–AL–NC Athens, GA Atlanta, GA
		041	Greenville–Spartanburg–Anderson, SC–NC Greenville–Spartanburg–Anderson, SC
014	Salisbury, MD–DE–VA	042	Asheville, NC Asheville, NC
015	Richmond–Petersburg, VA Charlottesville, VA Richmond–Petersburg, VA	043	Chattanooga, TN–GA Chattanooga, TN–GA
016	Staunton, VA–WV	044	Knoxville, TN Knoxville, TN
017	Roanoke, VA–NC–WV Lynchburg, VA Roanoke, VA	045	Johnson City–Kingsport–Bristol, TN–VA Johnson City–Kingsport–Bristol, TN–VA
018	Greensboro–Winston-Salem–High Point, NC–VA Danville, VA Greensboro–Winston-Salem–High Point, NC	046	Hickory–Morganton, NC–TN Hickory–Morganton–Lenoir, NC
019	Raleigh–Durham–Chapel Hill, NC Raleigh–Durham–Chapel Hill, NC Rocky Mount, NC	047	Lexington, KY–TN–VA–WV Lexington, KY
020	Norfolk–Virginia Beach–Newport News, VA–NC Norfolk–Virginia Beach–Newport News, VA–NC	048	Charleston, WV–KY–OH Charleston, WV Huntington–Ashland, WV–KY–OH Parkersburg–Marietta, WV–OH
021	Greenville, NC Goldsboro, NC Greenville, NC Jacksonville, NC	049	Cincinnati–Hamilton, OH–KY–IN Cincinnati, OH–KY–IN (PMSA) Hamilton–Middletown, OH (PMSA)
		050	Dayton–Springfield, OH Dayton–Springfield, OH
		051	Columbus, OH Columbus, OH
022	Fayetteville, NC	052	Wheeling, WV–OH Steubenville–Weirton, OH–WV Wheeling, WV–OH

See note at end of table.

BEA Economic Areas and Associated Metropolitan Areas—Continued

Code	Area name	Code	Area name
053	Pittsburgh, PA–WV Pittsburgh, PA		Tuscaloosa, AL
054	Erie, PA Erie, PA	079	Montgomery, AL Montgomery, AL
055	Cleveland–Akron, OH–PA Akron, OH (PMSA) Canton–Massillon, OH Cleveland–Lorain–Elyria, OH (PMSA) Mansfield, OH Sharon, PA Youngstown–Warren, OH	080	Mobile, AL Mobile, AL
		081	Pensacola, FL Fort Walton Beach, FL Pensacola, FL
		082	Biloxi–Gulfport–Pascagoula, MS Biloxi–Gulfport–Pascagoula, MS
056	Toledo, OH Lima, OH Toledo, OH	083	New Orleans, LA–MS Houma, LA New Orleans, LA
057	Detroit–Ann Arbor–Flint, MI Ann Arbor, MI (PMSA) Detroit, MI (PMSA) Flint, MI (PMSA) Jackson, MI Lansing–East Lansing, MI Saginaw–Bay City–Midland, MI	084	Baton Rouge, LA–MS Baton Rouge, LA
		085	Lafayette, LA Lafayette, LA
		086	Lake Charles, LA Alexandria, LA Lake Charles, LA
058	Northern Michigan, MI	087	Beaumont–Port Arthur, TX Beaumont–Port Arthur, TX
059	Green Bay, WI–MI Green Bay, WI	088	Shreveport–Bossier City, LA–AR Shreveport–Bossier City, LA
060	Appleton–Oshkosh–Neenah, WI Appleton–Oshkosh–Neenah, WI	089	Monroe, LA Monroe, LA
061	Traverse City, MI	090	Little Rock–North Little Rock, AR Little Rock–North Little Rock, AR Pine Bluff, AR
062	Grand Rapids–Muskegon–Holland, MI Grand Rapids–Muskegon–Holland, MI Kalamazoo–Battle Creek, MI	091	Fort Smith, AR–OK Fort Smith, AR–OK
063	Milwaukee–Racine, WI Milwaukee–Waukesha, WI (PMSA) Racine, WI (PMSA) Sheboygan, WI	092	Fayetteville–Springdale–Rogers, AR–MO–OK Fayetteville–Springdale–Rogers, AR
		093	Joplin, MO–KS–OK Joplin, MO
064	Chicago–Gary–Kenosha, IL–IN–WI Bloomington–Normal, IL Chicago, IL (PMSA) Gary, IN (PMSA) Janesville–Beloit, WI Kankakee, IL (PMSA) Kenosha, WI (PMSA) Rockford, IL	094	Springfield, MO Springfield, MO
		095	Jonesboro, AR–MO Jonesboro, AR
		096	St. Louis, MO–IL St. Louis, MO–IL
		097	Springfield, IL–MO Springfield, IL
065	Elkhart–Goshen, IN–MI Benton Harbor, MI Elkhart–Goshen, IN South Bend, IN	098	Columbia, MO Columbia, MO
066	Fort Wayne, IN Fort Wayne, IN	099	Kansas City, MO–KS Kansas City, MO–KS Lawrence, KS St. Joseph, MO
067	Indianapolis, IN–IL Bloomington, IN Indianapolis, IN Kokomo, IN Lafayette, IN Muncie, IN Terre Haute, IN	100	Des Moines, IA–IL–MO Des Moines, IA Waterloo–Cedar Falls, IA
		101	Peoria–Pekin, IL Peoria–Pekin, IL
068	Champaign–Urbana, IL Champaign–Urbana, IL Decatur, IL	102	Davenport–Moline–Rock Island, IA–IL Davenport–Moline–Rock Island, IA–IL
069	Evansville–Henderson, IN–KY–IL Evansville–Henderson, IN–KY Owensboro, KY	103	Cedar Rapids, IA Cedar Rapids, IA Iowa City, IA
070	Louisville, KY–IN Louisville, KY–IN	104	Madison, WI–IL–IA Dubuque, IA Madison, WI
071	Nashville, TN–KY Clarksville–Hopkinsville, TN–KY Nashville, TN	105	La Crosse, WI–MN La Crosse, WI–MN
072	Paducah, KY–IL	106	Rochester, MN–IA–WI Rochester, MN
073	Memphis, TN–AR–MS–KY Jackson, TN Memphis, TN–AR–MS	107	Minneapolis–St. Paul, MN–WI–IA Eau Claire, WI Minneapolis–St. Paul, MN–WI St. Cloud, MN
074	Huntsville, AL–TN Decatur, AL Florence, AL Gadsden, AL Huntsville, AL	108	Wausau, WI Wausau, WI
		109	Duluth–Superior, MN–WI Duluth–Superior, MN–WI
075	Tupelo, MS–AL–TN	110	Grand Forks, ND–MN Grand Forks, ND–MN
076	Greenville, MS		
077	Jackson, MS–AL–LA Hattiesburg, MS Jackson, MS	111	Minot, ND
078	Birmingham, AL Anniston, AL Birmingham, AL	112	Bismarck, ND–MT–SD Bismarck, ND

See note at end of table.

BEA Economic Areas and Associated Metropolitan Areas—Continued

Code	Area name	Code	Area name

113	Fargo–Moorhead, ND–MN
	    Fargo–Moorhead, ND–MN
		145	Great Falls, MT
			    Great Falls, MT

114	Aberdeen, SD	146	Missoula, MT

115	Rapid City, SD–MT–NE–ND
	    Rapid City, SD
		147	Spokane, WA–ID
			    Spokane, WA

116	Sioux Falls, SD–IA–MN–NE
	    Sioux Falls, SD
		148	Idaho Falls, ID–WY
			    Pocatello, ID

117	Sioux City, IA–NE–SD Sioux City, IA–NE	149	Twin Falls, ID

118	Omaha, NE–IA–MO
	    Omaha, NE–IA
		150	Boise City, ID–OR
			    Boise City, ID

119	Lincoln, NE
	    Lincoln, NE
		151	Reno, NV–CA
			    Reno, NV

120	Grand Island, NE	152	Salt Lake City–Ogden, UT–ID
			    Provo–Orem, UT
			    Salt Lake City–Ogden, UT

121	North Platte, NE–CO		

122	Wichita, KS–OK
	    Wichita, KS
		153	Las Vegas, NV–AZ–UT
			    Las Vegas, NV–AZ

123	Topeka, KS
	    Topeka, KS
		154	Flagstaff, AZ–UT
			    Flagstaff, AZ–UT

124	Tulsa, OK–KS Tulsa, OK	155	Farmington, NM–CO

125	Oklahoma City, OK
	    Enid, OK
	    Lawton, OK
	    Oklahoma City, OK
		156	Albuquerque, NM–AZ
			    Albuquerque, NM

		157	El Paso, TX–NM
			    El Paso, TX
			    Las Cruces, NM

126	Western Oklahoma, OK	158	Phoenix–Mesa, AZ–NM Phoenix–Mesa, AZ

127	Dallas–Fort Worth, TX–AR–OK
	    Dallas, TX (PMSA)
	    Fort Worth–Arlington, TX (PMSA)
	    Killeen–Temple, TX
	    Longview–Marshall, TX
	    Sherman–Denison, TX
	    Texarkana, TX–Texarkana, AR
	    Tyler, TX
	    Waco, TX
	    Wichita Falls, TX
		159	Tucson, AZ
			    Tucson, AZ

		160	Los Angeles–Riverside–Orange County, CA–AZ
			    Bakersfield, CA
			    Los Angeles–Long Beach, CA (PMSA)
			    Orange County, CA (PMSA)
			    Riverside–San Bernardino, CA (PMSA)
			    San Luis Obispo–Atascadero–Paso Robles, CA
			    Santa Barbara–Santa Maria–Lompoc, CA
			    Ventura, CA (PMSA)
			    Yuma, AZ

128	Abilene, TX Abilene, TX		

129	San Angelo, TX
	    San Angelo, TX
		161	San Diego, CA
			    San Diego, CA

130	Austin–San Marcos, TX
	    Austin–San Marcos, TX
		162	Fresno, CA
			    Fresno, CA
			    Visalia–Tulare–Porterville, CA

131	Houston–Galveston–Brazoria, TX
	    Brazoria, TX (PMSA)
	    Bryan–College Station, TX
	    Galveston–Texas City, TX (PMSA)
	    Houston, TX (PMSA)
	    Victoria, TX
		163	San Francisco–Oakland–San Jose, CA
			    Merced, CA
			    Modesto, CA
			    Oakland, CA (PMSA)
			    Salinas, CA
			    San Francisco, CA (PMSA)
			    San Jose, CA (PMSA)
			    Santa Cruz–Watsonville, CA (PMSA)
			    Santa Rosa, CA (PMSA)
			    Stockton–Lodi, CA
			    Vallejo–Fairfield–Napa, CA (PMSA)

132	Corpus Christi, TX Corpus Christi, TX		

133	McAllen–Edinburg–Mission, TX
	    Brownsville–Harlingen–San Benito, TX
	    McAllen–Edinburg–Mission, TX
		164	Sacramento–Yolo, CA
			    Chico–Paradise, CA
			    Sacramento, CA (PMSA)
			    Yolo, CA (PMSA)
			    Yuba City, CA

134	San Antonio, TX
	    Laredo, TX
	    San Antonio, TX		

135	Odessa–Midland, TX
	    Odessa–Midland, TX
		165	Redding, CA–OR
			    Redding, CA

136	Hobbs, NM–TX	166	Eugene–Springfield, OR–CA
			    Eugene–Springfield, OR
			    Medford–Ashland, OR

137	Lubbock, TX
	    Lubbock, TX
		167	Portland–Salem, OR–WA
			    Portland–Vancouver, OR–WA (PMSA)
			    Salem, OR (PMSA)

138	Amarillo, TX–NM Amarillo, TX		
139	Santa Fe, NM Santa Fe, NM	168	Pendleton, OR–WA

140	Pueblo, CO–NM
	    Pueblo, CO
		169	Richland–Kennewick–Pasco, WA
			    Richland–Kennewick–Pasco, WA
			    Yakima, WA

141	Denver–Boulder–Greeley, CO–KS–NE
	    Boulder–Longmont, CO (PMSA)
	    Colorado Springs, CO
	    Denver, CO (PMSA)
	    Fort Collins–Loveland, CO
	    Grand Junction, CO
	    Greeley, CO (PMSA)
		170	Seattle–Tacoma–Bremerton, WA
			    Bellingham, WA
			    Bremerton, WA (PMSA)
			    Olympia, WA (PMSA)
			    Seattle–Bellevue–Everett, WA (PMSA)
			    Tacoma, WA (PMSA)

142	Scottsbluff, NE–WY		

143	Casper, WY–ID–UT
	    Casper, WY
	    Cheyenne, WY
		171	Anchorage, AK
			    Anchorage, AK

144	Billings, MT–WY
	    Billings, MT
		172	Honolulu, HI
			    Honolulu, HI

NOTE.—Codes are assigned beginning in northern Maine, continuing south to Florida, then north to the Great Lakes, and continuing in a serpentine pattern to the West Coast. The metropolitan areas associated with each BEA economic area are listed below the economic area name. Most of these associated areas are Metropolitan Statistical Areas (MSA's); those which are Primary Met-ropolitan Statistical Areas (PMSA's) or New England County Metropolitan Statistical Areas (NECMA's) are noted in the list. Not all economic areas contain metropolitan areas.