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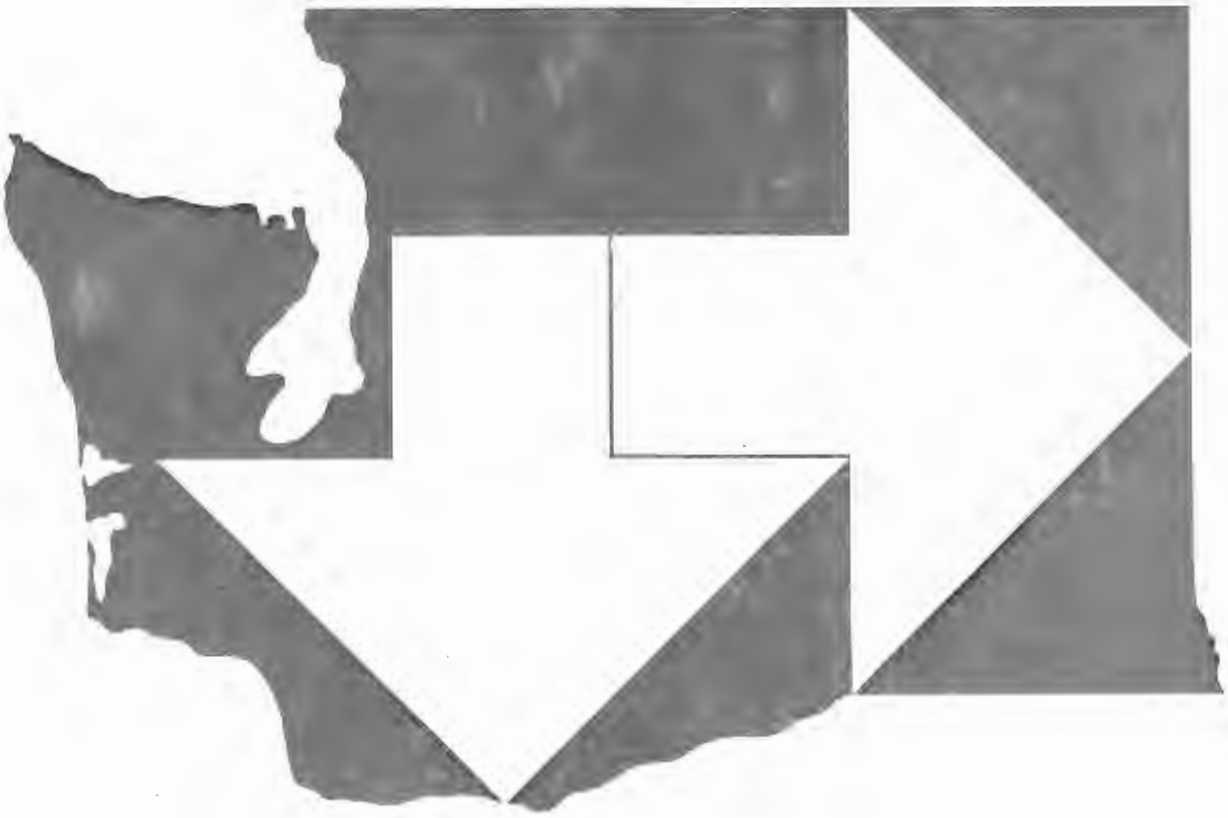

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THE 1972 WASHINGTON INPUT-OUTPUT STUDY

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by

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ACKNOWLEDGEMENTS

The basic purpose of this study is to provide benchmark estimates of the input-output structure of the Washington economy for the year 1972. In this empirical investigation, many persons and organizations have generously given of their time and expertise in a cooperative effort.

We are very appreciative of the contributions made by our faculty colleagues, who devoted many hours to gathering facts and carefully analyzing individual industries. Participants in this study from Washington State University included Professor J. Edwin Farris and Dr. Chinkook Lee, both of the Department of Agricultural Economics (and now at Clemson University and the U.S. Department of Agriculture, respectively), who undertook the basic research on the agricultural sectors; and Professor Charles L. Lillis, Department of Marketing, who conducted field work for the food processing sectors. Faculty members from the University of Washington included Professor William Beyers, Department of Geography, who was responsible for the analysis of the metals and machinery sectors and assisted in the investigations of many others; Dr. James N. Bray, Division of Marine Resources, who lent his support to the study of the fishing sector; Professor Ben S. Bryant, College of Forest Resources, who directed the analysis of the forest product industries; Professor Dudley Johnson, Graduate School of Business Administration, who assisted in the investigation of the petroleum and chemical industries; Professor Warren R. Seyfried, Business Administration, who collaborated on the analysis of the construction industry; and Professor Charles N. Henning, Business Administration, who gave us counsel during the organizational stages of the project and encouragement throughout the course of the study.

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Our debts outside the University are endless. Many government agencies provided us factual information and guidance in the interpretation and use of government statistics. Staff members of the Washington State Department of Commerce and Economic Development undertook studies of the expenditure patterns of state and local governments, provided support in the field work, and reviewed our findings from a user's point of view. In particular, we would like to acknowledge the contribution of William Burton. Other agencies deserving special mention include the Washington State Department of Employment Security, the Department of Revenue, the Department of Natural Resources, the Bureau of Economic Analysis of the U.S. Department of Commerce, the Bureau of Mines (Spokane) of the U.S. Department of Interior, the Federal Energy Administration (Seattle), and the Bonneville Power Administration.

A number of business groups supported our endeavor by sharing unpublished information about the purchases and sales patterns of their industries in Washington State and by encouraging their members to participate in our surveys. The assistance of the American Plywood Association, the Association of Washington Business, the Seattle Chamber of Commerce, the Spokane Chamber of Commerce, the Washington State Farm Bureau, and the Western Wood Products Association have helped to make the study more reliable.

Most of all, we wish to express our appreciation to the hundreds of Washington business firms who shared with us their intimate knowledge of the markets in which they buy and sell goods and services. In return for their cooperation, we hope that the input-output study, as a synthesis of their particularized information, provides them an overview that is useful in their understanding of how each of the parts of the economy are linked together. Indeed, we hope that our study helps in a general understanding of how each of us, as individuals in a quest to make a living, interrelate in the economic activities of our regional community.

Although we have had support from many quarters, the authors take responsibility for any shortcoming of this study.

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TABLE OF CONTENTS

PART I. THE WASHINGTON INPUT-OUTPUT STUDY

1. INTRODUCTION

This volume presents and describes the 1972 input-output tables for the Washington State economy. These tables represent a response to the need of regional economists and policymakers for a quantitative framework to analyze many of the economic issues confronting the people of this state.

More specifically, the 1972 Washington Input-Output Study serves three purposes. First, the tables describe the industrial structure of the Washington economy through a systematic accounting of the interindustry transactions within the region and between Washington producers and markets elsewhere. These flows in turn are a means of measuring the contribution made by regional economic activity to the nation's Gross National Product. Second, the input-output data provide the factual basis for estimating various income and employment multipliers, which are used in the analysis of economic impacts. Multipliers are measurements of the effects of changes in the final demand of the economy, such as an increase in an industry's exports, as they multiply, or "ripple", along the interindustry linkages. Finally, the Washington input-output tables provide a framework for the preparation of regional economic forecasts. In particular, the 1972 study is the core of the forthcoming Washington Projection and Simulation Model, an input-output econometric model of the Washington economy.

This volume is intended for analysts who want to use and understand the Washington interindustry tables. We have found in the past that users have had questions about the definitions, conventions, and sources of input-output estimates. The purpose here is to provide answers to many of these queries. Although this report is directed to all potential users, those persons desiring an introduction to the basic concepts of regional input-output are referred to the works of Miernyk and Richardson.[1]

The 1972 tables are the third in a series of benchmark estimates of the Washington input-output structure. Two previous studies have been conducted for the years 1963 and 1967. Together these tables comprise a unique set of survey-based regional studies. Spanning

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[1]Miernyk, W. H., The Elements of Input-Output Analysis (New York: Random House, 1965); Richardson, H. W., Input-Output and Regional Economics (New York: John Wiley and Sons, 1972).

nearly a decade, the three cross-sectional views constitute a motion picture of the economy that permits an analysis of the dynamics of industrial change during a period of turbulance in the fortunes of Washington State. The construction of national interindustry tables at regular intervals in time is becoming a common practice; but no other effort comparable to that in Washington State has been undertaken at the regional level.

Being the third in line, the 1972 input-output study is an innovation neither in concept nor application. However, since the construction of the original tables for 1963, much has been learned with regard to input-output measurements and the possible uses and limitations of interindustry tables. The 1972 study is therefore the result of a maturing process in research that has been going on for many years.

The report is divided into six sections. Section 2 of Part I briefly describes the input-output framework, emphasizing the distinction between the accounting system and the model. Some important conventions and definitions of the Washington input-output tables are presented in Section 3. Section 4 gives a complete account of the construction of the tables, which gives the reader further insight into their character. Multiplier analysis, one of the primary uses of input-output models, is the topic of Section 5. Part II contains detailed reports on each of the industrial and final demand sectors covered by the tables. Finally, the 1972 input-output tables are presented in Part III.

2. STRUCTURE OF REGIONAL INPUT-OUTPUT MODELS

An input-output table is a comprehensive and detailed picture of the activity of an economy at a point in time. The 1972 input-output transactions table for Washington State depicts for that year the flows of goods and services among industries in the state, sales to the region's final demand sectors and markets outside the state, and imports and value added by each industry in the economy. Thus, as Richardson notes, an input-output table is "first and foremost a mode of description[2]."

However, input-output is not only an accounting system: it is also a model of the behavior of industry. In other words, input-output measurements are a means to implementing a theory of industrial activity. The key theoretical concept underlying the model is that of industrial linkages, which views industries as being dependent upon one another as either markets for products or sources of inputs. Although the notion of industrial interdependence is not a new one to economics, it is only in recent years that Wassily Leontief has forged this concept into an operational model.[3]

The conversion of Leontief input-output models for the analysis of the behavior of regional economies has been linked to the parallel development of the export base theory of regional economic growth. Indeed, the complementary nature of these two perspectives has been a major impetus to the analysis of regional economic change. While the export base theory gives an explanation of what triggers and sustains the process of regional development, input-output models provide an analytical framework to describe how the impact of changes in the output of export industries becomes diffused throughout the regional industrial structure. However, input-output analysis is in general not restricted to a single cause of change. Rather, it describes the processes by which the output of industries responds to any number of external forces. This flexibility means that it is capable of being applied to a variety of questions in which feedbacks associated with industrial interdependence are important.

The specification of a regional interindustry framework is outlined in the following paragraphs. One objective is to clarify the distinction between a system of input-output accounts and an input-output model.

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[2]Richardson, Input-Output and Regional Economics, page 14.

[3]Leontief, W. W., The Structure of the American Economy, 1919-1939 (New York: Oxford University Press, 1953).

The Accounting Framework

The Identities

The input-output system of accounts is simply a statement of the economy's interindustry transactions during a given period of time. It is specified by four sets of accounting relationships.

The first of these identities shows in value terms the output distribution of each regional industry:

$$X_i = X_{i1} + \ldots + X_{ij} + \ldots + X_{in} + F_i, \quad i = 1, n, \tag{1}$$

where X_i is the total output of the "selling" industry i; X_{ij} is the output sold to regional industry j; and F_i is the output sold to the sectors of final demand. Equation (1) states that for each of the n industries in the economy the total value of output must equal the sum of the value of sales to each of the industry's markets, including the final demand sector. Equation (1) might be called a row equation, as it describes the transactions of an industry as shown in each of the rows of an input-output table. We can compactly represent the output equation by

$$X_i = \sum_{j=1}^{n} X_{ij} + F_i, \quad i = 1, n, \tag{2}$$

where the summation now signifies the total intermediate demand for the products of industry i.

Final demand in turn includes output sold for Washington consumption (C_i^w), Washington private fixed investment (I_i^w), Washington state and local government expenditures (G_i^{sl}), federal government expenditures (G_i^{fed}), exports to the rest of the U.S. (E_i^{us}), and exports to foreign countries (E_i^{for}). The definition of final demand for industry i is given by

$$F_i = C_i^w + I_i^w + G_i^{sl} + G_i^{fed} + \sum_{j=1}^{n} E_{ij}^{us} + E_i^{for}, \quad i = 1, n. \tag{3}$$

The first three terms on the right side of equation (3) represent internal final demands, that is, final demands generated from within the region. Exports, both domestic and foreign, include sales of goods and services to markets and customers (i.e., industries, consumers, and foreign governments) located outside Washington State. In the case of U.S. exports, each sale is identified by the purchasing industry, as indicated by the summation with respect the j-th industry. Although considered external demands, sales to the federal government are not geographically

defined, and may represent goods and services consumed either in the region, in the rest of the U.S., or abroad.

The third set of identities depicts the purchases pattern of industry inputs:

$$X_j = X_{1j} + \ldots + X_{ij} + \ldots + X_{nj} + VA_j + \sum_{i=1}^{n} M_{ij}^{us} + M_j^{for}, \quad j = 1, n, \qquad (4)$$

where X_j is the value of total input of "purchsing" industry j; X_{ij} is the purchased input from regional industry i; VA_j is the value added, or gross income originating, in industry j; and M_j^{us} and M_j^{for} are respectively the inputs of domestic and foreign imported goods and services. Equation (4) states that the value of total input of industry j must equal the sum of the value of each purchased input. Since an industry's purchases in an input-output table are displayed down a column, the input equation might be described as a column equation. We can also simplify equation (4) by writing

$$X_j = \sum_{i=1}^{n} X_{ij} + VA_j + \sum_{i=1}^{n} M_{ij}^{us} + M_j^{for}, \quad j = 1, n, \qquad (5)$$

where, in this case, the summation of X_{ij}'s represents the total intermediate input for industry j.

Value added and imports together make up the final payments sector. Value added is defined to include payments to the primary resources engaged by an industry, depreciation charges, and indirect business taxes. Payments to the factors of production include labor compensation, rent, net interest, and profits, all of which are measured before income taxes. This definition of value added is therefore close to the concept of gross national product originating in the national income and product accounts. Like the treatment of exports, imports from the rest of the U.S. are identified by supplying industry, whereas foreign imports are not.

The accounting framework is completed with the final identity that total output (sales) of each industry must equal its total input (purchases):

$$X_i = X_j \quad \text{for } i = j. \qquad (6)$$

Although equations (2), (3), (5), and (6) constitute the basic set of input-output accounts, other relationships derived from these fundamental identities are also of interest. For example, summing equation (2) over n industries gives

$$\sum_{i=1}^{n} X_i = \sum_{i=1}^{n}\sum_{j=1}^{n} X_{ij} + \sum_{i=1}^{n} F_i, \qquad (7)$$

which is an expression for <u>total</u> industrial gross output. Total gross input is given by

$$\sum_{j=1}^{n} X_j = \sum_{j=1}^{n}\sum_{i=1}^{n} X_{ij} + \sum_{j=1}^{n} VA_j + \sum_{j=1}^{n} M_j, \qquad (8)$$

where M_j now represents the sum of domestic and foreign imports. Since total output must equal total input, according to equation (6), we can equate equations (7) and (8). Noting also that total intermediate demand for all industries equals total intermediate output, we obtain

$$\sum_{j=1}^{n} VA_j = \sum_{i=1}^{n} F_i - \sum_{j=1}^{n} M_j. \qquad (9)$$

This identity states that the value of income earned in the industrial sector equals the value of final products delivered by industry, net of imports.

As such, equation (9) shows only the Gross State Income (GSI) and Gross State Product (GSP) for the industrial sector. To arrive at an accounting of GSP and GSI for the entire economy, we must also consider the value added and imports of the household, investment, and government sectors. Unlike the national input-output accounting conventions, we treat these value added and import payments simultaneously as income and final product. Adding these payments to equation (9), we obtain our desired estimates of GSI and GSP, as shown in Table 1.

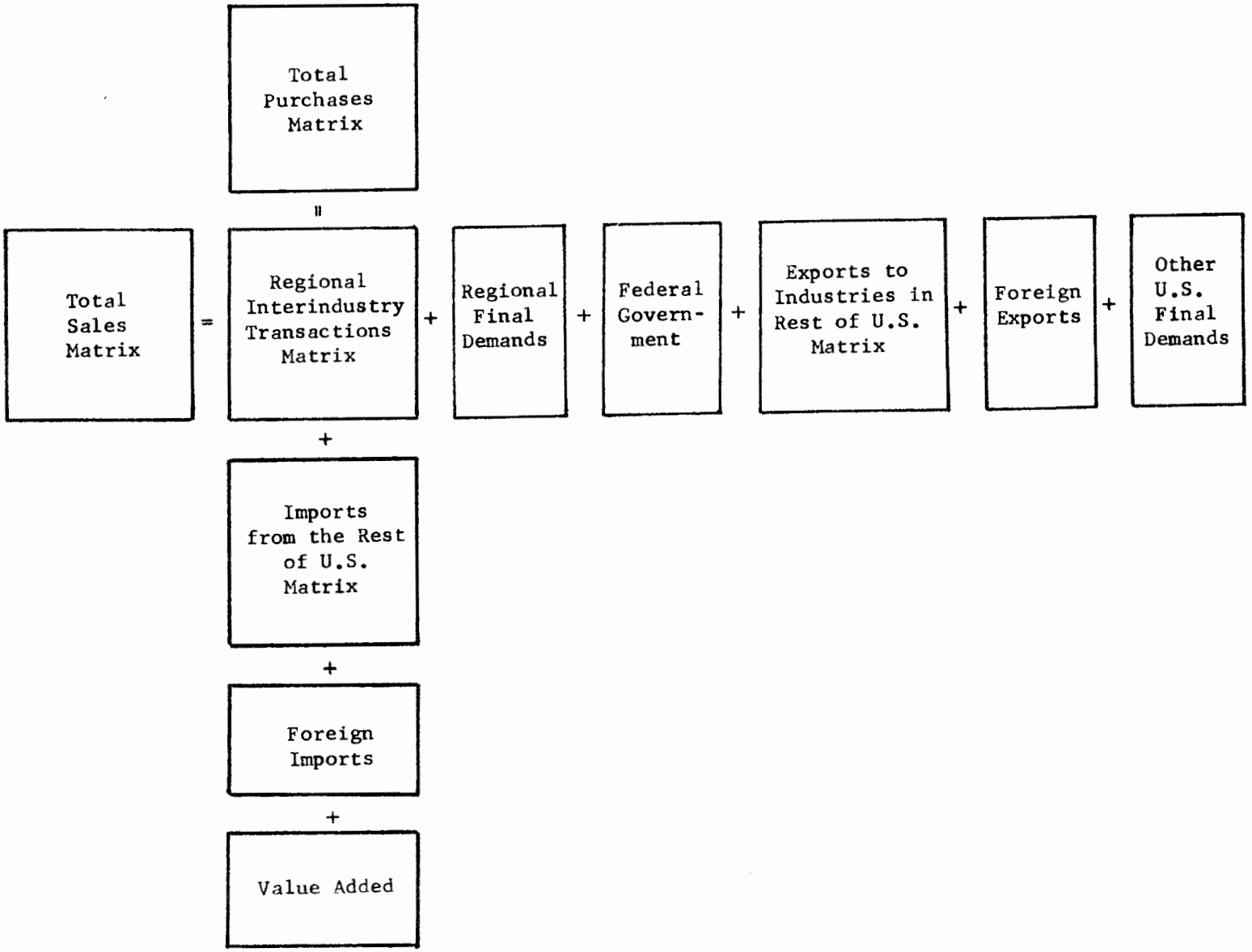
The Transactions Tables

The principal task of the Washington Input-Output Study has been to estimate the flows associated with the input-output accounting relationships, that is, equations (2), (3), (5), and (6). The outcome of this effort is a set of tables that describes transactions between Washington industries and (1) other industries in Washington State, (2) industries elsewhere in the U.S., (3) foreign countries, (4) the factors of production in Washington, (5) local final users, and (6) the federal government. Figure 1 graphically displays the major components of this accounting scheme as well as the relationships between them.

Tables corresponding to the flows depicted in Figure 1 are presented in Part III of this report. These include 51-industry and 27-industry regional transactions tables. The reason for presenting two input-output tables is that some users at times find the aggregated table more conve-

Figure 1

Elements of the Washington Input-Output Transactions Tables



nient, such as when it becomes necessary to relate interindustry flows to variables that are reported only at one or two-digit SIC levels. Also included in the set of transactions tables in Part III are an export table, which shows the industrial destination of exports to the U.S., and an import table, which gives the industrial source of imports from the U.S. Two other transactions tables are the total sales and total purchases tables, which are simply combinations of the regional transactions and export tables and the regional transactions and import tables, respectively.

Table 1

Gross State Income and Gross State Product in Washington State, 1972
(millions of dollars)

	Industrial value added	15,049.1
	Personal consumption value added	1,608.4
	State and local government value added	1,659.2
	Federal government value added	854.4
	Gross State Income	19,171.1
	Personal consumption expenditures	12,000.0
	Gross private domestic investment	2,335.5
	State and local government expenditures	2,979.1
	Federal government expenditures	2,384.4
	Exports to rest of U.S.	7,294.2
	Exports-foreign	1,952.7
Less:	Imports from rest of U.S.	8,563.1
Less:	Imports-foreign	1,211.7
	Gross State Product	19,171.1

Because of data limitations, not all flows are shown by their industrial origin or destination. For example, imports by Washington consumers and investors are not disaggregated by industry. We have only been able to roughly estimate the division of imports between the U.S. and foreign sectors. As we have pointed out, foreign imports or foreign exports are not identified with respect to industrial source or destination. We have not traced foreign trade according to the countries involved. These and other gaps in the transactions accounts of course limit the usefulness of the Washington input-output accounts.

The Input-Output Model

The Specification

As noted previously, the purpose of input-output tables is not only to describe economies at given points in time. With the addition of behavioral relationships to the accounting identities, we have at our disposal an input-output model that is applicable to a variety of forecasting problems.

The fundamental proposition underlying input-output behavior is the Law of Costs, which requires that each input of an industry at a given point in time be an increasing function of its output. One expression for the Law of Costs is given by

$$X^{*}_{ij} = f_{ij}(t)X_j, \quad f_{ij}(t) \geq 0, \tag{10}$$

where X^{*}_{ij} is the total requirements of industry j purchased from industry i (the asterisk indicating that the sources of inputs are not geographically restricted), and X_j is the output of j. In this form, if $f_{ij}(t)$ is a single-valued function of time, the production function is linear and homogenous at time t. For most forecasting purposes, $f_{ij}(t)$ is assumed to be a constant, a_{ij}, the value of which is estimated from an input-output table for some base year, t_o. That is,

$$f_{ij}(t) = a_{ij}, \tag{11}$$

where

$$\hat{a}_{ij} = X^{*}_{ij,t_o}/X_{j,t_o}. \tag{12}$$

The production processes of an n-industry economy can be completely described by a technical coefficients matrix, A, whose individual elements are estimates of a_{ij}. That is,

$$A = \begin{bmatrix} a_{11} & \cdots & a_{1n} \\ \vdots & & \vdots \\ a_{n1} & \cdots & a_{nn} \end{bmatrix}, \tag{13}$$

where each column j of matrix A specifies the production function for industry j.

For regional input-output models, the procurement functions are even more restrictive. It is usually assumed in forecasting exercises

that the ratio of input supplied by establishments in industry i located within the region to the total output of industry j is constant. This ratio is called the direct regional input coefficient, r_{ij}, and is expressed as

$$r_{ij} = X_{ij}/X_j. \tag{14}$$

Estimates of the regional coefficients are also taken from base-year input-output tables; that is,

$$\hat{r}_{ij} = X_{ij,t_o}/X_{j,t_o}. \tag{15}$$

Before proceeding further with the derivation of the model, we might more explicity point out the distinction between technical and regional coefficients. The total requirements of industry j from industry i include both regionally purchased and imported inputs. If M_{ij} represents the value of imported inputs, the total requirements at a given time is expressed as

$$X^*_{ij} = X_{ij} + M_{ij}. \tag{16}$$

Dividing equation (16) by the total output of industry j, we obtain

$$X^*_{ij}/X_j = X_{ij}/X_j + M_{ij}/X_j \tag{17}$$

or, referring to equations (12) and (14),

$$a_{ij} = r_{ij} + m_{ij}, \tag{18}$$

where m_{ij} signifies the import coefficient. In other words, each technical, or total requirements, coefficient is made up of two elements, a regional coefficient and an import coefficient. More commonly, equation (18) is rearranged as

$$r_{ij} = a_{ij} - m_{ij}. \tag{19}$$

What distinguishes regional from national input-output models is the size, and thus the importance, of the import coefficient. Whether or not the import coefficient is fairly constant over time, or changes in a predictable way, is also a critical issue in regional forecasting.[4]

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[4]For a study of the issue of coefficient stability, see Conway, R. S. Jr., "The Stability of Regional Input-Output Multipliers," Environment and Planning, 1977, pages 197-214.

If we accept the assumption of fixed regional coefficients, the regional input-output model can be derived by substituting equation (14) into equation (1), from which we obtain

$$X_i = r_{i1}X_1 + \ldots + r_{in}X_n + F_i, \quad i = 1, n. \tag{20}$$

With estimates of the regional coefficients, we can solve this system of n linear equations for each industry's output given a set of final demands. Using matrix notation, we can rewrite equation (20) as

$$X = RX + F, \tag{21}$$

where X is a column vector of industry outputs, R is a matrix of regional input coefficients, and F is a vector of final demands; that is,

$$X = \begin{bmatrix} X_1 \\ \cdot \\ \cdot \\ \cdot \\ X_n \end{bmatrix}, \quad R = \begin{bmatrix} r_{11} & \cdots & r_{1n} \\ \cdot & & \cdot \\ \cdot & & \cdot \\ r_{n1} & \cdots & r_{nn} \end{bmatrix}, \text{ and } F = \begin{bmatrix} F_1 \\ \cdot \\ \cdot \\ \cdot \\ F_n \end{bmatrix} \tag{22}$$

In its solution form, equation (21) is rewritten as

$$X = (I-R)^{-1}F, \tag{23}$$

where I is an n-dimensional identity matrix and $(I-R)^{-1}$ is called the Leontief inverse matrix.

The Inverse Matrix

The Leontief inverse matrix is the basic ingredient in most regional input-output forecasting exercises. If we let

$$(I-R)^{-1} = B = \begin{bmatrix} b_{11} & \cdots & b_{1n} \\ \cdot & & \cdot \\ \cdot & & \cdot \\ b_{n1} & \ldots & b_{nn} \end{bmatrix}, \tag{24}$$

each element in the inverse matrix, b_{ij}, can be interpreted as the direct and indirect requirements from regional industry i per dollar of final demand delivered from industry j. In other words, b_{ij} is the dollar amount of output needed from industry i to satisfy not only the initial demand of industry j but all other demands that are generated in the economy as a consequence of that dollar expansion in j. Thus, the inverse coefficients matrix is a table of industry output multipliers. It is also sometimes called an interaction matrix.

As noted, the output multipliers are critical elements in input-output analysis. Not only is the change in output generated in one industry in response to a change in the final demand of another industry an important dimension for impact studies, but also many other interesting variables can be related to the output multipliers. Thus, such economically important variables as income and employment can be linked to the Leontief inverse matrix.

We should point out that in Part III there are in fact two Leontief inverse tables. The first, entitled "The 1972 Washington Inverse Coefficients Table", is simply the coefficients matrix as defined by equation (23). The second is called "The 1972 Washington Induced Inverse Coefficients Table". In the latter case, households are treated as an endogenous sector, by which we mean that household income and consumption are now not exogenous to the input-output model but rather determined by it. How the household sector is incorporated into the regional matrix, and thus into the inverse matrix, is one of the topics on multiplier analysis presented in Section 5.

3. DEFINITIONS AND CONVENTIONS

Effective use of input-output models requires an understanding not only of the interindustry framework but of the transactions tables upon which they are built. The purpose of this section is to present some of the important definitions and conventions of the 1972 Washington State input-output table. Discussion of concepts more specific to individual sectors can be found in Part II.

The Region

The geographical area under study is Washington State, which defines the region in terms of its political boundaries. As such, our primary objective is to account for the economic activity of all establishments operating inside state borders. However, the operation of certain establishments, particularly those employing mobile resources, is not easily defined on a geographical basis. Consider, for example, the following questions: should the catch of Washington fishing vessels operating in Alaskan waters be counted as part of Washington production; how should we treat the services of Washington-based trucking firms who transport goods throughout the nation; and what about the activities of firms domiciled elsewhere but doing business in the state?

As one approach to solving these conceptual problems we define output on a place-of-performance basis. In principle, we count output only if it is produced by establishments operating within the boundaries of the state or in its adjacent waters. The value of output therefore excludes any revenue accruing to Washington business firms from economic activity performed in other regions. To be more specific, the output of the fishing industry is defined as the value of commercial catch landed in Washington State, whether vessels are of local registry or not. For firms engaged in interstate transportation, we measure as output only the revenues generated by the resources employed in the state. Construction output is defined as the value of all new construction-put-in-place and maintenance and repair conducted within Washington State, a definition that is inclusive of the activities of contractors who are headquartered outside the region.

The place-of-performance concept of regional output has two advantages over other possible concepts. First, it precludes counting the same output in more than one region. Second, the concept is consistent with the definition of regional value added as the portion of gross national income earned by the factors of production located in the state. Included in Washington State value added are the returns to all capital situated in the region, even if the owners of that capital reside elsewhere. Such returns encompass the income of computers or equipment

leased from national firms, among other things. Regional value added also includes the personal income of employees who work in state but maintain residences out of state. On the other hand, wages, rents, interest, and dividends that accrue to residents of Washington but are associated with production elsewhere are not counted in the input-output transactions.

The Base Year

The input-output table described in this report is estimated for 1972. This year has been chosen as an input-output benchmark because it coincides with the most recent census of industry undertaken by the Bureau of the Census of the U.S. Department of Commerce. Encompassing manufacturing, trade, services, construction, and mining, the census provides indispensable output and cost information on Washington industries.

Since the collection and publication of census data are a time-consuming process, and since some of the input-output estimating procedures could only be undertaken after the availability of this information, the gestation period for the input-output table is necessarily drawn out. In order to expedite the construction of the table, much of the input-output analysis has been initiated upon receipt of preliminary Census reports. As a consequence, it has not always been feasible to rework every estimate as Census revisions have become available. The present input-output estimates include only major Census revisions as of the middle of 1976.

To some readers, an input-output table for 1972 may now appear outdated. With respect to the levels of regional economic activity, this is obviously true. But the age of the table should be viewed in light of the use to which it is put. For applications that make use of regional input coefficients, the 1972 estimates will remain useful for some time, since evidence suggests that coefficients are relatively stable over time. Of course, where indications of changing purchases patterns are strong, such as in the case of energy inputs, adjustments may be necessary. To put the age of the Washington input-output table in another perspective, we might point out that 1967 is the date of the most recent national benchmark table. A number of non-survey regional tables still in use have been synthesized from national data of an even earlier vintage.

Of greater concern than the age of the table should be the quality of the estimates, the ability of the user to adapt the information to his needs, and the particular circumstances of the economy reflected in the base-year estimates. As for the state of the regional economy in 1972, activity levels were neither exceptionally high nor low. It was a year of recovery following a severe contraction as a result of a precipitous drop in the exports of aerospace, a major employer in Washington. Although the aftermath of the Boeing slump, as it was called, was still evident in a high unemployment rate, the shocks had more or less run their course, and

the economy was experiencing a modest expansion. We should also point out that the imposition of wage and price controls may have influenced the structure of the economy at that time. Nevertheless, while we would hesitate to argue that 1972 was a normal year--a dubious notion under any circumstance--the period does appear to be a good point of departure for analyzing and forecasting the structure of the economy through at least the remainder of the decade.

Sectoring Plan

One of the first steps in an input-output study is the development of a sectoring plan. In our sectoring scheme there are three major divisions, corresponding to the industrial (or intermediate) sectors, the final demand sectors, and the final payments sectors. The choice of the number of sectors within each division depends upon a number of considerations; but the decision essentially entails the assessment of the trade-off between the usefulness of more disaggregated input-output tables and the availability and reliability of detailed interindustry information. The 1972 Washington transactions table has been constructed with 51 industries, seven final demand sectors, and three final payments sectors.[5] Since a more condensed table is often helpful, as well as more accurate in that errors of classification are reduced, a 27-industry table has also been prepared.

Shown in Table 2 are the industry definitions of the 1972 sectoring plan. Included are both the 51 and 27-industry sector numbers, the industry name, and the corresponding 1972 Standard Industrial Classification (SIC) code. These industry definitions follow closely the classification scheme used in the prior input-output studies for 1963 and 1967. One of the purposes of the 1972 input-output study has been to extend the number of economic cross-sections over time in order to test the temporal stability of the input-output structure. Comparability with the earlier studies has therefore been one of the goals of the 1972 study.

Nevertheless, the increasing importance of certain sectors for policy-making, some changes in the SIC code, and our opportunities to exploit regional data have led to a few alterations in the sectoring plan and the scope of activities covered within each sector. One major revision has been the disaggregation of the utilities industry into three components--Electric Companies, Gas Companies, and Other Utilities. This has been in response to growing public concern over energy and its future. In recognition of a data problem, we have also combined the business and personal

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[5]Much of the input-output estimation was done for an 89-industry classification; but this degree of detail presented too many statistical problems. As a result, the table was aggregated to the 51-industry level prior to the arbitrage process.

Table 2

Washington Input-Output Industry Definitions, 1972

Industry Number 51 Ind.	27-Ind.	Industry Name	1972 SIC
1	1	Field and Seed Crops	011, 013 (exc. 0133), pt. 018, pt. 019
2	3	Vegetables and Fruits	0133, 016, 017, pt. 019
3	2	Livestock and Products	02 (exc. 027)
4	3	Other Agriculture	Pt. 018, 027, 071
5	4	Fisheries	09 (exc. 097)
6	5	Meat Products	201
7	5	Dairy Products	202
8	6	Canning and Preserving	203, 2091, 2092
9	7	Grain Mill Products	204
10	6	Beverages	208
11	7	Other Foods	205-207, 2095-2099
12	8	Textiles	22
13	8	Apparel	23
14	4	Mining	10-14
15	4	Forestry	08--includes national and state forests
16	9	Logging	241
17	9	Sawmills	242
18	10	Plywood	2435, 2436
19	9	Other Wood Products	2431, 2434, 2439, 244, 245, 249
20	21	Furniture and Fixtures	25
21	11	Pulp Mills	261
22	11	Paper Mills	262
23	11	Paperboard and Other Paper Products	263-266
24	12	Printing and Publishing	27
25	13	Industrial Chemicals	281, 286, 287, 289
26	13	Other Chemicals	282-285
27	13	Petroleum	29
28	14	Glass Products	321-323
29	14	Cement, Stone, and Clay	324-329
30	15	Iron and Steel	331, 332, 339

Table 2 (continued)

Washington Input-Output Industry Definitions, 1972

Industry Number 51-Ind.	27-Ind.	Industry Name	1972 SIC
31	16	Other Nonferrous Metals	3331-3333, 3339, 334, 3351 3356, 3357, 3362, 3369
32	16	Aluminum	3334, 3353-3355, 3361
33	17	Structural Metal Products	344
34	17	Other Fabricated Metals	341-343, 345-349
35	18	Nonelectrical Motive Equipment	351-353
36	18	Machine Tools and Shops	354, 359
37	18	Nonelectrical Industrial Equipment	355-358
38	18	Electrical Machinery	36
39	19	Aerospace	372, 376
40	20	Motor Vehicles	371, 374, 375, 379
41	20	Ship and Boat Building	373--includes Puget Sound Naval Shipyard
42	21	Other Manufacturing	30, 31, 38, 39
43	23	Transportation Services	40-47--includes Postal Service, state ferries, and public transit
44	24	Electric Companies	491, pt. 493--includes BPA, PUD's, and municipal electric utilities
45	24	Gas Companies	492, pt. 493--includes municipal gas companies
46	24	Other Utilities	Pt. 493, 494-497-- includes public water, sewage, sanitary, and irrigation systems
47	24	Communications	48
48	22	Construction	15-17
49	25	Trade	50-59--includes state liquor stores
50	26	Finance, Insurance, and Real Estate	60-67
51	27	Services	072-079, 097, 70-89-- excludes public hospitals and schools

services sectors into one industry called Services. A third revision has been a more thorough transfer of government enterprises into the industrial sector. Of special note in the 1972 study is the inclusion of the U.S. Postal Service in Transportation Services. As a result of changes in the SIC code, modifications in the input-output classification scheme have been made, but these are for the most part of minor significance.

Identified in Table 3 as final demand sectors are Washington Personal Consumption, Washington Gross Private Fixed Investment, Washington Change in Inventories, Washington State and Local Government Expenditures, Federal Government Expenditures, Exports to the Rest of the U.S., and Foreign Exports. Apart from the previously mentioned transfer of government enterprises, the only major revision in this division has been the disaggregation of private investment into fixed investment and inventory change. Note that net inventory change represents only the change in finished-goods and work-in-process inventories, and only in those industries for which estimates could be made. Further discussion of the final demand sectors is found in Part II.

The final payments sectors include Value Added, Imports from the Rest of the U.S., and Foreign Imports. No revision has been made in this division, although there has been some progress in disaggregating value added and estimating employment by industry. These two steps have been useful in the development of a variety of regional multipliers for impact analysis (see Section 5).

Classification of Establishments

While the industrial component of the sectoring plan is stated in terms of industries, the basic unit of observation for making input-output estimates is the establishment. An establishment is defined as "an economic unit, generally at a single physical location where business is conducted or where services or industrial operations are performed.[6]"

In order to define the 51 industry groupings in the 1972 study, establishments are classified by industry according to their primary activities. In other words, since establishments typically produce more than one good or service, each industry defined on an establishment basis will incorporate all output (including secondary products) of establishments whose principal product is one of the products included under the sector definition (as given in Table 2). This approach to classifying establishments follows the conventions used by the Bureau of the Census.

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[6]Executive Office of the President, Office of Management and Budget, Standard Industrial Classification Manual, 1972 (Washington, D.C.: U.S. Government Printing Office), page 10.

The implication of defining industries on an establishment basis is that the output of a given industry is not homogenous in content. For example, an establishment primarily engaged in shipbuilding may also manufacture industrial equipment. It is therefore possible to observe in this accounting system a sale from the shipbuilding industry to such an unlikely market as Aerospace. In the U.S. input-output tables, the problem of secondary products is dealt with by either redefinition or transfer, techniques which are made possible by the availability of national information on primary and secondary products. Such data are not obtainable at the regional level. However, even if they were, the redefinition and transfer approach would not be desirable in our case, because of the additional complications it would introduce into the interpretation of regional input-output models. A detailed discussion of the issue of secondary products is not appropriate here; but it is important to point out how the Washington and U.S. tables differ in this respect.[7]

Not all industries in the Washington input-output study are classified on an establishment basis. Field and Seed Crops, Vegetables and Fruits, Livestock and Products, Other Agriculture, Fisheries, Mining, and Forestry are defined on a commodity basis. Some industries, such as Construction, are defined wholly or partially on an activity basis. A sector defined on a commodity or activity basis includes the value of all commodities or services produced in the economy corresponding to the sector definition, whether or not they are produced by establishments which would be classified in that sector on an establishment basis. In these industries, the distinction between primary and secondary products becomes immaterial.

Transactions on Current and Capital Account

Transactions in the input-output tables cover expenditures on both current and capital account. However, the gross flows among industries are on current account only. Viewing them from the purchases side, these transactions reflect the annual operating expenses of industry. The purchases of capital goods by the private sector of the economy are shown in the investment column of final demand. They represent the value of the private sector's additions of housing, plant, and equipment that are charged to fixed asset accounts. In the accounting of current production costs, only the annual capital consumption allowance (the current charge for the use of capital) is counted as an input, being part of the value added of each industry.

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[7] See the U.S. Department of Commerce, Bureau of Economic Analysis, "Definitions and Conventions of the 1967 Input-Output Study," pages 12-14, for a discussion of the problem of secondary products.

Table 3

Washington Input-Output Final Demand and Final Payments Sector Definitions, 1972

Sector Name	Definition
Washington Personal Consumption	Sales to consumers in Washington State.
Washington Gross Private Fixed Investment	Sales for residential and non-residential private fixed capital formation.
Washington Change in Inventories	Net inventory change of finished goods and work-in-process for selected Washington industries.
Washington State and Local Government Expenditures	State and local purchases on both current and capital account, excluding operating expenses of government enterprises transferred to industrial sector.
Federal Government Expenditures	Federal purchases of goods and services on current and capital account for delivery both in-state and out-of-state. Excluded are operating expenses of government enterprises transferred to industrial sector.
Exports to Rest of U.S.	Sales of goods and services on both current and capital account to consumers and producers in the rest of the U.S.
Foreign Exports	Goods and services sold to foreign purchasers on both current and capital account.
Value Added	Gross national product originating of the respective sectors. Value added in consumption column is the space rental income (tenant as well as owner-occupied) on residential housing, less associated purchases of goods and services, plus the value of the services of household domestics.

Table 3 (continued)

Washington Input-Output Final Demand and Final Payments Sector Definitions, 1972

Sector Name	Definition
Imports from Rest of U.S.	Purchases of goods and services on current account from establishments in the rest of the U.S.
Foreign Imports	Purchases of goods and services on current account from establishments in foreign countries.

Producers' Prices

Input-output transactions are valued at producers' prices. Each transaction represents the revenue earned by the producer and not the cost incurred by the purchaser. To arrive at purchasers' prices, it would be necessary to add the value of trade and transportation margins to producers' prices. In other words, the producers' price convention implies that the "purchaser pays the freight" as well as for the trade services of middlemen who act as intermediaries in the exchange of goods. According to input-output accounting conventions, the costs of distributing a commodity are shown as direct sales of services from Trade and Transportation Services to the sector purchasing the commodity. For example, the large expenditure by households from Trade represents the mark-up earned by regional wholesale and retail establishments acting as intermediaries between consumers and producers.

As a consequence of the producers' price convention, the input-output tables do not literally trace the flows to and from the trade industry. If the buying and reselling of commodities by Trade were shown, we would lose the valuable information on the linkages between producers and users, since virtually all commodities would then flow from one source, namely Trade.

Differences with Conventions in National Accounts

Many of the conventions employed in the Washington input-output accounts are the same as those used in the national input-output tables. However, there are a number of differences. Several of the more important ones include the following:

(1) Handling of secondary products. Since the Washington study generally adheres to the establishment as the basic unit of observation, the output of an industry includes both its primary and secondary products. In contrast, the national tables, either by transfer or redefinition, include secondary products as part of the output of the industry that is its primary producer.

(2) Foreign imports. The Washington accounts show foreign imports as purchases by the industry acquiring them. In the national accounts, foreign imports are handled differently in that imports which are a substitute for domestically produced goods and services are channeled through the domestic producing industry for distribution to the using sectors. This means that the national tables do not directly assign foreign imports to the industries that purchase them, and that the control total for an industry reflects total domestic supply rather than domestic production. In contrast, the Washington control totals are a measure of production, and foreign imports (as well as interstate imports) are directly distributed to the industries that procure them.

(3) Government enterprises. Industry definitions in the Washington sectoring plan incorporate within their scope the appropriate activities of both private and public enterprises. In the national study, on the other hand, a distinction is made between private and government enterprises. Thus, as an example, the output of Electric Companies in the Washington tables includes the output of private as well as public utilities.

Other notable differences in conventions include the handling of rents, the treatment of construction activity, and the use of dummy industries. Interested readers should compare the sector reports in Part II with the statement of definitions and conventions of the U.S. input-output study.[8]

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[8]U.S. Department of Commerce, Bureau of Economic Analysis, "Definitions and Conventions of the 1967 Input-Output Study."

4. CONSTRUCTION OF THE 1972 TABLES

There are two basic approaches to constructing regional input-output tables: they can be estimated from the national table or tables from other regions, the synthetic approach; or, they can be built up from information obtained in an industry survey and augmented by published data, the survey-based approach. The first method is much less costly in terms of time and research resources, while the second provides estimates of higher quality.

The 1972 Washington Input-Output Study is survey-based, although data from the U.S. input-output table and other secondary sources also underlie the final estimates. The construction of the regional tables essentially involves two phases, the data-gathering and analysis phase and the so-called arbitrage (or balancing) process. Each phase presents its own special problems, the resolutions of which are ultimately reflected in the accuracy of the interindustry figures.

Data-Gathering Phase

The first phase of the Washington study entails the collection and processing of data from both primary and secondary sources of information. The objective is to develop for each industry a gross output control total and estimates for the sales and purchases distributions of that output, the distributions covering both regional and total sales and purchases by industry.

Ultimately, the first phase yields preliminary 1972 estimates for the 51-industry tables. However, the economy has been studied in much greater detail. Each 51-level industry typically involves a number of distinctive sub-sectors that require separate analyses. For example, Other Food Products is comprised of a variety of smaller industries that encompass the production of bakery goods, sugar, confectionary products, and other miscellaneous foods. Each has its own purchases and sales distributions needing individual attention and appropriate weighting to permit an accurate estimate of the input-output structure of the more aggregated sector. Overall, hundreds of Washington industries are investigated in the first phase.

Publication of the model in greater detail than 51 industries is conceivable, but aggregation occurs for two reasons. First, it is likely that the accuracy of the published table is improved considerably, since information at more disaggregated levels tends to be less reliable. As an example of the measurement errors that might arise, respondents to our questionnaires would be more likely to misclassify sources of supply and markets for output with more disaggregated sectoring plans. Second,

aggregation precludes disclosure of confidential information in certain industries.

Drawing Up the Sectoring Plan

The initial step of the first phase is to draw up a sectoring plan that defines the industries of the economy (see Table 2 in Section 3). The central consideration is how to group establishments into a manageable number of industries. The classification criterion is the uniformity of the input structures and sales distributions of establishments. The sectoring plan that maximizes this uniformity is optimal, although problems of product mix (i.e., the inclusion of heterogeneous products within a single sector) can never be completely overcome. The sectoring plan also attempts to highlight the important industries in the region. Thus, in the 51-industry model, there are six food-product sectors, five industries in forestry and wood products, three paper sectors, and three industries that cover transportation equipment.

The Survey

Once the sectoring plan is completed, a stratified sample survey of Washington establishments is taken. This survey is conducted for all manufacturing industries, forestry, utilities, communications, selected services, and portions of the transportation services sector. Surveys are not taken in other industries, since it is prohibitively expensive given the large number of small establishments in these sectors. Moreover, the unsurveyed sectors are felt to have either excellent secondary source data (as in agriculture, fishing, mining, and construction) or relatively simple input structures that could be estimated from national input-output data (as in certain services).

For each establishment surveyed, respondents have been asked to estimate essentially three things: (1) the value of total output; (2) sales and purchases by sector; and (3) the proportion of each sale and purchase made within Washington State. A copy of the questionnaire is given on four following pages. Total output is measured as either total sales, shipments, receipts, or revenues for calendar year 1972. Sales by sector include transactions to the 51 industries as well as to the sectors of final demand. Purchases by sector cover flows from industries and the final payments sectors. In estimating the percentage of sales made in Washington State, respondents are also asked to identify what proportion of those sales represent capital goods. The purchases analysis covers only transactions on current account. For survey purposes, preliminary purchases estimates incorporate trade and transportation margins.

The sample survey is designed to maximize coverage of each industry, but the response rate to the 2,000 questionnaires sent out varied from industry to industry, as shown in Table 4. A total of 443 usable ques-

Table 4

Responses to Survey Questionnaires

Industry		Number of Responses	Coverage Factors: Percent of Employment	Coverage Factors: Percent of Sales
6	Meat Products	4	10	6
7	Dairy Products	5	29	17
8	Canning and Preserving	19	43	40
9	Grain Mill Products	3	13	28
10	Beverages	9	54	80
11	Other Foods	12	17	20
12	Textiles	4	87	55
13	Apparel	7	24	26
15	Forestry	6	57	53
16	Logging	13	21	49
17	Sawmills	27	39	43
18	Plywood	15	56	62
19	Other Wood Products	16	15	20
20	Furniture and Fixtures	6	15	23
21	Pulp Mills	7	79	93
22	Paper Mills	7	98	94
23	Paperboard and Paper Products	22	66	59
24	Printing and Publishing	12	33	38
25	Industrial Chemicals	6	70	56
26	Other Chemicals	4	21	17
27	Petroleum	10	93	88
28	Glass Products	2	89	91
29	Cement, Stone, and Clay	8	13	21
30	Iron and Steel	5	25	22
31	Other Nonferrous Metals	4	63	79
32	Aluminum	4	84	65
33	Structural Metal Products	13	29	25
34	Other Fabricated Metals	12	52	47
35	Nonelectrical Motive Equipment	10	94	101
36	Machine Tools and Shops	9	18	16
37	Nonelectrical Industrial Equipment	14	34	40
38	Electrical Machinery	19	90	117
39	Aerospace	3	94	97
40	Motor Vehicles	2	69	76
41	Ship and Boat Building	9	89	80
42	Other Manufacturing	21	12	17
43	Airlines	11	88	NA
43	Pipelines	3	93	97
44	Electric Companies	5	40	47
45	Gas Companies	3	93	97
46	Other Utilities	2	1	2
47	Communications	7	81	85
51	Services	60	2	4
--	Unclassified	4	--	--
	Total	443	--	--

tionnaires have been returned, for an overall response rate of 22 percent. Coverage based on total employment in each industry has ranged from nearly nothing to a full count.[9] The highest coverage factors are for Beverages, Plywood, Pulp Mills, Paper Mills, Petroleum, Glass Products, Other Nonferrous Metals, Aluminum, Nonelectrical Industrial Equipment, Electrical Machinery, Aerospace, Motor Vehicles, Ship and Boat Building, Gas Companies, and Communications. In terms of employment, total coverage in the nonagricultural sectors amounts to about 27 percent; but for manufacturing the figure is approximately 56 percent.

There is a wide divergence in the quality of the questionnaires returned. It is apparent that some establishments have spent many hours in preparing their figures; in other cases, there is very little information of use. Not surprisingly, the best questionnaires tend to come from the larger establishments. In many instances, personal or telephone interviews are conducted by the investigators responsible for each sector to augment or clarify information given in the responses.

Control Totals

The survey provides information for estimating industry sales and purchases distributions as fractions of total output. In order to transform these fractions into dollar flows, it is necessary to estimate a gross output control total for each industry. To complete the input-output tables, it is also necessary to estimate control totals for the sectors of final demand, such as Washington Personal Consumption.

Control totals either have been taken directly from publications like the Census of Manufactures or have been estimated on the basis of national and regional information. The gross output of each industry is measured inclusive of the excise taxes paid or the sales taxes collected by the industry. The control totals generally reflect conventional methods of valuation used by business firms, as shown in the Census reports or other published statistics. However, in some industries, such as Trade, Transportation Services, and Finance, Insurance, and Real Estate, output is measured by margins earned rather than by gross sales. For more complete information on the control total concept and the data sources used for estimating its value, the reader is referred to the sector reports in Part II.

Industry Analysis

As we have noted, the purpose of the survey is to provide information for estimating the procurement and sales patterns of each industry. From the questionnaire responses, the distributions of purchases and sales as fractions of the control total are developed. Secondary data, such as

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[9]For Electrical Machinery the coverage factor exceeds 100 percent. This is due to a difference in classifying establishments by ESD and the Census.

marketing and cost information from trade associations, regulatory agencies, and other sources, are also incorporated into these input-output profiles. Thus, the investigation of each industry takes into account all information available to the investigator.

The purchases and sales distributions developed from the industry analysis are then applied to the corresponding control totals to estimate the dollar value of purchases and sales. These gross flows estimates constitute the initial, or pre-arbitrage, estimates of the columns and rows of the Washington State transactions table. Actually, four transactions tables are estimated at this point: a total sales table, a total (technical) purchases table, a regional sales table, and a regional purchases table. Since the regional purchases by industry j from industry i must equal the regional sales from i to j, the arbitrage process represents the reconciliation of two independent estimates (one from the purchases side and one from the sales side) for each cell in the regional interindustry transactions table. The arbitrage process is discussed in a following section.

Use of Secondary Information

We have pointed out that while field data are being processed, a search of published material is conducted. Valuable information can be found in government documents, trade journals, local newspapers, corporate annual reports, and similar sources. Such information supplements the survey data regarding industry outputs, markets, material inputs, payrolls, and employment. The most important secondary sources for the input-output study are the Census of Agriculture, Census of Manufactures, and the Census of Business, which provide data on industrial sales, value added, and costs of materials.

As an example of how secondary information is used in place of survey data, consider the analysis of the construction industry. For further details, the reader is again directed to Part II. As with other sectors, there are three estimates that have to be made in the first phase: the control total, the distribution of purchases, and the distribution of sales. The control total for Construction is defined as the value of new construction-put-in-place and maintenance and repair work done by contract construction establishments. It is estimated from the Census series on U.S. Value of New Construction-Put-in-Place, the Census of Construction report on Washington State, and the Dodge series on Construction Contracts by States. The control total is broken down into eleven types of activity --ranging from housing construction to maintenance and repair-- for which there is technical input information available. The primary source of the requirements data is the Bureau of Labor Statistics, but information is also extracted from the 1967 U.S. input-output study and issues of the Engineering News Record. Once the technical input structures are determined, the proportion of each input produced in the region is estimated. Since surveys are not undertaken in this

PURCHASES ANALYSIS

4. Please indicate the approximate cost of the materials, parts, supplies, utilities, and business services you purchased from other establishments in 1972. (Do not include capital expenditures.)

   $_____ (thousands)

5. In column 1 below, please allocate your purchases according to supplying industries.

   Remember, purchases from wholesalers and retailers should be shown as purchases from industries producing the product. A list of industries is attached, but IF YOU PREFER TO LIST SPECIFIC MATERIALS please identify such purchases so we may assign their industrial sources.

SUPPLYING INDUSTRIES	(1) Amount Purchased	Proportion from Producers Located in		
		Washington	Other states	Foreign
Example: Aluminum	$6000	90%	10%	0%
Materials Consumed: (I/O No.)				
Cost of Contract Work Done for You by Others on Your Materials				
Cost of Products Bought and Resold Without Further Processing				
Cost of Fuels Consumed:				
a) Petroleum Products				
b) Natural Gas and Steam				
Cost of Electricity Purchased				
Telephone and Telegraph				
Cost of Other Utilities				
Insurance Premiums				
Other Services (identify):				
Total Purchases From All Suppliers	$	xxx	xxx	xxx

SALES ANALYSIS

1. List the major products or services you produce: _____

_____

2. Please indicate the 1972 sales of your Washington establishments.
   Total Sales: $_____ (Shipments or Receipts)

3. Allocation of Sales among Markets:

   (a) First, in column 1 below, allocate your sales among markets. Remember, sales to wholesalers and retailers for resale should be shown as sales to the processing or consuming markets to which they are to be resold.

   (b) Next, in column 2 below, estimate for each market the percentage of sales made to Washington users.

   (c) Finally, in column 3 below, estimate the percentage of your Washington sales representing capital goods in each industrial market. Capital goods are buildings, machinery, or equipment which your customers treat as fixed depreciable assets.

MARKETS Brief Description	(1) Sales Distribution	(2) % of Sales made in Wash.	(3) % of Wash. Sales representing capital goods
Example: Petroleum Refiners	$10,000	100%	0%
Household Consumers			xxx
Washington Governments-State & Local		100%	xxx
Federal Government		0%	xxx
Exports to Foreign Countries		0%	xxx
Industrial markets (briefly identify)			
(I/O No.)			
Total	$	xxx	xxx

INDUSTRIAL MARKETS AND SUPPLIERS

I/O No.

RESOURCE INDUSTRIES

1. Field Crops, including seeds
2. Vegetables, Fruits, and Sugar Beets
3. Livestock, Poultry and Eggs
   -dairy farms, ranches, feed lots
   -processed products in sectors 7, 8
4. Nursery and Miscellaneous Agricultural Products
5. Fishing (SIC 09)
6. Mining (SIC 10-14)
   -stone, sand, gravel
   -minerals and coal
   -crude petroleum

FOOD PRODUCTS

7. Meat Products (SIC 201)
8. Dairy Products (SIC 202)
   -milk, cream, butter, cheese
9. Canning and Preserving (SIC 203)
   -fruits, vegetables, and seafoods
10. Grain Mill Products (SIC 204)
11. Beverage Industries (SIC 208)
12. Other Foods (SIC 205-7, 209)
    -bakery, sugar and confectionary products
    -fats and oils, coffee, ice, other foods

FOREST PRODUCTS

13. Forestry (SIC 08)
    -public and private forestlands
14. Logging (SIC 241)
15. Sawmills (SIC 2421)
16. Veneer and Plywood (SIC 2432)
17. Misc. Wood Products (SIC 2426, 2429, 2431, 2433, 244-249)
    -hardwood dimension lumber, cooperage
    -shingle and shake mills, millwork
    -wood kitchen cabinets, wood containers
    -mobile and prefabricated homes
    -other wood products
18. Furniture and Fixtures (SIC 25)
    -wood and metal furniture
    -mattresses and shades
19. Pulpmills (SIC 261)
20. Paper Mills (SIC 262)
    -includes integrated pulp mills
21. Misc. Paper and Paperboard Mills (SIC 263-6)
    -paperboard containers
    -building paper

CHEMICALS AND PETROLEUM

22. Industrial Chemicals (SIC 281)
    -acids, alkalies, salts, gases, pigments
    -includes Hanford nuclear plants
23. Finished Chemicals (SIC 282-289)
    -paints, explosives, fertilizers
    -drugs, plastics and resins
24. Petroleum Industries (SIC 29)
    -gasoline, kerosene, fuel oils
    -asphalt products

STONE, CLAY, AND GLASS

25. Glass and Glass Products (SIC 321-3)
26. Cement, Clay, and Plaster Products (SIC 324-9)
    -includes brick and gypsum

METALS

27. Ferrous Metals (SIC 331, 332, 3391, 3399)
    -steel mills, foundries, and forgings
    -electrometallurgical products
28. Non-ferrous Metals excl. Aluminum SIC pt. 33)
    -copper, lead, and zinc
29. Aluminum (SIC 3334, 3352, 3361)
    -primary and secondary reduction
    -rolled and extruded products

METAL FABRICATING INDUSTRIES

30. Fabricated Structural Metal Products (SIC 344)
    -sheet metal work
    -boiler plate fabrication
    -metal sash and doors

USED IN THE WASHINGTON STATE INPUT-OUTPUT STUDY

31. Other Fabricated Metal Products (SIC 341-3, 345-9)
    -metal cans, cutlery, hand tools
    -bolts, screws, and stampings
    -anaodizing, electroproplating
    -wire products, valves, pipes & fittings
    -miscellaneous fabricated metal products

MACHINERY

32. Farm and Construction Machinery (SIC 351-3)
    -includes engine manufacture
33. Machine Tools and Shops (SIC 354, 359)
34. Other Non-electrical Machinery (SIC 355-8)
    -food products and woodworking machinery
    -paper industry machinery
    -computing and accounting machinery
    -refrigeration and service machinery
    -pumps, bearings, compressors, fans
35. Electrical Machinery, Equipment, Supplies, and Appliances (SIC 36)

TRANSPORTATION EQUIPMENT

36. Aerospace (SIC 372, 376)
37. Motor Vehicles and Railroad Cars (SIC 371, 374-5, 379)
    -includes motor cycles, bicycles, trailers, trailers, campers
38. Ship and Boat Building and Repair (SIC 373)
    -includes Bremerton Navy Yard

OTHER MANUFACTURING

39. Textile Mill Products (SIC 22)
    -fabric, carpets, cordage, twine
40. Apparel (SIC 23)
    -includes curtains and canvas products
41. Printing and Publishing (SIC 27)
42. Other Manufacturing (SIC 30, 31, 38, 39)
    -leather, luggage, instruments
    -rubber products, sporting goods
    -jewelry, toys, advertising signs
    -other manufacturing

CONSTRUCTION

43. Construction (SIC 15-17)
    -contract and maintenance construction

SERVICES

44. Transportation Services (SIC 40-47)
    -railroad, water, air, and motor transport
    -public transit and taxicabs
    -warehousing, pipelines
45. Utilities (SIC 49)
    -electric, natural gas, and water
    -garbage and sanitary services
    -irrigation systems
46. Communications (SIC 48
    -telephone and telegraph
    -radio and television
47. Wholesale and Retail Trade (SIC 50-59)
    -see note 3 of instructions
    -report only those items treated as operating expenses by wholesalers and retailers (not for resale)
48. Finance (SIC 60-62, 66, 67)
    -banks, loan companies, security dealers
49. Insurance (SIC 63, 64)
    -carriers, agents, insurance services
50. Real Estate Operators and Brokers (SIC 65, 66)
51. Business Services (SIC 73, 81, 89)
    -advertising agencies, credit, legal, accounting
    -research, engineering
    -architectural services
52. Personal Services (SIC 70-72, 75-80, 82-87, 074)
    -lodging, repair, photography, automobile
    -entertainment, medical, educational
    -includes private hospitals and schools
    -non-profit organizations
    -public schools, hospitals are part of state and local government

industry, this estimation is judgmental and based on information regarding the specific inputs required for construction and their availability within the region. Lastly, the distribution of output is estimated. According to input-output conventions, all construction output is sold to regional markets. Furthermore, the nature of the output suggests its purchaser in many cases. For instance, we know that nearly all residential housing flows to the private investment sector, and that all highway construction is done for state and local government. As for the accuracy of the preliminary construction estimates, the total purchases vector and the sales distribution are probably reasonable. On the other hand, the regional input structure is subject to much greater error. Clearly, without the support of survey information and with the greater reliance on national coefficients, we are less confident that our input-output estimates reflect the regional peculiarities of this industry.

The Arbitrage Process

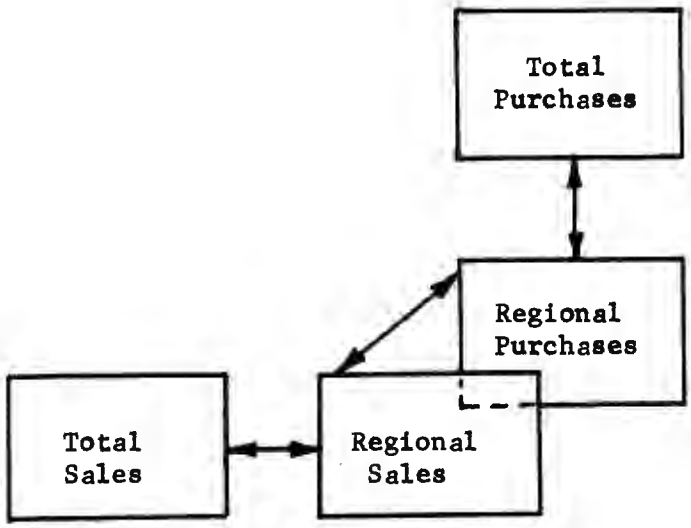
The second phase of constructing the Washington input-output tables entails the reconciliation of disparities in the two preliminary regional transactions tables, as depicted in Figure 2. The regional sales and regional purchases tables represent two independent estimates of the interindustry structure of the Washington economy. Since the initial sales estimates are given in producers' prices, while the purchases estimates are usually stated in purchasers' prices, the initial transactions tables first of all differ on definitional grounds. There are further discrepancies in these two sets of estimates because of errors associated with industrial classification, the distinction between in-state and out-of-state markets, control total estimates, the identification of capital transactions, and the treatment of taxes. The two-way estimating process used in the Washington study is especially useful in exposing discrepancies in accounting concepts and data that arise because of the fact that the analysis of the individual industries is undertaken by many investigators over a period of several months.

Of interest is how the "rows only" estimates compare with those of the "columns only" approach. A comparison of the two preliminary regional transactions tables can only be made with respect to the "goods" sectors (i.e., industries 1 through 42), since it is impossible to develop estimates from the sales side for the distribution of output of such service-type industries as transportation, trade, finance, insurance, and business and personal services. For the goods-producing sectors, the initial estimate of total regional intermediate purchases exceeds the preliminary estimate of total regional intermediate sales by 18 percent. An excess in the value of regional purchases over the value of regional sales is what one would expect, given that purchases are generally reported on a price basis that includes trade and transportation margins. In fact, the

total amount by which purchases exceed sales has provided a quite reasonable difference with which to accomodate allowances for trade and transportation margins. The amount by which local purchases from a given industry differs from the total sales of that industry is also often gratifyingly close after we take into account margins. However, in some sectors, the differences in the initial estimates demand further investigation. For individual cells in the input-output table, there tend to be many great disparities in the preliminary figures, implying substantial problems with the initial measurements.

Figure 2

The Arbitrage Process



The purpose of arbitrage is to reconcile differences in the row and column tables, arriving at a consistent set of regional transactions estimates. The first step in the process is to make adjustments to take account of the local trade and transportation margins associated with locally produced goods. With analysts of the various industries usually meeting in pairs, the next step is to resolve any further discrepancies in the preliminary tables. Where the differences in the initial interindustry transactions are small, arbitrage proceeds without difficulty. Where significant disparities exist, the investigators must decide upon the single, most reasonable estimate. This judgment is essentially made on the basis of the relative quality of the information incorporated

in the two preliminary figures, which in turn depends upon the survey coverage of the relevant sectors and the availability of good secondary data. One further consideration is the fact that the input-output accounting structure requires that a change in any element of the regional table must be compensated by a change elsewhere, either in other cells or in the industry control totals.

The arbitrage process itself requires many weeks of work, during which time the estimates are checked and rechecked. In some instances, large disparities in the preliminary figures trigger a thorough review of primary and secondary data as well as additional contacts with knowledgeable persons in industry. For example, a large error in the petroleum refining control total, based on a preliminary Census report, led to another canvass of the industry before the discrepancy was resolved. Of course, the arbitrage process not only affects the estimates of the regional table but leads to adjustments in the total sales, total purchases, export, and import tables as well. From the arbitrage process emerges a third set of input-output tables, one in which the flows among industries are consistent with each other and account for all industry output. While some analysts may regard this effort as "overkill," our experience with arbitrage has led us to become skeptical of either the "rows only" or "columns only" approach to estimating regional input-output tables.

Trade and Transportation Margins

According to our input-output accounting conventions, transactions are valued at producers' prices. In other words, the trade and transportation margins associated with the flows of commodities are shown explicitly as separate purchases from Trade and Transportation Services. The estimation of these two margins by purchasing sector is one of the more difficult tasks of the study. The problem stems from the complexity of distribution systems and the variety of billing practices. In short, buyers generally do not know how much of the price paid for goods represents the mark-up for trade and transportation services. Nor do the distributors always know the sectoral destinations of the products they handle. As a consequence, it is impossible to reliably estimate trade and transportation margins from our survey, making it necessary to resort to indirect estimating techniques.

The technical trade and transportation charges for each purchasing sector are estimated by applying the corresponding national input-output coefficients to the control totals of that sector. Admittedly, this step may understate transportation margins incurred by local purchasers because of the corner position occupied by Washington State relative to the national centers of production.

The next step is to estimate how much of the total trade and transportation services are supplied by the Washington economy. For each

purchasing sector, the total margins are first allocated to local Trade and Transportation Services according to the ratio of the value of goods purchased locally to the value of total goods purchased. The term "goods" again refers to purchases made from the commodity-producing industries, that is, industries 1 through 42 in our sectoring plan. Note that we are disregarding the service-type industries on the grounds that they entail little, if any, distribution mark-up. As an example of this allocation, if a sector purchases three-quarters of its goods in-state, we assign three-quarters of the total margins to Washington Trade and Transportation Services. The margins that remain are of course associated with commodity imports. However, not all of the trade and transportation services on these commodity imports are supplied from out-of-state distributors. In this case, we invoke a "rule of one-half;" that is, we assume that one-half of the distribution services tied to imports are performed by local establishments. Therefore, in our example, one-eighth of the total margins are also assigned to the local economy because of importing services. Although this rule is chosen largely out of convenience, one should bear in mind that for the transportation industry a large portion of the services entail the warehousing and handling of goods at <u>each</u> end of the movement. Similar reasoning also applies to Trade.

At the same time that estimates are made from the purchases side, consideration is also given to the <u>sales</u> of trade and transportation services. In the case of the transportation industry, control totals are estimated for eight modes of transportation. Given the outputs of these local sub-sectors, the final step is to reconcile those outputs with the transportation input estimates by purchasing sector. As with all input-output transactions, the purpose is to achieve a consistent set of estimates.

<u>Finance, Insurance, and Real Estate Margins</u>

Like Trade and Transportation Services, the Finance, Insurance, and Real Estate sector encompasses the activities of intermediaries. For Finance, the output includes the value of services for which monetary income is received as well as the imputed value of services furnished without explicit charge (e.g., so-called "free" bank services). In the case of Insurance, output is defined on a net basis as the value of premiums earned less benefits paid, which is a measure of the cost of the "risk-spreading" function of the industry. The output of Real Estate covers brokerage commissions and fees to rental agents. Because of the problems presented by these output concepts, surveys are of little use in estimating the sales distribution of the Finance, Insurance, and Real Estate sector. Instead, the distribution to various purchasers is inferred from national coefficients and secondary data regarding regional sales.

Technical requirements by each purchasing sector from the Finance industry are estimated using national input coefficients. Since the supply of services provided by the Washington Finance sector, as measured

by its control total, exceeds the estimated purchases by all regional sectors, the residual suggests that the state is a net exporter of financial services. Lacking further information on the matter, imports are assumed to be negligible and the output in excess of regional requirements is taken to be gross exports.

For the Insurance sector, the sales distribution is estimated in a series of steps. An initial estimate of the technically required inputs of insurance by each sector is again made by applying national coefficients to the corresponding Washington control totals. These inputs are then scaled to agree with the total margins earned on all insurance policies in force in Washington State, that is, policies written by both in-state and out-of-state insurance firms. Apparently, Washington industries purchase more insurance services (margins) than the national coefficients would suggest. Since an independent estimate of the margins earned in connection with the export of insurance services from Washington can be made from secondary data, the amount of locally supplied insurance to Washington users can also be estimated. This latter amount is allocated among buying sectors in proportion to their respective total purchases of insurance. While this procedure assumes that every sector imports the same proportion of its insurance requirements, it does provide an estimate of locally purchased insurance that is consistent with the total amount of locally supplied insurance.

The output of Real Estate is also distributed to users within Washington on the basis of national coefficients as well as the judgements of the staff, since the Washington Real Estate sector is defined in a different manner than that in the national input-output study.

Because of the inadequacy of the regional data for this industry, we have had to improvise estimating procedures that are less satisfactory than those used elsewhere in the study. The unique features of the regional industry are therefore much less clearly distinguishable from those of its national counterpart. Combining the finance, insurance, and real estate sub-sectors into a single industry is one way of dealing with our doubts concerning the reliability of the sales distributions of each component.

The Final Estimates

There is no way of knowing the accuracy of the final input-output estimates. All that can be said about the quality of the figures is that, given the vast amount of primary and secondary information underlying them, and the methodological consistency imposed by the arbitrage process and the input-output accounting conventions, the estimates appear reasonable. In other words, there has been no compelling information brought to the attention of the analysts that indicate the transactions should be something else.

Of course, we recognize that some estimates have better factual bases than others. Indeed, taking this into consideration, we might suggest a ranking of sectors according to the apparent quality of the estimates: manufacturing, resources, services, consumption, state and local government, and other final demand sectors. For the manufacturing industries, there are good survey and secondary data available, and the problems with input-output concepts, such as defining regional output, are minimal. The resource sectors have only scanty field information but excellent secondary data, and the concepts are generally clear. In the service-related industries there is some survey information and good published data. In many instances, it is felt that the relatively simple input structure of services, namely the large value added component, make it unnecessary to conduct extensive surveying. However, there are some significant conceptual and measurement problems, especially on the output side for Trade, Transportation Services, and Finance, Insurance, and Real Estate. Good secondary data provide a reasonable total consumption estimate, and the regional shares are estimated from survey data where they exist. Extensive field work underlies state government expenditures, but little information is available for local government expenditures, particularly with regard to the regional purchases. Lastly, for the other final demand sectors, purchases from regional sectors are estimated on the basis of survey sales figures. Otherwise, estimates are derived from a meager supply of published information.

A main concern with measurement error in the transactions tables is the effect it has on the operation of the input-output model in forecasting exercises. Again, we cannot give a straight answer to this question. However, the 1972 table has been subjected to Monte Carlo simulation experiments to assess the role of measurement error. Results indicate that, all things considered, measurement errors in the transactions table should be of minor concern to forecasters predicting economic aggregates like total income and employment, which is the case in most impact analyses. However, for more detailed forecasts, such as the prediction of the impact of a change in final demand of one industry on the output of another, the effects of measurement error in the table can be substantial. This caveat is simply another recognition that the behavior of the smaller components of an economy's structure are more difficult to predict than that of the broader aggregates.

5. MULTIPLIER ANALYSIS

Uses of input-output models fall into two categories, regional forecasting and multiplier analysis. A regional forecast is a projection into the future of the behavior of the regional economy in its entirety. In contrast, multiplier, or impact, analysis predicts the overall change in the economy usually as a consequence of an isolated change in the final demand of one of its industries. Of the two uses, multiplier analysis is by far the more common, being extensively employed for decision-making in both the private and public sectors.

The purpose of this section is to show the derivation of the multipliers from the Washington input-output study and to discuss their proper application. Although the basic notion of a multiplier is a relatively simple one, the first step is to outline a few of the fundamental ideas underlying input-output multipliers, some of which tend to make their application more difficult than is first apparent. Later in this section, these thoughts will be further discussed in the context of some specific examples of multipliers and impact analyses.

Basic Multiplier Concepts

At the start of our discussion, there are four points that might be made with regard to input-output multipliers. The first deals with the general definition of a multiplier. Multipliers measure the repercussions of the change in the level of one economic variable on the level of another variable. In the context of a Keynesian macroeconomic model, one commonly studied multiplier is the government expenditures multiplier, which estimates the change in aggregate income as a consequence of a change in public spending. A multiplier is therefore a ratio, with the dependent variable (in our example, income) in the numerator and the independent variable (government expenditures) in the denominator. There are a vast array of multipliers of potential interest to economists. Indeed, the conceivable number of combinations of dependent and independent variables forming multipliers is infinite. For regional analysts, reference to commonly used multipliers is found in expressions like "the increase in regional income from an increase in the exports of farm commodities" or "the decline in the total number of local jobs as a result of the closure of a plywood mill."

The second point is a reiteration of an idea developed in Section 2, namely that the Leontief inverse matrix is the basic ingredient in input-output multiplier analysis. As we have noted, the general solution of an interindustry model is given by equation (23),

$$X = (I-R)^{-1}F, \qquad (23)$$

where X is the vector of unknown, or endogenous, industry outputs and F represents the vector of given, or exogenous, final demands. The Leontief inverse matrix, derived from base-year estimates of the regional coefficients matrix, R, is a square matrix, B,

$$(I-R)^{-1} = B = \begin{bmatrix} b_{11} & \cdots & b_{1n} \\ \cdot & & \cdot \\ \cdot & & \cdot \\ \cdot & & \cdot \\ b_{n1} & & b_{nn} \end{bmatrix} \tag{24}$$

where each element, b_{ij}, is interpreted as the output directly and indirectly required from regional industry i per dollar of final demand delivered from industry j. As such, the inverse matrix is a table of output multipliers, representing the repercussions on the output of individual industries from changes in the final demands of other industries. For a 51-industry input-output model, there are 2,601 (=51x51) output multipliers in the inverse table. These output multipliers are not only of importance in their own right, but they provide the bridge to a variety of other useful input-output multipliers. For example, a value added multiplier, showing the Gross State Income required directly and indirectly from industry i to support a dollar of final demand of j, is a simple transformation of the output multiplier. If the value added coefficient, v_i, measures the value added in industry i per dollar of output (i.e., $v_i=V_i/X_i$, where V_i is the value added in i), the valued added multiplier, ${}_vM_{ij}$, is given by

$${}_vM_{ij} = b_{ij}v_i. \tag{25}$$

Similar multipliers, including their aggregate counterparts (i.e., the so-called Type I and Type II multipliers), can be developed for income and employment, as we demonstrate in a later sub-section.

The third fundamental notion about input-output multipliers is that their values are dependent upon the restrictions implied by the specification of the interindustry model. Three key assumptions employed in regional input-output formulations involve the form of the output equations, the stability of purchases coefficients, and model closure. Primarily because of the ease with which the mathematical model can be manipulated, the output equations are usually assumed to be linear and homogeneous, as given by equation (20) in Section 2. Furthermore, in order to render the model operational for forecasting purposes, the assumption of constant regional coefficients is commonly invoked. The issue of closure deals with the degree to which the variables of the model are made endogenous. In impact studies, income and consumption are treated as endogenous variables (the Type II formulation of an input-output model), although this is not always the case. In any event, if one or more of these restrictions are modified (e.g., if regional coefficients are assumed to vary in the future

at some projected rate), the values of the multipliers will be altered. Analysts should always keep in mind the implication that model specification has for values of multipliers and impact assessments.

The final point is also related to model specification. The multipliers derived from the Washington input-output tables are described as being static, since the underlying models, which depict the regional economy in timeless states of equilibrium, do not treat time as an explicit variable. An impact analysis is therefore an exercise in comparative statics, as it shows the changes in economic levels between two states of equilibrium without taking into account the length of time required to make the adjustment. More general specifications of input-output systems would consider the effects of time. Multipliers derived from formulations in which time lags, variable capital stocks, or temporally changing coefficients play a role are termed dynamic. Although most of the multipliers described in this paper are static in nature, we do report the results of preliminary attempts to measure the multipliers of a dynamic input-output econometric model for Washington State. This model, called the Washington State Projection and Simulation Model, is the subject of a forthcoming volume.[10]

A Simple Multiplier Analysis

One way of further presenting the ideas that lie behind input-output multipliers and impact analysis is to give a simple example. Suppose that a new manufacturing plant Y is planning to locate in Washington State. It intends to manufacture $50 million of product X for export to national and foreign markets. As some of its inputs, it plans to use locally supplied goods and services as well as labor and capital. What will be its economic impact on the region?

The regional economic impact of the location of a new plant or industry--or the expansion or decline of an existing industry--is the most common question facing input-output practitioners. One recent example for Washington State analysts has been the effect on the state economy of refining Alaskan oil. Another, for the drought year of 1977, has been the probable income and employment losses resulting from cutbacks in the aluminum industry due to temporary hydroelectric power shortages.

Since the changes in the production levels of one industry lead to output changes in other industries, in order to carry out an impact assessment it is necessary to know how industries are linked. For example, an

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[10] See Bourque, P. J., R. S. Conway, Jr., and C. T. Howard, The Washington Projection and Simulation Model: An Input-Output Econometric Model of Washington State (Seattle: Graduate School of Business Administration, University of Washington, forthcoming).

expansion in local petroleum refining will lead to increased output of the industrial chemicals industry, since chemicals are a direct requirement of petroleum refining. Increased production in Industrial Chemicals will in turn trigger activity in other local suppliers, such as Paperboard Mills. At the same time, income will be earned in all impacted sectors as a result of the intial expansion, which will increase the local demands for Trade and Meat Products, among other industries.

An input-output model is designed to assess the effects on local income and employment due to such external changes in economic activity. How we would estimate the impact of Plant Y on Washington State might be shown using a two-industry input-output model of the region. If X_1 is the output of manufacturing and X_2 is the output of nonmanufacturing, following equation (20), the general form of the input-output relations would be given by

$$\begin{aligned} X_1 &= r_{11}X_1 + r_{12}X_2 + F_1 \\ X_2 &= r_{21}X_1 + r_{22}X_2 + F_2. \end{aligned} \tag{26}$$

In this first formulation, final demand is inclusive of household consumption; that is, the model given by equation set (26) does not depict the output-income-consumption linkage.

To keep our example simple, suppose also that Plant Y has the same input structure as the manufacturing sector as a whole. In other words, its input requirements are specified by r_{11} and r_{21}, the regional purchases coefficients for manufacturing in our two-industry economy. In that case, if we had estimates of all regional coefficients, we could solve equation set (26) for industry outputs, X_1 and X_2, given any set of final demands, F_1 and F_2. Or, more generally, we could solve for changes in these outputs for any given changes in final demand. In our example, the expansion of Plant Y to produce $50 million of exports, all else being equal, would be tantamount to assuming that F_1=50 and F_2=0.

Estimates for the regional purchases coefficients can be obtained from a base-year input-output table. Shown in Table 5 are the 1972 transactions for our two-industry sectoring plan of the Washington State economy. These transactions are an aggregation of the 51-industry gross flows table given in Part III. Following equation (15), the estimated regional coefficient representing the purchases of manufactured goods by the nonmanufacturing sector, r_{12}, is calculated by dividing $817.5 million by $15,181.6 million. This coefficient is estimated to be 0.054 and is shown in Table 6, along with the other regional coefficients.

Substituting the values for the regional interindustry coefficients and final demands into equation (26), we obtain

$$X_1 = 0.125X_1 + 0.054X_2 + 50$$
$$X_2 = 0.140X_1 + 0.146X_2 + 0. \qquad (27)$$

With two equations in two unknowns, we can solve for X_1 and X_2. The values of the solution are 57.7 and 9.5, respectively. The reader can verify this by substituting these values into equation set (27). The $50 million expansion of Plant Y is therefore expected to increase manufacturing output by $57.7 million and nonmanufacturing by $9.5 million.

If we want to estimate the impact including the effects of induced household consumption, (i.e., if we want to close the model with respect to the household sector), we can reformulate the input-output model as follows:

$$X_1 = r_{11}X_1 + r_{12}X_2 + c_1V + F_1$$
$$X_2 = r_{21}X_1 + r_{22}X_2 + c_2V + F_2 \qquad (28)$$
$$V = v_1X_1 + v_2X_2 + c_vV + F_v,$$

where V is total regional value added (income), v_j is the value added coefficient for industry j, and c_i is the coefficient representing the fraction of total value added spent on goods and services produced by industry i in the state. According to this model, value added by sector is forecast as a constant fraction of sector output, while consumption purchases from industries are predicted as constant fractions of total value added.

For the impact of Plant Y, using the purchases coefficients calculated from the two-industry input-output table, we can rewrite equation set (28) as

$$X_1 = 0.125X_1 + 0.054X_2 + 0.054V + 50$$
$$X_2 = 0.140X_1 + 0.146X_2 + 0.317V + 0 \qquad (29)$$
$$V = 0.415X_1 + 0.696X_2 + 0.084V + 0.$$

Solving this system of equations, manufacturing output is expected to increase by $62.0 million, nonmanufacturing output by $28.7 million, and value added by $49.9 million. The anticipated impact on regional industries is of course higher in this case, since we have taken into account the feedback effects of the output-income-consumption linkage.

Rather than setting up and solving a set of equations, like (29), for each impact to be analyzed, we can turn to the Leontief inverse

Table 5

Two-Industry Washington State Transactions Table, 1972
(millions of dollars)

	Manufacturing	Nonmanufacturing	Consumption	Other Final Demands	Total Output
Manufacturing	1,355.7	817.5	1,029.5	7,609.8	10,812.5
Nonmanufacturing	1,510.7	2,223.4	6,077.7	5,369.8	15,181.6
Value Added	4,485.9	10,563.2	1,608.4	2,513.6	19,171.1
Imports	3,460.2	1,577.5	3,284.4	1,452.7	9,774.8
Total Input	10,812.5	15,181.6	12,000.0	16,945.9	54,940.0

Table 6

Two-Industry Washington State Regional Coefficients Table, 1972

	Manufacturing	Nonmanufacturing	Consumption
Manufacturing	0.125	0.054	0.054
Nonmanufacturing	0.140	0.146	0.317
Value Added	0.415	0.696	0.084

Table 7

Two-Industry Washington State Inverse Coefficients Table, 1972

	Manufacturing	Nonmanufacturing
Manufacturing	1.155	0.073
Nonmanufacturing	0.189	1.183

Table 8

Two-Industry Washington State Induced Inverse Coefficients Table, 1972

	Manufacturing	Nonmanufacturing	Consumption
Manufacturing	1.240	0.192	0.140
Nonmanufacturing	0.574	1.720	0.629
Value Added	0.997	1.394	1.633

tables, which provide a general solution to our input-output model, as discussed in Section 2. Table 7 gives the general solution to the two-industry model specified by equation set (26). Each cell shows the direct and indirect requirements in dollars from the regional industry named at the left per dollar of final demand delivered from the industry named at the top. Thus, for every dollar of output from manufacturing the economy directly and indirectly requires 18.9 cents of output from nonmanufacturing. For the $50 million manufacturing operation of Plant Y, we can see that the economy requires $57.7 million (=1.155x50) of output from manufacturers in the state and $9.5 million (=0.189x50) from the local nonmanufacturing sector. This is of course the solution to equation set (27).

In the same manner, Table 8 shows the general solution to the input-output model specified by equation set (28). In this case, each cell represents the value of output from the industry named at the left required directly, indirectly, and through induced household consumption to support a dollar of final demand delivered from the industry named at the top. The operation of Plant Y is now estimated to require $62.0 million (=1.240x50) of manufacturing output, $28.7 million (=0.574x50) of sales from nonmanufacturers, and value added amounting to $49.9 million (=0.997x50). Again, this is the solution to equation set (29).

Specification of Multipliers

A summary measure of the potential impact on the regional economy of an expansion or decline of an industry is given by that sector's aggregate multiplier. Input-output multipliers of this sort are derived from the inverse matrices, and can be stated in terms of value added, income, and employment, among other variables, depending upon the problem at hand.

A so-called Type I value added multiplier for sector j expresses the sum of the direct and indirect income changes in all industries of the economy from a dollar increase in the final demand of j. As we have previously noted, this multiplier is a simple transformation of the output multipliers given in the inverse matrix, B. If v_i is the value added coefficient for sector i, the Type I multiplier for j is expressed as

$$v M_j^I = \sum_{i=1}^{n} v_i b_{ij}. \qquad (30)$$

Using the inverse matrix in Table 7 and the value added coefficients in Table 6, we calculate the Type I value added multiplier for manufacturing in our two-industry model to be 0.611 [=(0.415)(1.155)+(0.696)(0.189)].

The Type II value added multiplier captures the repercussionary effects of the feedback loop that runs through earned household income and consumption expenditures. It therefore measures the direct, indirect, and induced value added in all industries per dollar of final demand of industry j. The inverse matrix, B, in this case is based upon a direct requirements matrix, R, expanded to include a household row and column (such as shown in Table 6). For this model, now with n+1 endogenous sectors, the Type II value added multiplier is given by

$$ {}_{v}M_{j}^{II} = \sum_{i=1}^{n+1} v_i b_{ij}. \tag{31} $$

The Type II value added multiplier for nonmanufacturing, derived from Tables 6 and 8, is calculated to be 1.394 [=(0.415)(0.192)+(0.696)(1.720) +(0.084)(1.394)]. Note that the Type II value added multiplier is given in the bottom row of the induced inverse matrix, and that it is actually not necessary to make this calculation. From Table 8, the Type II multiplier for manufacturing is shown to be 0.997.

We can also derive a Type II labor income (i.e., wages, salaries, and proprietors' income) multiplier. For this we need values of labor income coefficients, which are defined as the ratio of labor income to output in industry i; that is,

$$ y_i = Y_i/X_i. \tag{32} $$

Given estimates of y_i, the Type II labor income multiplier is given by

$$ {}_{y}M_{j}^{II} = \sum_{i=1}^{n+1} y_i b_{ij}. \tag{33} $$

Similarly, we can calculate a Type II job multiplier given estimates of job coefficients. A job coefficient is defined as

$$ n_i = N_i/X_i, \tag{34} $$

where N_i is the number of jobs in industry i needed to support an output level of X_i. The Type II jobs multiplier is expressed as

$$ {}_{n}M_{j}^{II} = \sum_{i=1}^{n+1} n_i b_{ij}. \tag{35} $$

We should point out that whereas a constant coefficient assumption regarding regional, value added, and labor income coefficients is reasonable in many forecasting exercises, a constant job coefficient assumption is not.

This is due to productivity changes, which tend to reduce the amount of labor needed to produce a unit of output, and thus the values of n_i, over time. As a consequence, while we might expect valued added and income multipliers to remain fairly stable, we would anticipate job multipliers, as defined by equation (35), to decline over time.

Note that here we have not specified aggregate output multipliers. Although the output multipliers given by the elements of the inverse matrix are at the root of the multipliers specified in the previous paragraphs, it is not very meaningful to sum these elements into an aggregate output multiplier for each industry j. In other words, given the concepts that lie behind each output measure, it does not make much sense, economically speaking, to combine, say, the shipments of pulp mills with the margins of the insurance industry into an aggregate transactions measure. Furthermore, users of the Washington tables in the past have sometimes employed aggregate output multipliers inappropriately, in at least one case confusing them with income multipliers. For these reasons, we have chosen not to present aggregate output multipliers.

Washington State Multipliers

Multipliers for the 51-industry Washington State input-output model are reported in Table 9. Included for each industry are Type I value added, Type II value added, Type II labor income, and Type II job multipliers. The income multipliers are stated in terms of millions of dollars of income per million dollars of output delivered to final demand by the industry named in the table. The jobs multiplier is given in terms of the total number of jobs generated in the economy per million dollars of output. Each type of multiplier follows the specification given in the previous paragraphs. For example, the Type I value added multiplier is calculated according to equation (30). The interested reader can verify this fact by using the inverse and value added coefficients found in the input-output tables presented in Part III.

In order to calculate the Type II labor income and jobs multipliers, estimates of labor income and job coefficients by industry are necessary. The estimates of labor income and jobs for 1972 upon which these coefficients are based are given in Table 10. Labor income is defined as wages, salaries, proprietors' income, and other labor income (such as payments to pension funds and medical insurance plans). Labor income is therefore equal to employee compensation and proprietors' income less the amount of employers' contributions to social insurance. The distribution of labor income by sector is consistent with the labor income estimates given by the U.S. Bureau of Economic Analysis in their personal income series. The concept of jobs differs from other employment concepts (such as persons employed) in a number of respects. It includes wage and salary employees (part-time as well as full-time workers), proprietors, and family workers, including those under 16 years of age. The job estimates

Table 9

Washington State Input-Output Multipliers, 1972
(millions of dollars and number of jobs per million dollars of output delivered to final demand)

Industry		Type I Value Added	Type II Value Added	Type II Labor Income	Type II Jobs
1	Field and Seed Crops	0.82	1.38	0.83	98.4
2	Vegetables and Fruits	0.91	1.53	1.11	130.5
3	Livestock and Products	0.67	1.13	0.71	83.2
4	Other Agriculture	0.79	1.32	0.83	102.3
5	Fisheries	0.81	1.36	0.87	114.1
6	Meat Products	0.47	0.78	0.45	52.9
7	Dairy Products	0.68	1.14	0.70	79.4
8	Canning and Preserving	0.78	1.31	0.74	93.8
9	Grain Mill Products	0.52	0.87	0.45	52.4
10	Beverages	0.71	1.19	0.54	59.7
11	Other Foods	0.68	1.14	0.69	80.7
12	Textiles	0.68	1.13	0.53	72.7
13	Apparel	0.49	0.83	0.46	72.4
14	Mining	0.73	1.22	0.66	67.8
15	Forestry	0.97	1.62	0.42	62.9
16	Logging	0.90	1.50	0.71	89.4
17	Sawmills	0.86	1.44	0.72	87.1
18	Plywood	0.75	1.25	0.68	78.3
19	Other Wood Products	0.60	1.00	0.57	69.6
20	Furniture and Fixtures	0.68	1.14	0.69	86.2
21	Pulp Mills	0.71	1.18	0.62	66.4
22	Paper Mills	0.66	1.10	0.60	61.7
23	Paperboard and Other Paper Products	0.72	1.20	0.60	65.2
24	Printing and Publishing	0.78	1.31	0.80	92.4
25	Industrial Chemicals	0.79	1.32	0.66	68.4
26	Other Chemicals	0.61	1.02	0.57	64.6
27	Petroleum	0.24	0.40	0.19	17.6
28	Glass Products	0.84	1.41	0.73	77.3
29	Cement, Stone, and Clay	0.74	1.24	0.71	75.8
30	Iron and Steel	0.77	1.29	0.71	74.6
31	Other Nonferrous Metals	0.69	1.16	0.74	75.7
32	Aluminum	0.45	0.75	0.36	36.3
33	Structural Metal Products	0.63	1.05	0.67	68.0
34	Other Fabricated Metals	0.55	0.92	0.49	54.4
35	Nonelectrical Motive Equipment	0.62	1.04	0.68	69.6
36	Machine Tools and Shops	0.68	1.14	0.82	85.6
37	Nonelectrical Industrial Equipment	0.63	1.06	0.69	69.4
38	Electrical Machinery	0.60	1.01	0.60	66.8
39	Aerospace	0.52	0.86	0.54	49.9
40	Motor Vehicles	0.34	0.57	0.36	33.7
41	Ship and Boat Building	0.72	1.21	0.91	86.1
42	Other Manufacturing	0.66	1.09	0.63	74.3
43	Transportation Services	0.85	1.41	0.96	96.8
44	Electric Companies	0.90	1.50	0.57	63.8
45	Gas Companies	0.56	0.94	0.31	36.1
46	Other Utilities	0.96	1.60	0.65	77.5
47	Communications	0.91	1.51	0.68	74.9
48	Construction	0.67	1.12	0.72	77.3
49	Trade	0.93	1.55	0.88	119.6
50	Finance, Insurance, and Real Estate	0.92	1.54	0.88	105.6
51	Services	0.90	1.51	1.02	134.8

Table 10

Labor Income and Jobs by Sector, 1972
(millions of dollars and thousands of jobs)

	Industry	Labor Income	Jobs
1	Field and Seed Crops	169.3	18.7
2	Vegetables and Fruits	267.0	29.6
3	Livestock and Products	78.7	8.7
4	Other Agriculture	24.9	3.0
5	Fisheries	17.3	2.4
6	Meat Products	28.5	2.9
7	Dairy Products	32.5	2.7
8	Canning and Preserving	78.8	11.2
9	Grain Mill Products	16.3	1.5
10	Beverages	39.5	3.2
11	Other Foods	52.9	5.5
12	Textiles	4.2	0.6
13	Apparel	36.6	6.5
14	Mining	25.9	2.1
15	Forestry	14.7	3.8
16	Logging	165.5	18.7
17	Sawmills	201.7	21.5
18	Plywood	87.7	8.6
19	Other Wood Products	64.1	7.6
20	Furniture and Fixtures	21.3	2.6
21	Pulp Mills	44.8	3.5
22	Paper Mills	88.2	6.6
23	Paperboard and Other Paper Products	90.8	7.7
24	Printing and Publishing	107.7	11.6
25	Industrial Chemicals	70.0	5.3
26	Other Chemicals	9.0	0.9
27	Petroleum	49.9	2.5
28	Glass Products	8.2	0.7
29	Cement, Stone, and Clay	53.9	4.9
30	Iron and Steel	38.4	3.2
31	Other Nonferrous Metals	19.7	1.7
32	Aluminum	114.4	8.4
33	Structural Metal Products	55.3	4.6
34	Other Fabricated Metals	32.1	3.1
35	Nonelectrical Motive Equipment	30.8	2.6
36	Machine Tools and Shops	40.7	3.7
37	Nonelectrical Industrial Equipment	55.9	4.6
38	Electrical Machinery	37.7	3.7
39	Aerospace	601.7	41.4
40	Motor Vehicles	65.1	4.5
41	Ship and Boat Building	213.9	16.6
42	Other Manufacturing	77.2	8.4
43	Transportation Services	742.4	63.5
44	Electric Companies	85.4	6.8
45	Gas Companies	14.4	1.2
46	Other Utilities	42.8	4.5
47	Communications	173.4	15.3
48	Construction	807.6	72.2
49	Trade	2,087.6	296.7
50	Finance, Insurance, and Real Estate	622.0	69.3
51	Services	1,708.6	229.7
	Domestic Service	70.0	32.0
	State and Local Government	1,500.3	190.6
	Federal Government	796.8	77.6
	Total	11,984.1	1,371.0

are based on Census and Employment Security Department data as well as on national measures of the number of employees and jobs by industry.

Some Considerations in Multiplier Analysis

The popularity of input-output for economic analysis is due in part to the simple and understandable structure of the model. Still, one can find many misuses--and even abuses--of input-output models. Although this is not the place for a thorough discussion of the methodology of impact studies, we might set down a few considerations, and in some cases words of caution, to be kept in mind during the course of a multiplier analysis. Some of these thoughts are only a re-emphasis of fundamentals that have already been discussed.

1. There is no single multiplier for an economy. One often hears the question, "What is the multiplier for Washington State?" Clearly, this question does not make much sense, since there are in fact many multipliers. Indeed, Table 9 has presented 204 multipliers for our economy--51 aggregate industry multipliers for each of four multiplier types. Nor does this list exhaust the possibilities. For example, if we had estimates of waste residual coefficients by industry, measuring the amount of waste per dollar of output, we could calculate pollution multipliers in the same manner that we have calculated job multipliers.

As we have noted earlier, a multiplier is an estimate of how one variable of the economy is expected to change when some other variable changes. The Type II labor income multiplier for Other Foods given in Table 9 is an estimate of the anticipated change in the economy's labor income in millions of dollars when Other Foods' exports increase by one million dollars. Thus, a multiplier is composed of two parts, the dependent change (in our example, the change in labor income) and the independent change (the increase in Other Foods' exports). The multiplier is simply the ratio of these two changes, the dependent change being the numerator and the independent change being the denominator. Conceivably, there are an infinite number of possible combinations of numerators and denominators and therefore an infinite number of possible multipliers. Some examples of multipliers not given in Table 9 that one might encounter are the following: the output of industry A per dollar of exports of industry B (i.e., the output multipliers given in an inverse matrix); the total payroll in the economy per dollar of direct payroll in industry C; the total regional value added per dollar of personal income; and total labor income per dollar of investment.

2. Multipliers are specified according to quite simplified assumptions concerning the behavior of the economy in response to changes in demand and income. The value for a given multiplier is dependent upon the behavioral assumptions underlying the input-output model. As apparent in equation set (28), four key restrictions are placed upon the Type II

value added multipliers: (1) the behavioral relations are linear; (2) regional coefficients are constant; (3) consumption is a simple function of value added; and (4) the effects of induced state and local government expenditures and induced capital spending are zero, that is, the model is not closed with respect to government and investment expenditures.[11] If we were to alter any of these assumptions, the multiplier estimates would change. How much bias a set of assumptions might introduce into the assessment of an impact is a critical issue.

It is not possible to measure the "true" impact of a given change in an economy, since input-output models cannot depict exactly an economy's complex reaction to such change. It is therefore not possible to state how much bias is associated with a given multiplier; that is, we cannot tell how much forecasting error is entailed with use of a given multiplier model. However, we can give an indication of the possible degree of bias associated with our specifications. Table 11 shows three sets of multipliers, each purporting to estimate the dollar change in total regional value added per dollar of final demand delivered by the industry named at the left. The first set is a repeat of the Type II value added multipliers given in Table 9, which follow the specification of equation set (28). In contrast, the second and third sets are value added multipliers based on other, though still reasonable, input-output models.

The second set of multipliers posits an alternative consumption function. In this case, consumption is a linear function of personal income rather than value added. Changes in personal income are in turn assumed to be equal only to changes in labor income as a consequence of the increased production in the region. A two-industry model would be specified in the following manner:

$$\begin{aligned} X_1 &= r_{11}X_1 + r_{12}X_2 + c_1Y + F_1 \\ X_2 &= r_{21}X_1 + r_{22}X_2 + c_2Y + F_2 \\ Y &= y_1X_1 + y_2X_2 + y_yY + F_y \\ V &= v_1X_1 + v_2X_2 + v_yY + F_v, \end{aligned} \tag{36}$$

where in this case c_i is the fraction of personal income spent on the output of industry i, y_j is the labor income coefficient of industry j, Y is total personal income, and F_y is the exogenous component of personal income, namely transfer payments, property income, and contributions to social insurance. In some ways this model of consumption behavior is more reasonable than our prior specification, since personal income is a more

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[11] These restrictions also apply to the Type II labor income and Type II jobs multipliers.

immediate trigger of household spending than value added. However, we are still some distance from an ideal formulation of the output-income-consumption linkage. For example, property income is assumed to remain unresponsive to an impact. Clearly, any increased activity in the economy will increase the property income of Washington residents in two ways. An expansion in production will mean increased income to the non-labor factors of production, some of which will go into the pockets of local residents. Greater output will also entail higher employment and some in-migration, with migrants bringing with them property income in the form of dividend, rent, and interest payments.

The third set of multipliers attempts to capture the effects of induced state and local government spending. The model assumes that public expenditures are a linear function of value added:

$$\begin{aligned} X_1 &= r_{11}X_1 + r_{12}X_2 + c_1V + g_1V + F_1 \\ X_2 &= r_{12}X_2 + r_{22}X_2 + c_2V + g_2V + F_2 \\ V &= v_1X_1 + v_2X_2 + v_vV + g_vV + F_v \end{aligned} \qquad (37)$$

where g_i is the fraction of value added spent on the output of local industry i. Note that here we return to our original specification of household behavior. Assuming that state and local spending is related to regional income is not unreasonable. In fact, recent studies for the national economy and for Washington State support this contention. These findings are consistent with either of two hypotheses. The first is that the demand for public services is similar in nature to the demand for consumer services and thus is predictable from household income levels. The second hypothesis is that tax revenues determine expenditures, but that taxes are also predictable from total income.

As shown in Table 11, the value added multipliers with the alternative consumption function are lower in value than the Type II multipliers. The average reduction is about 15 percent, but there is a considerable range about this mean. For instance, the multiplier for Ship and Boat Building falls only 4 percent, while the decline for Forestry exceeds 35 percent. The ranking of multipliers (a measure of their relative values) is not disturbed much with the introduction of the alternative specification, although there are some notable exceptions, such as Forestry, whose rank falls from one to 22. When state and local government expenditures are made endogenous to the input-output model, all multipliers increase above their Type II values by 24 percent. The mathematical structure of the input-output model accounts for this across-the-board percentage increase. Of course, this does not alter multiplier values relative to one another.

The purpose of this exercise has been to show that the values of multipliers, and therefore the results of impact studies, are dependent

Table 11

Value Added Multipliers Under Alternative Specifications, 1972
(dollar per dollar of output delivered to final demand)

Industry		Type II	Alternative Consumption Function	State and Local Endogenous
1	Field and Seed Crops	1.38	1.18	1.71
2	Vegetables and Fruits	1.53	1.44	1.90
3	Livestock and Products	1.13	0.99	1.40
4	Other Agriculture	1.32	1.16	1.64
5	Fisheries	1.36	1.20	1.69
6	Meat Products	0.78	0.66	0.97
7	Dairy Products	1.14	0.99	1.42
8	Canning and Preserving	1.31	1.10	1.63
9	Grain Mill Products	0.87	0.70	1.08
10	Beverages	1.19	0.91	1.48
11	Other Foods	1.14	0.99	1.42
12	Textiles	1.13	0.88	1.41
13	Apparel	0.83	0.69	1.03
14	Mining	1.22	1.00	1.52
15	Forestry	1.62	1.03	2.02
16	Logging	1.50	1.16	1.87
17	Sawmills	1.44	1.14	1.79
18	Plywood	1.25	1.03	1.56
19	Other Wood Products	1.00	0.84	1.24
20	Furniture and Fixtures	1.14	0.99	1.42
21	Pulp Mills	1.18	0.96	1.47
22	Paper Mills	1.10	0.91	1.36
23	Paperboard and Other Paper Products	1.20	0.95	1.49
24	Printing and Publishing	1.31	1.13	1.63
25	Industrial Chemicals	1.32	1.04	1.64
26	Other Chemicals	1.02	0.85	1.27
27	Petroleum	0.40	0.31	0.50
28	Glass Products	1.41	1.14	1.75
29	Cement, Stone, and Clay	1.24	1.05	1.55
30	Iron and Steel	1.29	1.06	1.60
31	Other Nonferrous Metals	1.16	1.02	1.44
32	Aluminum	0.75	0.58	0.93
33	Structural Metal Products	1.05	0.93	1.30
34	Other Fabricated Metals	0.92	0.75	1.14
35	Nonelectrical Motive Equipment	1.04	0.93	1.29
36	Machine Tools and Shops	1.14	1.07	1.42
37	Nonelectrical Industrial Equipment	1.06	0.94	1.31
38	Electrical Machinery	1.01	0.86	1.25
39	Aerospace	0.86	0.75	1.07
40	Motor Vehicles	0.57	0.50	0.71
41	Ship and Boat Building	1.21	1.16	1.50
42	Other Manufacturing	1.09	0.92	1.36
43	Transportation Services	1.41	1.29	1.76
44	Electric Companies	1.50	1.07	1.87
45	Gas Companies	0.94	0.64	1.17
46	Other Utilities	1.60	1.17	1.99
47	Communications	1.51	1.15	1.88
48	Construction	1.12	0.99	1.39
49	Trade	1.55	1.29	1.92
50	Finance, Insurance, and Real Estate	1.54	1.29	1.91
51	Services	1.51	1.37	1.88

upon the specification of the underlying input-output model. Partly in recognition of the specification problems of static input-output multipliers, recent research in the Graduate School of Business Administration at the University of Washington has been directed at developing an input-output econometric model of the state, as we have previously noted. From the Washington Projection and Simulation Model (WPSM) we can derive multipliers that are comparable in definition to the value added multipliers shown in Table 11. However, the multipliers from WPSM are conceptually superior to, say, the Type II multipliers in at least four respects. First, the input-output econometric model is closed with regard to state and local government expenditures and private investment, these variables being predicted from income and population, among other things. The output-income-consumption linkage is also more accurately specified than that found in Type II models. Third, the multipliers are dynamic in the sense that their values follow a time path as the various lags and time-phased adjustments operate within the system. Last, WPSM is not restricted to linear homogeneous functions and temporally constant interindustry coefficients; the dynamic model is nonlinear, and an attempt is made at projecting regional purchase coefficients into the future.

A comparison of WPSM value added multipliers with their static Type II counterparts for selected industries is given in Table 12. The multipliers from WPSM are calculated under the assumption that there is a dollar increase in exports of the given industry in 1976, with the exports remaining at that relatively higher level throughout the forecast period, in this case to 1985. For each industry the WPSM multiplier is higher in value than the corresponding Type II multiplier, a fact due primarily to the inclusion of the feedback loops running through state and local government spending and investment in the dynamic model. Differences between the dynamic and static multipliers are much greater in the early years of the impact, when induced investment in the WPSM model reaches its peak. By 1985, with the passing of the investment phase, WPSM multipliers begin to level off, although they still remain at values much higher than that of the static multipliers.

This discussion probably raises more questions about multipliers and impact studies than it answers. One important unanswered question deals with the choice of a multiplier (or more specifically, a multiplier model) in light of the selection shown here. Is the Type II multiplier preferable to the one with the alternative consumption function? Is the WPSM multiplier superior to all of them? Unfortunately, more research is required before this issue can be settled. In the meantime, we feel that Type II multipliers continue to be useful for impact analyses. There are four reasons for making this observation. First, Type II multipliers are the ones traditionally used in impact studies for Washington State and other regions. Second, they are readily accessible and easy to apply, especially in comparison to dynamic multipliers like those of WPSM. Third, according to what is known about input-output formulations, Type II multipliers probably provide conservative estimates of impacts; that is, in the analysis

Table 12

A Comparison of WPSM and Static Type II
Value Added Multipliers for Selected Industries
Assuming an Increase in Exports from 1976 to 1985
(dollars of value added per dollar of exports)

Industry	Type	1975	1976	1978	1980	1985
Aerospace	WPSM	0	1.15	1.21	1.22	1.01
	Static	0	0.86	0.86	0.86	0.86
Logging	WPSM	0	1.83	1.97	2.04	1.85
	Static	0	1.49	1.49	1.49	1.49
Pulp Mills	WPSM	0	1.33	1.67	1.75	1.59
	Static	0	1.18	1.18	1.18	1.18
Petroleum	WPSM	0	0.43	0.52	0.53	0.46
	Static	0	0.40	0.40	0.40	0.40
Aluminum	WPSM	0	0.92	1.05	1.13	1.11
	Static	0	0.75	0.75	0.75	0.75
Trade	WPSM	0	1.66	2.37	2.49	2.19
	Static	0	1.53	1.53	1.53	1.53

of, say, economic expansions, they err on the side of caution in their statements of the income and employment increases that are expected to take place. Last, it appears that, with few exceptions, multipliers maintain their relative values even with model modifications. Thus, Type II multipliers (or any multiplier, for that matter) would be useful in making relative comparisons of two or more different impacts. In any event, whatever the choice of multipliers, the analyst should be aware of the possible bias in the impact assessment because of the restrictions inherent in the model's specification.

3. Accurate estimates of the direct impact are important. The most straightforward approach to estimating the impact on regional value added of a plant expansion is to use the Type II value added multiplier of the industry to which the plant belongs. This procedure of course presumes that the plant has an input structure equivalent to that of the industry as a whole. When one has no further information on hand, this is the most reasonable assumption to adopt.

However, when one does know the make-up of the plant's direct purchases vector, this information should be incorporated into the impact assessment. The basic reason for this is that once the direct value added is known, and one has reliable estimates of the other direct regional purchases, a good portion of the impact has been measured. As evidence of this contention is the fact that for many sectors the direct value added coefficient represents about one-half of the total Type II value added multiplier.

Furthermore, use of the aggregate industry multiplier can be misleading. Since each industry, even in the 51-sector input-output model, consists of establishments producing a variety of goods and services and requiring different bundles of inputs, a given establishment's multiplier may be quite different from the "average" industry multiplier. To demonstrate this, consider the aggregate multipliers of two establishments in the Beverages sector. For reasons of confidentiality these companies will go unnamed, but both were operating in 1972 and filled out survey questionnaires regarding their direct purchases for that year. Using this information, we have calculated their Type II value added multipliers to be 1.20 and 0.93, respectively. These figures compare with an industry multiplier estimated to be 1.19. The multiplier of the first establishment virtually equals the industry multiplier. However, the multiplier of the second company is significantly lower, about 30 percent below the industry value in this instance. Unfortunately, the multiplier of the second establishment does not seem to represent an extreme example, in which case the test here clearly demonstrates the value of having information on the direct purchases vector.

4. The use of historical multipliers should be of minor concern in impact studies. Criticism of input-output models has focussed upon the assumption of temporally constant coefficients, an assumption commonly

invoked to render the models operational. There are several potential causes of regional coefficient change--technological change, variations in product mix, price changes, input substitutions, and shifts in trade patterns--but the question of coefficient instability is essentially an empirical one. The criterion with which to gauge the importance of coefficient change is the degree to which such change impinges upon the quality of input-output forecasts. For impact analysis this issue reduces to a consideration of the stability of multipliers over time.

Recent studies of Type II value added multipliers of the 27-industry Washington input-output models for 1963, 1967, and 1972 have indicated that these multipliers are relatively constant over time. Over each of the three test periods--1963-1967, 1967-1972, and 1963-1972--the average change in the industry aggregate multipliers was 10 percent, although variations went as high as 30 percent. A pictorial presentation of the variation of multipliers is given in Figure 3. In this instance, the range in the values of the Type II multipliers for each industry over the three input-output years is shown. The small change in each multiplier relative to the differences among them is evident in this figure. This, coupled with a somewhat systematic movement of multipliers over time (i.e., it has been found that multipliers tend to rise and fall together), has meant that the values of multipliers relative to each other have remained fairly stable.

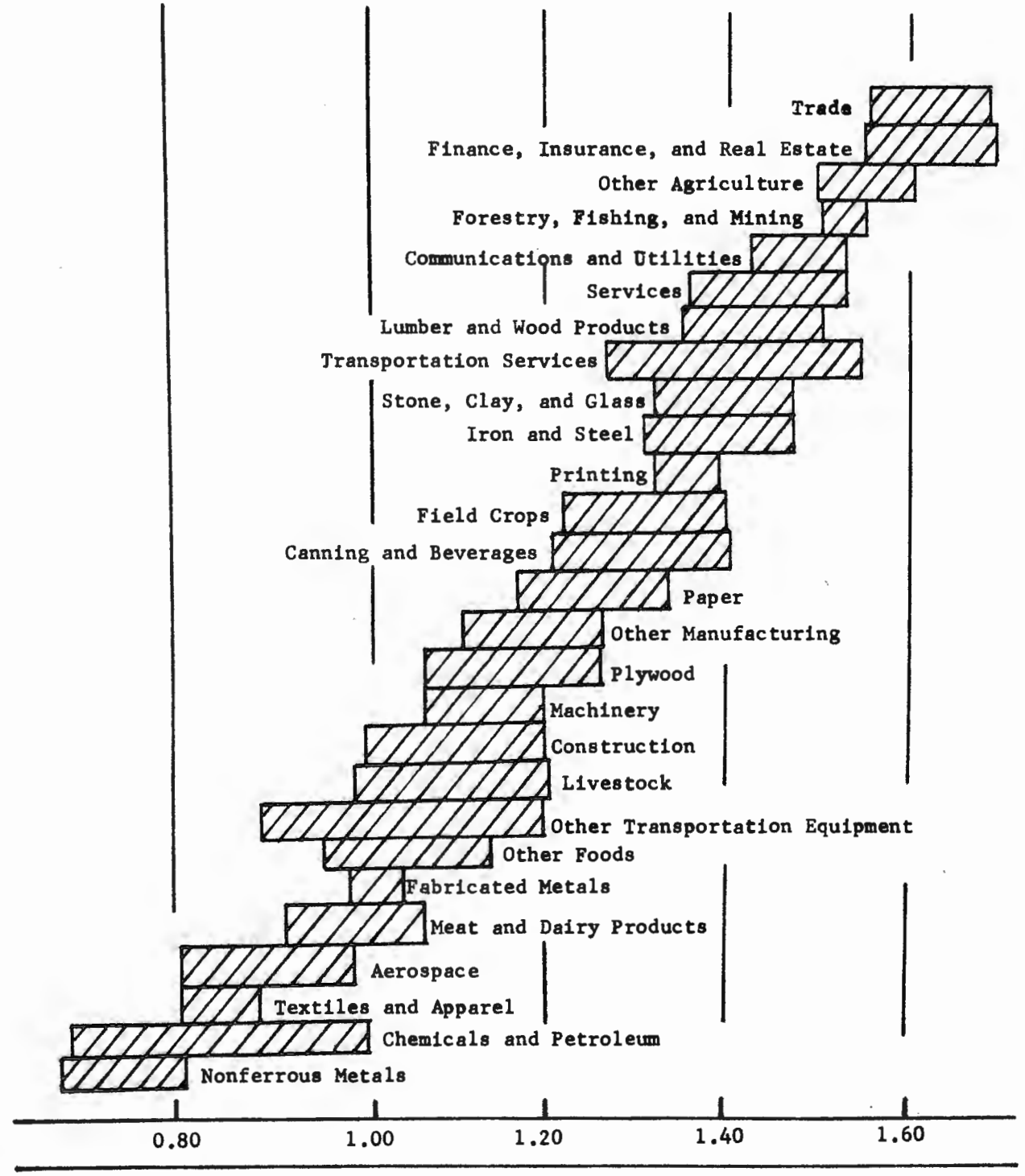
We should point out again that the constant multiplier assumption is not valid for Type II jobs multipliers, as we have defined them here. While it may be reasonable to assume that the aggregate income of an economy required directly and indirectly to support a given increase in the final demand of some industry does not change over time, we do expect the employment requirements to decline because of productivity gains. It is therefore necessary for analysts to update job multipliers by estimating the jobs-per-output ratios for the relevant forecasting period.

However, for income impacts the use of historical multipliers does not seem to be a critical problem. The criterion for making this judgment is the size of the forecasting error introduced into impact analyses because of unstable multipliers over time relative to the forecasting errors generated by other factors. As a means of capsulizing this contention, we might suggest a list of concerns for input-output practitioners when making impact studies. Five concerns are listed in their apparent order of importance. These are: (1) the possible misuse of multipliers; (2) the choice of the specification of the input-output model; (3) measurement error in the direct purchases vector; (4) measurement error in the base-year input-output model, especially if it is not derived from a survey-based table; and (5) the temporal instability of multipliers.

5. <u>High multipliers are not necessarily good; and low multipliers are not necessarily bad</u>. It is sometimes suggested that development of Industry G instead of Industry H should be promoted since the former has

Figure 3

Range of Type II Value Added Multipliers, 1963, 1967, and 1972



a higher multiplier. Such statements contain at least two fallacies. First, as we have seen, an impact is multi-dimensional, entailing induced effects on a number of economic variables. To put this in other terms, one should take into account more than one multiplier when evaluating the relative benefits of alternative expansions. And while Industry G may have a higher labor income multiplier, Industry H may have a higher employment multiplier. Referring back to Table 9, this is in fact the case for Paper Mills and Apparel.

The second fallacy is that a consideration only of industry multipliers neglects the relative costs of proposed developments. It may well be that Industry G has consistently higher income and employment multipliers than Industry H, but that the cost of promoting the regional expansion of G--in terms of public investment, tax incentives, and the like--is prohibitive. In general, the decision to promote one industry and not others is a complicated choice involving the assessment of both benefits and costs of all possible alternatives. Individual input-output multipliers enter into this decision as only one of many criteria.

6. Multipliers, and impact assessments, represent only estimates of the anticipated economic effects of some external change. A multiplier analysis is a forecasting exercise, and forecasts are bound to be wrong, at least to a degree. As apparent from the previous discussion, inaccuracies in impact statements will occur for a number of reasons: the misuse of input-output models; model misspecification; incorrect projections of the direct impact; measurement errors in the base-year coefficient estimates; and outdated input-output coefficients. The first reason is inexcusable, while the last four are unavoidable. It is therefore nonsensical to estimate the income effects of, say, a billion-dollar Aerospace expansion down to the last dollar, or even to state that the Type II value added multiplier for Field and Seed Crops is 1.37653. It would be preferable to give impact assessments in terms of a confidence interval, such as $100 million of labor income give or take $30 million. However, given such problems as model specification, the degree of uncertainty is not always measureable or even apparent. Nevertheless, the analysts should bear in mind that future economic behavior is never certain, and that multipliers as indicators of that behavior are only estimates.

PART II. SECTOR REPORTS

Economists usually perceive the principal value of input-output studies to reside in the techniques used to analyze industrial interdependence, such as in multiplier, or impact, analysis. However, for any application the transactions table is the initial point of departure. Thus, without a clear understanding of the nature of the estimates that make up the transactions table, it would be impossible to carry out applications effectively.

The transactions table represents an orderly display of what initially have been individually distinct studies of the sales, purchases, and incomes of each industry. Although the industries in Washington State have been examined by rules which permit an eventual unification into a transactions table, each industry study has encountered unique problems with regard to definitions, measurement conventions, and the development of observations or methods of estimation. A complete documentation of these accounting problems for each industry would be a task too exhaustive to undertake. Yet, for those persons interested in making use of the Washington input-output studies, some documentation is necessary.

In summary form, the following reports present the salient concepts and measures of activity for each sector. Each report briefly discusses the sector definition, the source of the control total estimate, indicators of economic activity for both the sector and some sub-sector components, identification of major products and producers, and the basis for estimating the input-output distributions. However, prior to the sector reports, there is a short discussion of certain conceptual and measurement issues common to all sectors.

Some Matters of Concept and Measurement

Sector Classification

Each of the following reports provides a specific definition of sector content. In this regard, each sector is defined in terms of the 1972 Standard Industrial Classification (SIC) code; major products in Washington State are identified; and each sector is related to the U.S. input-output classification scheme.

Showing the corresponding national input-output sectors is useful for many analytical purposes, especially for studies making comparisons of the interindustry structures of the Washington and U.S. economies. As we have noted in Section 3 of Part I, the bridge between the Washing-

ton and U.S. input-output studies is not direct. Among the important differences are that the Washington study generally adheres to the establishment definition of sectors used in the various industrial censuses; the state tables identify imports by receiving industry; and the Washington study incorporates the activity of government enterprises within the appropriate industrial sector.

Control Totals and Net Inventory Change

Each report shows operating statistics for the sector and indicates the basis for estimating the control total, that is, the value of total output. The figures on activity levels have been obtained from, or estimated on the basis of, various industrial censuses and reports of statistical or regulatory agencies. More specifically, the control total is defined as the value of either production, sales, gross revenues, gross receipts, or gross margins, a total that is inclusive of excise taxes whether levied on production or sales.

For the manufacturing industries the control total is the value of production, which is equal to the cost of materials consumed plus value added, where value added, as defined by the 1972 Census of Manufacturers, includes the costs of some purchased services.[12] The difference between the value of production and the value of shipments represents the net change of work-in-process and finished-goods inventories held by manufacturers; that is,

net inventory change = production - shipments

or

net inventory change = cost of materials + value added - shipments.

Note that the net inventory change estimate does not reflect changes in the stock of raw materials. In the nonmanufacturing industries where inventory change is shown to be zero, either there are no processed or finished product inventories held, or there is no information available with which to determine net inventory change.

Employment and Payrolls

Industrial censuses for 1972 and reports of the Washington Employment Security Department (ESD) are the principal sources of employment and payroll statistics by industry. However, these two sources provide

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[12]Because it includes the costs of certain purchased services, the Census of Manufactures concept of value added is not synonymous with value added as defined in our input-output accounts.

estimates which differ for a number of reasons:

(1) The Census reports measure the total number of employees, while the ESD quarterly reports count only workers covered by the State Employment Security Act.[13]

(2) The Census figures for manufacturing employment and payrolls by industry exclude administrative and auxiliary staff, whereas ESD estimates include such staff.

(3) The manufacturing Census estimate of employment is the average employment of production workers over four months (March, May, August, and November) plus the March employment of all other workers. On the other hand, ESD estimates are an average of monthly covered employment for the entire year.

(4) The Census estimates by industry are based on a classification of establishments according to the 1972 SIC manual, whereas ESD estimates for 1972 are based on the 1967 SIC manual.

(5) The classification of particular establishments into industry groups by the Census and ESD may differ, since disclosure rules and time lags sometime preclude a common determination.

Since the employment and payroll estimates reported by the Census and ESD often differ, we have shown estimates from both sources in the following reports. Still a third set of employment and payroll estimates has been made for the input-output study. These reassign operating employment and payrolls of government enterprises into industrial sectors, while capitalized labor costs of private establishments are transferred into the construction industry. These estimates of employment and payrolls measure the current labor input associated with the output of industries, and are therefore better suited to the analytical requirements of input-output analysis.

Principal Producers

The establishment is the unit of observation for estimating input-output relationships for most sectors, and we have identified the principal firms that operate establishments in each sector. This provides the reader with some specific examples of the scope of activities in these sectors. Other publications, such as Contacts Influential and the Directory of Washington Manufacturers, contain more detailed information,

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[13]ESD also reports total employment, as well as total nonagricultural wage and salary employment by industry, in its "Monthly Report of the Labor Force." However, these estimates are made at a level of aggregation not generally compatible with the more detailed input-output sectoring scheme.

including the industry classification of producers, their location, and their products and principal markets.

Survey Coverage

For sectors in which surveys have been undertaken a measure of the coverage of activity represented by the returned questionnaires is provided. The coverage factor in terms of employment is usually based on ESD estimates, while the coverage in terms of sales is usually based on Census shipments.

Coverage factors indicate the reliability of the input-output distributions, in that a higher response rate for a sector, ceteris paribus, should mean a more accurate estimate of the pattern of its purchases and sales. However, the reliability of a set of estimates cannot be wholly judged by the respective coverage factor. Since each entry in the transactions table is an estimate based on a dual response (where both the respective selling and purchasing sectors have been surveyed), two survey estimates are involved. Furthermore, the discipline of the arbitrage process and the accounting identity that total output must equal total input for each industry ensure that the complete set of estimated input and output distributions are consistent. Finally, the survey coverage factor does not reflect the contribution to the accuracy of the input-output tables of information obtained from secondary sources, administrative records of regulatory commissions and agencies, and numerous communications with business persons and trade associations.

Secondary Sources of Information

In preparing the industry sales and purchases estimates, we have drawn upon a variety of statistical publications. Some of these are unique to a particular sector, and these are indicated in the following reports. However, other publications which underlie the estimates of a number of industries are cited here:

U.S. Bureau of the Census, 1967 Census of Minerals.

U.S. Bureau of the Census, 1969 Census of Agriculture.

U.S. Bureau of the Census, 1972 Census of Construction.

U.S. Bureau of the Census, 1972 Census of Governments.

U.S. Bureau of the Census, 1972 Census of Manufactures.

U.S. Bureau of the Census, 1972 Census of Retail Trade.

U.S. Bureau of the Census, 1972 Census of Selected Services.

U.S. Bureau of the Census, 1972 Census of Transportation.

U.S. Bureau of the Census, 1972 Census of Wholesale Trade.

U.S. Department of Commerce, Input-Output Structure of the U.S. Economy, 1967.

Washington Employment Security Department, Quarterly Report of Employment and Payrolls, various issues.

Washington Employment Security Department, Labor Force and Employment in Washington State, various issues.

Industry 1: Field and Seed Crops

The Field and Seed Crops sector is defined on a commodity basis to include SIC 011, 013 (except 0133), and parts of 018 and 019. This corresponds to U.S. I/O sectors 2.01-2.03 and 2.06. This sector covers cash grains and other field crops, with the exception of sugar beets, as well as seed crops. The output is defined as the value of production and represents the value harvested and not just the output sold. Included in the value of output, for example, is hay produced on farms to feed livestock. Subsidy payments to farmers by government are excluded from the control total.

The two major field crops in the state are wheat and hay. Together they make up 85 percent of the value of field crop production. While wheat finds its markets primarily outside the state, hay is consumed principally by the Washington Livestock and Products sector.

Crop	Production ($ mil.)
Wheat	256.4
Hay	76.4
Barley	18.4
Field corn	19.2
Alfalfa seed	9.3
Other	13.6
Total	393.3

There are no published statistics of employment and income for each of the industries in the farm sector. For agriculture as a whole (i.e., industries 1-4 combined), estimates are available from several sources. The U.S Bureau of Economic Analysis (BEA) reports labor and proprietors' income on farms of $536 million, of which $450 million is proprietors' income (including imputed rental value of farm dwellings and farm subsidies) and $86 million is labor income (including wage disbursements plus other labor income). BEA also reports the number of farm wage and salary workers and farm proprietors to be 26,751 and 41,939, respectively. Somewhat different estimates are provided by the U.S. Department of Agriculture (USDA). It reports 75,000 workers on Washington farms, including 27,000 hired workers and 48,000 family workers, with hired labor expense (cash wages, perquisites, and social security taxes paid by employers) amounting to $116.2 million. The Washington Employment Security Department (ESD) estimates total agriculture employment, including farm managers, unpaid family workers, and hired year-around and seasonal workers, as averaging 49,300 in 1972. Of this total, only 562 employees in SIC 01 with payrolls of $2.2 million are reported by ESD to be covered by the Social Security Act.

On the basis of the above data and national ratios from U.S. input-output studies, we have made estimates of the employment and payrolls attributed to each of the four agricultural sectors in the Washington study. For Field and Seed Crops hired employment is estimated to be 8,500 workers with payrolls of $28.4 million.

The control total is taken to be the value of production of field and seed crops as reported in the Annual Crop Report, 1972. Since no survey of farms is feasible, the initial distributions of outlays and sales have been made primarily on the basis of secondary sources of information and the judgments of Agricultural Extension Service agents and agricultural economists. Two publications by the USDA, Farm Production Expenditures, Washington, 1972 and the Census of Agriculture, Washington, 1969, provide the principal basis for estimating the total purchases distribution. The published estimates of interindustry transactions within Washington State are the resultant of arbitrage among all industrial sectors to achieve consistency.

Published sources of information used in the analysis of the agricultural sectors include:

U.S. Department of Agriculture, Census of Agriculture, Washington, 1969.

U.S. Department of Agriculture, Farm Income, State Estimates, 1957-1972.

U.S. Department of Agriculture, Farm Labor, January 1973.

U.S. Department of Agriculture, Farm Production Expenditures, Washington, 1972.

U.S. Department of Agriculture and the Washington Department of Agriculture, Annual Crop Report, 1972.

Industry 2: Vegetables and Fruits

Vegetables and Fruits is defined on a commodity basis as SIC 0133, 016, 017, and part of 019. This corresponds to U.S. I/O sectors 2.04 and 2.05. The products covered in this sector are vegetables (including sugar beets), fruits, and nuts. As discussed in the Field and Seed Crops report, the output is defined as the value of production.

We have estimated 1972 hired employment in Vegetables and Fruits to be 13,400 workers with payrolls of $44.9 million.

Apples, potatoes, and sugar beets lead the list of major crops in this sector. Most of these crops are sold to local processors, who in turn supply both internal and external markets.

Crop	Production ($ mil.)
Apples	114.1
Potatoes	57.9
Sugar beets	39.5
Hops	24.0
Pears	22.0
Cherries	11.9
Other	101.8
Total	371.2

As there is no survey of farms, the purchases and sales estimates are based largely upon secondary sources of information, as outlined in the Field and Seed Crops report.

Industry 3: Livestock and Products

The Livestock and Products sector is defined on a commodity basis as SIC 02, except 027, which corresponds to U.S. I/O sectors 1.01-1.03. Products covered by this sector include beef cattle, hogs, sheep, goats, milk and cream, poultry, and eggs. As discussed in the Field and Seed Crops report, the output is defined as the value of production.

We have estimated 1972 hired employment in Livestock and Products to be 4,000 workers with payrolls of $13.2 million.

Cattle and calves and milk and cream head the list of major products in this sector. These are sold mainly to Meat Products and Dairy Products, respectively, which in turn serve local consumer demand.

Product	Production ($ mil.)
Cattle and calves	151.3
Milk and cream	149.0
Eggs	22.7
Chickens and broilers	12.3
Other	18.3
Total	353.6

As there is no survey of farms, the purchases and sales estimates are based upon secondary sources of information, as outlined in the Field and Seed Crops report.

Industry 4: Other Agriculture

Other Agriculture is defined on a mixed commodity-establishment basis as SIC 027, 071, and part of 018, which corresponds to U.S. I/O sector 2.07 and part of 4.00. This industry embraces animal specialties (e.g., rabbits and horses), horticultural specialties (e.g., bulbs and flowers), and soil preparation services. Other agricultural services are classified in Services, and forest nurseries are included in Forestry.

We have estimated hired employment in Other Agriculture to be 1,600 workers with payrolls of $6.0 million.

Nursery and greenhouse crops are the major commodities of Other Agriculture. In general, the products in this sector are sold to consumers, both inside and outside the state.

Product	Production ($ mil.)
Nursery crops	26.0
Greenhouse crops	16.6
Bulb crops	5.4
Other products and services	9.7
Total	57.7

As there is no survey of farms, the purchases and sales estimates are based upon secondary sources of information, as outlined in the Field and Seed Crops report.

Industry 5: Fisheries

Fisheries is defined on a commodity basis as SIC 091, which includes only commercial fishing. This corresponds to part of U.S. I/O sector 3.00. The operations of fish hatcheries, farms, and preserves are not included in Fisheries. The processing of fish is categorized in Canning and Preserving, and the operation of party fishing boats is counted in Services.

For the purposes of this study, the output of Washington fisheries is defined as the fisherman's value of the catch landed in Washington State. The exclusion of fish caught in distant fishing grounds and landed in another state (e.g., Alaska) by Washington vessels tends to underestimate the importance of fishing as a source of income to Washington fishermen; but the definition chosen avoids the likelihood of the same catch being counted in more than one state. Neither the residence of the fishermen nor the port of registry of the vessel would appear to be a relevant basis for measuring the value of output from the economic resources engaged within the State of Washington.

The value of the landed catch in Washington State for 1972 is reported by the Washington State Department of Fisheries as follows:

Product	Value of Catch ($ mil.)
Salmon	17.7
Bottomfish	3.0
Halibut	1.8
Other fish	6.3
Oysters	5.4
Other shellfish	5.5
Total	39.7

According to the Washington Employment Security Department, the average monthly covered employment in 1972 is 1,050 workers, with payrolls of $15.0 million. However, there are a large number of self-employed and "shares" workers in this highly seasonal industry.

An analysis of the purchases and sales distributions has been undertaken by species as well as by type of gear for salmon. Sources used to estimate the costs and markets for Fisheries include the Marine Economics Data Sheets prepared by the Sea Grant Advisory Program of Oregon State University, interviews with representatives of fishing associations, questionnaires returned from two large

oyster companies, and a variety of secondary sources. The final published estimates of purchases and sales are the resultant of arbitrage among all industrial sectors to achieve consistency.

The following published sources of information are used in the analysis of Fisheries:

Schary, P., R. Shirley, and B. L. Sonle, "Distribution of Fresh and Frozen Salmon: Analysis and Simulation," Oregon State University, 1971.

Smith, F. J., "Marine Economics Data Sheets," Oregon State University Extension Service, 1973.

U.S. Department of Commerce, Fisheries Statistics of the U.S., 1970 and 1972.

Industry 6: Meat Products

The Meat Products sector includes establishments primarily engaged in the slaughter and packing of food animals. This sector includes egg processing, but pet and baby foods containing meat are classified in Canning and Preserving. Meat Products is defined as SIC 201 and corresponds to U.S. I/O sector 14.01.

The 1972 Census of Manufactures reports operating statistics for Meat Products as well as for its major component, meatpacking plants (SIC 2011), as follows:

	SIC 2011 Meatpacking	Other SIC 201 Other Meat Products	SIC 201 Meat Products
Number of establishments	44	19	63
Employment (thousands)	1.8	0.9	2.7
Payrolls ($ mil.)	18.7	6.1	24.8
Shipments ($ mil.)	275.6	45.1	320.7
Net inventory change ($ mil.)	+6.9	0.0	+6.9
Production ($ mil.)	282.5	45.1	327.6

The Washington State Employment Security Department reports the average 1972 employment in 82 establishments to be 3,400, inclusive of administrative and auxiliary workers, with total wages of $32.2 million.

The composition of the meat products industry in Washington State is similar to that in the U.S., with the slaughtering, cutting, and wrapping of beef and pork by meatpacking plants being the primary activities. Large firms in the state include Hygrade Food Products Corporation, Cudahy Company, Schaake Packing Company, Swift and Company, Western Farmers Association, Fors Farms, Acme Poultry Company, Western Packing Company, Oberto Sausage Company, and George A. Hormel and Company.

Only four survey responses have been received from establishments in Meat Products, covering 10 percent of the employment and 6 percent of the sales. Due to this low coverage, especially for meatpacking plants, primary reliance for the interindustry purchases and sales estimates is placed upon national coefficients, the 1963 Washington I/O study, and questionnaire responses from the suppliers to and purchasers of Meat Products.

Industry 7: Dairy Products

Dairy Products includes the manufacture of butter, cheese, canned milk products, and frozen dairy products as well as the processing and distribution of fluid milk and cream. The industry is defined on an establishment basis as SIC 202 and corresponds to U.S. I/O sectors 14.02-14.06

The operating statistics of this industry, as shown in the 1972 Census of Manufactures, are as follows:

	SIC 202 Dairy Products
Number of establishments	59
Employment (thousands)	2.6
Payrolls ($ mil.)	28.2
Shipments ($ mil.)	244.2
Net inventory change ($ mil.)	+0.3
Production ($ mil.)	244.5

Employment of 2,600 workers, inclusive of administrative and auxiliary staff, having payrolls of $28.4 million is reported for 56 establishments by the Washington State Employment Security Department.

The major activity in Dairy Products is the processing and distribution of fluid milk for local consumption. Large firms located in the state include Carnation Company, Consolidated Dairy Products, Arden Farms Company, and Foremost Foods Company.

Purchases and sales information is obtained in questionnaires from five respondents. These responses represent 29 percent of industry employment and 17 percent of sales. Due to this relatively low coverage, considerable weight is given to the information from the suppliers to Dairy Products and inferences from national coefficients in making the initial industry's purchases estimates. The final interindustry transactions are the result of arbitrage among all Washington sectors to achieve consistency.

Industry 8: Canning and Preserving

The output of the canning and preserving industry encompasses canned and dried fruits and vegetables, dried soups, pickled and frozen fruits and vegetables, vegetable sauces and seasonings, salad dressings, and canned and frozen seafood. Canning and Preserving is defined on an establishment basis and incorporates SIC 203, 2091, and 2092. This corresponds to U.S. I/O sectors 14.07-14.13.

The 1972 Census of Manufactures reports industry statistics directly for preserved fruits and vegetables, SIC 203. However, the figures below for processed seafood, SIC 2091 and SIC 2092, represent estimates of operations based upon incomplete Census data and supporting information.

	SIC 203 Preserved Fruits and Vegetables	SIC 2091 and 2092 Processed Seafood	SIC 203, 2091 and 2092 Canning and Preserving
Number of establishments	63	83	146
Employment (thousands)	8.6	2.1	10.7
Payrolls ($ mil.)	56.5	11.8	68.3
Shipments ($ mil.)	383.1	103.8	486.9
Net inventory change ($ mil.)	-3.2	+0.1	-3.1
Production ($ mil.)	379.9	103.9	483.8

For 226 establishments in Canning and Preserving, the Washington State Employment Security Department reports average employment of 12,300 workers, inclusive of administrative and auxiliary staff, with payrolls of $89.6 million.

The canning industry in the state processes many locally grown varieties of fruits and vegetables, notable among them being apples. The industry is further distinguished by the many (mostly small) establishments which process seafood, primarily salmon caught in local and Alaskan waters. Large firms include Snokist Growers, Whitney-Fidalgo Seafoods, Del Monte Corporation, Nalleys Fine Foods, Libby McNeil and Libby, Lamb-Weston, Prosser Packers, Chef Reddy Foods Corporation, Stokely Van Camp, and Rogers Walla Walla.

Nineteen survey questionnaires have been received for Canning and Preserving, covering 43 percent of employment and 40 percent of sales. These provide the basis for estimating initial interindustry purchases and sales for this sector. The published distributions are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 9: Grain Mill Products

Activities of Grain Mill Products include the milling and blending of grains and the manufacture of cereal breakfast foods, starch, and pet and livestock feed. This industry is defined on an establishment basis as SIC 204 and corresponds to U.S. I/O sectors 14.14-14.17.

Operating statistics for Grain Mill Products are reported in the 1972 Census of Manufactures as follows:

	SIC 204 Grain Mill Products
Number of establishments	58
Employment (thousands)	1.4
Payrolls ($ mil.)	14.1
Shipments ($ mil.)	170.6
Net inventory change ($ mil.)	+2.3
Production ($ mil.)	172.9

Employment in 1972 of 1,300 workers, inclusive of administrative and auxiliary staff, having wages of $13.0 million are reported for 53 establishments by the Washington State Employment Security Department.

Major activities in the Washington State grain mill products industry are the milling and blending of flour from grains, primarily wheat and corn, and the preparation of animal feed. Large firms include Fisher Mills, Centennial Mills, Ralston Purina Company, and Western Farmers Association.

Three questionnaires covering 13 percent of employment and 28 percent of sales have been received from Grain Mill Products establishments. This coverage represents a small sample, requiring reliance upon supporting information in making the purchases and sales estimates for this industry. The final estimates of interindustry transactions in Washington State are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 10: Beverages

The output of Beverages is defined on an establishment basis and includes both alcoholic and nonalcoholic beverages. Syrups and flavoring extracts are also included, but the manufacture of fruit and vegetable juices is classified in the canning sector. The industry corresponds to SIC 208 and U.S. I/O sectors 14.21-14.23.

The 1972 Census of Manufactures reports the operating statistics for Beverages directly. We have estimated net inventory change, federal excise taxes, and the value of production as follows:

	SIC 208 Beverages
Number of establishments	54
Employment (thousands)	3.0
Payrolls ($ mil.)	34.3
Shipments ($ mil.)	233.0
Net inventory change ($ mil.)	+0.3
Excise taxes ($ mil.)	49.3
Production ($ mil.)	282.6

The Washington State Employment Security Department estimates the 1972 average employment in 49 establishments to be 2,900 employees, inclusive of administrative and auxiliary staff, with payrolls of $33.4 million.

The beverage industry in the state is characterized by the production of malt beverages, Washington being the home of two large breweries, Olympia Brewing Company and Rainier Brewing Company. Washington also has its share of the market-oriented soft drink bottling establishments as well as a growing number of small wineries. Other large firms in the state include Carling Brewing Company, Pacific Coca-Cola Bottling Company, Glaser Beverage, Pepsi Cola Bottling Company, and Great Western Malting Company.

The initial interindustry purchases and sales estimates have been derived from questionnaires. The survey has yielded nine responses, covering 54 percent of the employment and 80 percent of the output in the sector. These responses have provided a good basis for estimating the purchases and sales distribution of beverages. The final distributions are the resultant of arbitrage among all industries to achieve consistency.

Supplementary sources of information include the 1972 Annual Report and the 1973 Annual Report of the Commissioner of Internal Revenue.

Industry 11: Other Foods

Other Foods embraces a number of products, including bakery goods, sugar and confectionary products, fats and oils, and miscellaneous foods not included elsewhere. The sector incorporates SIC 205-207 and 2095-2099. The corresponding U.S. I/O sectors are 14.18-14.20 and 14.24-14.32.

The 1972 Census of Manufactures reports the operating statistics for Other Foods as follows:

	SIC 205 Bakery Products	SIC 206 Sugar and Confec-tionary Products	SIC 207, 2095-2099 Miscella-neous Foods	SIC 205-207, 2095-2099 Other Foods
Number of establishments	41	17	61	119
Employment (thousands)	2.5	1.4	1.3	5.2
Payrolls ($ mil.)	25.6	10.6	9.7	45.9
Shipments ($ mil.)	74.0	88.3	64.7	227.0
Net inventory change ($ mil.)	+0.1	+4.3	-0.7	+3.7
Production ($ mil.)	74.1	92.6	64.0	230.7

The Washington State Employment Security Department estimates employment of 5,300 workers, inclusive of administrative and auxiliary staff, with wages of $47.2 million for 114 establishments in Other Foods.

Utah-Idaho Sugar Company, which is engaged in the manufacture of beet sugar, is a large company operating within the state. Washington also has a number of establishments producing confectionary products as well as many bakeries serving local demand. Other large firms include ITT Continental Baking Company, American Bakeries Company, Gai's Seattle French Baking Company, Brown and Haley, Societe Candy Company, American Biscuit Company, Van De Kamps Holland Dutch Bakers, Oroweat Baking Company, Ruth Ashbrook Bakery, and Silver Loaf Baking Company.

Twelve questionnaires covering 17 percent of employment and 20 percent of sales have been received from establishments in Other Foods. These responses plus several articles in the Seattle Times (including October 30, 1972 and October 22, 1975) and national coefficients provide the basis for the preliminary purchase and sales estimates. The final estimates in this publication are the result of arbitrage among all sectors to achieve consistency.

Industry 12: Textiles

The Textiles sector, which is defined as SIC 22, predominantly engages in the production of broad woven fabrics, knit outerwear, and miscellaneous textile mill products, including fishing nets. The industry corresponds to U.S. I/O sectors 16.01-18.03.

The 1972 Census of Manufactures reports the number of establishments, employment, payrolls, and value of shipments for this industry, and we have derived estimates of the net inventory change of finished goods and work-in-process and the value of production, as follows:

	SIC 22 Textiles
Number of establishments	17
Employment (thousands)	0.6
Payrolls ($ mil.)	3.8
Shipments ($ mil.)	15.4
Net inventory change ($ mil.)	+0.1
Production ($ mil.)	15.5

The Washington Employment Security Department estimates average covered employment in 17 establishments to be 700 workers, inclusive of administrative and auxiliary staff, with payrolls of $4.1 million.

The principal firms in Textiles are Pendleton Woolen Mills and Seattle Knitting.

The preliminary purchase and sales distributions are based on the responses from four establishments covering 87 percent of industry employment and 55 percent of industry production. The final published estimates are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 13: Apparel

Apparel is defined on an establishment basis as SIC 23 and includes factories and jobbers making clothing and other products from purchased textiles and related materials, such as leather, plastics, rubberized fabric, and furs. The national I/O study classifies this industry as 18.04 and 19.01-19.03. The dominant products in Washington State are men's and boys' furnishings.

The 1972 Census of Manufactures reports the number of establishments, employment, payrolls, and the value of shipments of this industry, and we have derived estimates of net inventory change and the value of production, as follows:

	SIC 23 Apparel
Number of establishments	148
Employment (thousands)	6.3
Payrolls ($ mil.)	33.5
Shipments ($ mil.)	134.1
Net inventory change ($ mil.)	+5.2
Production ($ mil.)	139.3

The Washington Employment Security Department estimates average monthly covered employment in Apparel as 6,300, inclusive of administrative and auxiliary staff, with payrolls of $35.9 million in 1972.

The largest firms in this industry are Days Tailor, Farwest Garments, Bayly Manufacturing, Eddie Bauer, Apparel Incorporated, Black Manufacturing, Seattle Quilt, Roffe-Rene, Sunset Sportswear, Sportcaster, Jantzen, Item House, and Bemis Company (a manufacturer of textile bags). While clothing manufacturers are dominant among the larger firms, there are numerous smaller firms, some of them engaged in the manufacture of diverse fabric products, including curtains and drapes, sack containers, and other non-apparel products.

The initial purchase and sales distributions are based on responses from seven establishments covering 24 percent of industry employment and 26 percent of the value of production. The final published estimates are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 14: Mining

Corresponding to SIC 10-14 and U.S. I/O sectors 5.00-10.00, the output of Mining is defined on a modified commodity basis. Products classified in this sector include metals, coal, crude petroleum and natural gas, stone and clay, and chemical and fertilizer minerals. However, the value of minerals taken from quarries operated by the government, logging, and transportation sectors are not counted in the output, while the value of services performed in the development or operation of mineral properties is counted.

The Washington State Employment Security Department reports average employment of 1,800 workers and payrolls of $20.2 million for 1972. By adding mining workers employed in establishments in other sectors (principally in Cement, Stone, and Clay), we estimate that 2,100 workers with payrolls of $23.7 million are associated with this industry on a commodity basis.

Mining is a relatively small industry in the state with only a few major activities, namely quarrying and coal mining, the latter being done mainly for the Chehalis electric generating plant. For some of the important minerals, the Bureau of Mines Minerals Yearbook reports the following value of production for 1972:

Mineral	Production ($ mil.)
Sand and gravel	26.1
Stone	23.8
Coal	17.4
Zinc	2.3
Lead	0.8

Major establishments include Washington Irrigation and Development Company, Pend Oreille Mines and Metals Company, Dawn Mining Company, Knob Hill Mines, Lakeside Gravel Company, and Cunningham Sand Company.

No survey of mining establishments has been conducted, and therefore most purchases and sales estimates are based on information from published sources and informed persons. The control total is essentially the value of mineral production in Washington State as reported by the U.S. Bureau of Mines, adjustments being made for mining services and the above mentioned quarrying operations. The total purchases vector for Mining has been estimated from national coefficients, modified for differences in fuel consumption and labor costs. The initial regional purchases estimates are based primarily on judgment. The Minerals Yearbook provides many useful bits of information with which to derive a sales distribution. The final estimates of interindustry transactions in Washington State are

the resultant of arbitrage among all industrial sectors to achieve consistency. However, due to reliance upon secondary sources which are not always compatible with regard to definitions, more than usual caution should be taken with regard to the purchases and sales estimates in this sector.

As noted above, the major secondary source of information is the U.S. Bureau of Mines, Minerals Yearbook, 1972.

Industry 15: Forestry

Forestry is defined on a commodity basis as SIC 08 and corresponds to parts of U.S. I/O sectors 3.00 and 4.00. The Forestry sector includes the operation of timber tracts (including those under the management of the U.S. Forest Service, the U.S. Bureau of Indian Affairs, and the Washington Department of Natural Resources), the operation of forest nurseries, the gathering and extracting of seeds, the gathering of other forest products, and the provision of forestry services. The logging of timber is handled separately in Logging, Sector 16.

Estimates of activity in this sector of the Washington economy in 1972 are as follows:

	Employment (thousands)	Payrolls ($ mil.)
Private	0.7	3.2
Public	0.7	7.4
Total	1.4	10.6

Private sector employment and payrolls are based on covered employment and payrolls reported by the Washington Employment Security Department. The estimates for the public sector represent approximations of manpower needed to support timber yields on government lands, figures being based on information supplied by government agencies.

The output total for this sector is estimated to be $259.9 million. This is composed of an estimated stumpage value of harvested timber of $239.4 million, special forest products (Christmas trees, floral greens, seed cones, and the like) of $9.4 million, and forestry services (seeding, fertilization, and consulting) of $11.1 million. The estimate of the stumpage value of the timber is based on a harvest of 2.4 billion board feet from public lands and 4.7 billion board feet from private lands.

The initial input distribution of the Forestry sector has been estimated on the basis of six questionnaire responses covering 57 percent of employment and 53 percent of the value of output of the industry. The final published purchases estimates are the resultant of arbitrage among all industrial sectors to achieve consistency. The distribution of sales for forestry, other than special forest products and forestry services, are estimated on the basis of purchases reported by the wood-consuming industries. The estimate of output and its sales distribution should be regarded with some caution because of the difficulties in valuation and the problems of industrial classification in the highly vertically-organized timber-using industries.

The principal published sources of information used in the analysis of this sector are as follows:

U.S. Forest Service, Special Forest Products, 1969 Harvesting Report, Oregon and Washington.

Washington Department of Natural Resources, A Review of Washington Forest Industries, 1974.

Washington Natural Resources and Recreation Agencies, Annual Report, 1973.

Industry 16: Logging

The logging industry corresponds to SIC 241, and includes establishments primarily engaged in the cutting of timber and production of rough, round, hewn, or riven primary raw materials. Logging operations carried out by sawmill establishments are reported in Sector 17. The related U.S. I/O sector is 20.01.

The 1972 Census of Manufactures does not disclose the operating statistics for this industry in Washington State. We have inferred the following estimates on the basis of Census aggregates and other sources of information for the year 1972:

	SIC 241 Logging
Number of establishments	944
Employment (thousands)	13.4
Payrolls ($ mil.)	113.1
Shipments ($ mil.)	568.3
Net inventory change ($ mil.)	+5.9
Production ($ mil.)	574.2

The Washington Employment Security Department estimates average monthly covered employment in 1,048 establishments as 13,200 workers, inclusive of administrative and auxiliary staff, with payrolls of $139.3 million.

The major logging operators in this sector include Weyerhaeuser, ITT Rayonier, St. Regis Paper, Crown Zellerback, Simpson Timber, Biles-Coleman, Mary Brothers Logging, and Scott Paper.

The initial input-output distributions are based on questionnaire responses received from 13 establishments, covering 21 percent of sector employment and 49 percent of industry shipments, as well as secondary sources of information. Road and bridge outlays have been treated as an expense only to the extent that these are reflected in responses to our questionnaires. The final input-output distributions are the resultant of arbitrage among all industrial sectors to achieve consistency.

The principal published sources of information used in the analysis of sectors 16-19 (Logging, Sawmills, Plywood, and Miscellaneous Wood Products) are as follows:

American Plywood Association, Energy Profile.

International Forestry Association, Forest Products Statistics, 1972: Washington.

U.S. Bureau of the Census, Survey of the Origin of Exports of Manufacturing Establishments in 1972.

U.S. Corps of Engineers, Waterborne Trade: 1972.

U.S. Forest Service, Pacific Northwest Forest and Range Experiment Station, Timber Resource Statistics for Washington, 1973.

U.S. Forest Service, Production, Prices, Employment and Trade in Northwest Forest Industries, 1974.

Washington Department of Natural Resources, Mill Survey, 1973.

Western Wood Products Association, Western Lumber Facts, 1973.

Whittlesey, Norman, Energy Use in Forest Products Industries in Washington.

Industry 17: Sawmills

The Sawmills sector, SIC 242, includes establishments engaged in sawing lumber from logs or bolts, planing mills, and manufacturers of hardwood dimension lumber, including flooring, shingles, cooperate stock, wood chips, and excelsior. Logging camps operated by sawmills are included in this sector. The corresponding U.S. I/O sectors are 20.02-20.04.

The 1972 Census of Manufactures does not disclose the operating statistics for this industry in Washington State. We have inferred the following estimates on the basis of Census aggregates and other sources of information for the year 1972:

	Sic 242 Sawmills
Number of establishments	437
Employment (thousands)	19.5
Payrolls ($ mil.)	176.4
Shipments ($ mil.)	826.6
Net inventory change ($ mil.)	-3.6
Production ($ mil.)	823.0

The Washington Employment Security Department estimates average monthly covered employment in 432 establishments as 19,000, inclusive of administrative and auxiliary staff, with payrolls of $186.1 million.

The largest establishments in this sector are operated by Weyerhaeuser, Boise-Cascade, Simpson Timber, Biles-Colemen Lumber, St. Regis Paper, Summit Timber, Pope and Talbot, Exeter Lumber Sales, SDS Lumber, M and R Timber, International Paper, and Aloha Lumber.

The initial distributions of sales and purchases are based on 27 questionnaire responses, covering 39 percent of industry employment and 43 percent of shipments, as well as secondary sources of information. The published input-output distributions are the resultant of arbitrage among all industrial sectors to achieve consistency.

The principal published sources of information used in the analysis of this industry are listed in the report for Sector 16.

Industry 18: Plywood

Plywood includes establishments primarily engaged in the production of softwood or hardwood veneer and plywood, and is defined as SIC 2435 and 2436 in the 1972 SIC manual. The corresponding U.S. I/O sector is 20.06.

The 1972 Census of Manufactures publishes operating statistics for SIC 2435 (hardwood veneer and plywood). For SIC 2436 (softwood veneer and plywood) we have made estimates on the basis of Census aggregates and other sources of information:

	SIC 2435 Hardwood Plywood	SIC 2436 Softwood Plywood	SIC 2435, 2436 Plywood
Number of establishments	14	33	47
Employment (thousands)	0.9	7.3	8.2
Payrolls ($ mil.)	7.9	73.1	81.0
Shipments ($ mil.)	50.0	302.0	352.0
Net inventory change ($ mil.)	+0.7	-0.5	+0.2
Production ($ mil.)	50.7	301.5	352.2

The Washington Employment Security Department estimates average monthly covered employment for 1972 in 49 establishments as 8,900, inclusive of administrative and auxiliary staff, with payrolls of $88.1 million.

Plywood establishments in Washington State primarily process softwood lumber, mainly Douglas Fir. The principal plywood mills are operated by Weyerhaeuser, Simpson Timber, Publishers Forest Products, U.S. Plywood, Everett Plywood, Puget Sound Plywood, Evans Products, Fort Vancouver Plywood, and Buffelen Woodworking.

The purchases and sales flows are based on 15 questionnaire responses, covering 56 percent of employment and 62 percent of shipments of the Plywood sector, as well as secondary sources. The final input-output distributions are the resultant of arbitrage among all industrial sectors to achieve consistency.

The principal published sources of information used in the analysis of this industry are listed in the report for Sector 16.

Industry 19: Other Wood Products

The other wood products industry includes establishments primarily engaged in the manufacture of millwork, kitchen cabinets, bathroom vanities, laminated or fabricated structural members, prefabricated buildings, mobile homes, wood containers and pallets, particleboard, treated poles, and other miscellaneous wood products, as well as the preservative treating of sawed wood. It encompasses SIC 2431, 2434, 2439, 244, 245, and 249. The corresponding U.S. I/O sectors are 20.05, 20.07-21.00, and a part of 61.06.

The 1972 Census of Manufactures does not disclose the operating statistics for all the industries that make up this sector. We have inferred the following estimates on the basis of the disclosed portion, Census aggregates, and other sources of information for 1972:

	SIC 2431, 2434, 2439, 244, 245, 249 Other Wood Products
Number of establishments	274
Employment (thousands)	7.2
Payrolls ($ mil.)	58.9
Shipments ($ mil.)	284.3
Net inventory change ($ mil.)	+0.9
Production ($ mil.)	285.2

The Washington Employment Security Department estimates average monthly covered employment in 237 establishments as 7,300, inclusive of administrative and auxiliary staff, with payrolls of $61.3 million.

The principal establishments in this sector are those operated by E.A. Nord, Biles-Coleman Lumber, Simpson Timber, Allen Homes, Moduline, West Coast Door, St. Regis Paper, Broadmore Mobil Homes, Brillware, Lindal Cedar Homes, Northwest Homes, Pacific Wood Treating, and Precision Wood Products.

The initial distributions of interindustry flows are based on 16 questionnaire responses covering 15 percent of employment and 20 percent of sector shipments, as well as secondary sources. The final estimates of sales and purchases are the resultant of arbitrage among all industrial sectors to achieve consistency.

The principal published sources of information used in the analysis of this industry are listed in the report for Sector 16.

Industry 20: Furniture and Fixtures

The Furniture and Fixtures sector is defined as SIC 25, and includes establishments engaged in the manufacture of household, office, and public building furniture and fixtures, including partitions, shelving, lockers, drapery hardware, and other furniture and fixtures. This sector corresponds to U.S. I/O sectors 22.01-23.07.

The operating statistics for this sector and its major components are reported in the 1972 Census of Manufactures as follows:

	SIC 251 Household Furniture	Other SIC 25 Other Furniture and Fixtures	SIC 25 Furniture and Fixtures
Number of establishments	64	54	118
Employment (thousands)	1.6	0.9	2.5
Payrolls ($ mil.)	10.4	8.4	18.8
Shipments ($ mil.)	33.4	25.8	59.2
Net inventory change ($ mil.)	-0.1	+0.2	+0.1
Production ($ mil.)	33.3	26.0	59.3

The Washington Employment Security Department estimates average monthly covered employment in Furniture and Fixtures in 118 establishments as 3,300 workers, inclusive of administrative and auxiliary staff, with payrolls of $26.4 million. Part of the difference between Census and Employment Security Department employment and payroll estimates is attributable to differences in the industrial classification of particular establishments.

The principal producers in this industry are Auburn Furniture, Desoto, Interior Systems, Educators, and Monitor (International Paper has a cabinet plant which has been included in Sector 19, Other Wood Products).

Questionnaire responses have been obtained from six establishments covering 15 percent of employment and 23 percent of shipments. Because of thin coverage, national coefficients have been used to supplement the questionnaires in the analysis of the preliminary purchase and sales distributions. The final published input-output flows are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 21: Pulp Mills

Pulp Mills is composed of establishments that make pulp from wood or other materials. Pulping operations of integrated pulp-paper mills are classified in Sector 22, while for integrated pulp and paperboard mills they are classified in Sector 23. This sector corresponds to SIC 261 and U.S. I/O sector 24.01.

The 1972 Census of Manufactures identifies seven (non-integrated) pulp mills in Washington State, but does not disclose their operating statistics. On the basis of Census aggregates and other sources of information the following indicators of economic activity are estimated:

	SIC 261 Pulp Mills
Number of establishments	7
Employment (thousands)	3.4
Payrolls ($ mil.)	40.0
Shipments ($ mil.)	204.0
Net inventory change ($ mil.)	+21.8
Production ($ mil.)	225.8

The Washington Employment Security Department classifies ten establishments in SIC 261, with employment of 2,600 workers, inclusive of administrative and auxiliary staff, and payrolls of $31.3 million. The classification of establishments in Pulp Mills, Paper Mills, and Paperboard Mills is not consistent among different data sources.

On the basis of our information, we recognize the following plants as non-integrated pulp mills: the Weyerhaeuser mills in Everett (two mills), Longview, and Cosmopolis; the ITT Rayonier mills in Hoquiam, Port Angeles, and Mason County; the Scott Paper mill in Anacortes; and one of the two Georgia Pacific mills in Bellingham.

The initial sales and purchases estimates for Pulp Mills are based on questionnaire responses received from seven establishments covering 79 percent of employment and 93 percent of shipments for the industry. The final estimates are the resultant of arbitrage among all industrial sectors to achieve consistency.

The principal published source of information used in the analysis is the Northwest Pulp and Paper Association, Economic Survey 1972.

Industry 22: Paper Mills

The Paper Mills sector is defined as SIC 262, which includes mills that manufacture paper (except building paper) from pulp and converted paper products. The corresponding U.S. I/O sector is 24.02. The classification of establishments into Washington I/O sectors 22 and 23 (Paperboard Mills) is sometimes discretionary.

The operating statistics for Paper Mills are reported by the 1972 Census of Manufactures as follows:

	SIC 262 Paper Mills
Number of establishments	13
Employment (thousands)	6.4
Payrolls ($ mil.)	78.6
Shipments ($ mil.)	348.7
Net inventory change ($ mil.)	-3.0
Production ($ mil.)	345.7

The Washington Employment Security Department estimates average monthly covered employment in 14 establishments to be 9,700 workers, inclusive of administrative and auxiliary staff, with payrolls of $110.9 million.

The major establishments in this industry are operated by Crown Zellerbach, Scott Paper, Grays Harbor Paper, Boise Cascade, and R-W Paper.

The initial input-output distributions for this industry are based primarily on questionnaire responses from seven establishments covering 98 percent of industry employment and 94 percent of shipments. The final input-output distributions are the resultant of arbitrage among all industrial sectors to achieve consistency.

The principal secondary source of information used in the analysis is Northwest Pulp and Paper Association, Economic Survey 1972.

Industry 23: Paperboard Mills and Other Paper Products

The Paperboard Mills sector includes manufacturers of paperboard as well as mills that manufacture converted paper products and paperboard containers and boxes. The sector covers SIC 263-266 and corresponds to U.S. I/O sectors 24.03-25.00.

The 1972 Census of Manufactures discloses the following operating statistics for the industry components:

	SIC 263 Paper-board Mills	SIC 264 Converted Paper Products	SIC 265-266 Containers and Building Paper	SIC 263-266 Paperboard Mills and Other Paper Products
Number of establishments	5	29	32	66
Employment (thousands)	3.0	2.6	1.8	7.4
Payrolls ($ mil.)	35.1	27.1	18.7	80.9
Shipments ($ mil.)	186.9	170.7	90.4	448.0
Net inventory change ($ mil.)	-1.3	-0.3	-0.4	-2.0
Production ($ mil.)	185.6	170.4	90.0	446.0

The Washington Employment Security Department estimates average monthly covered employment in 63 establishments as 5,800 workers, inclusive of administrative and auxiliary staff, with payrolls of $63.7 million. The classification of establishments in this sector by ESD differs from that of the Census.

The principal establishments in this sector are operated by Longview Fibre, St. Regis Paper, and Boise Cascade.

The preliminary input-output distributions for this sector have been based primarily on questionnaire responses from 22 establishments covering 66 percent of sector employment and 59 percent of shipments. The final estimates are the resultant of arbitrage among all industrial sectors to achieve consistency.

The principal published source of information used in the analysis is Northwest Pulp and Paper Association, Economic Survey 1972.

Industry 24: Printing and Publishing

This sector includes establishments primarily engaged in commercial printing, the production of business forms, the publication and printing of newspapers, periodicals, and books, and the provision of services for the printing trade, such as typesetting, photoengraving, and platemaking. The sector corresponds to SIC 27 and sectors 26.00-26.08 in the U.S. I/O study. The retail distribution of newspapers is part of Trade, Sector 49.

The 1972 Census of Manufactures reports operating statistics for components of this industry, from which are estimated net inventory change and the value of production, as follows:

	SIC 2711 Newspapers	Other SIC 27 Other Printing and Publishing	SIC 27 Printing and Publishing
Number of establishments	158	395	553
Employment (thousands)	6.5	4.1	10.6
Payrolls ($ mil.)	62.0	34.1	96.1
Shipments ($ mil.)	143.2	97.0	240.2
Net inventory change ($ mil.)	0.0	+1.2	+1.2
Production ($ mil.)	143.2	98.2	241.4

The Employment Security Department reports average monthly covered employment of 10,600 wage and salary workers, inclusive of administrative and auxiliary staff, with payrolls of $97.5 million.

Newspaper publication is the dominant activity of this industry in Washington State, followed in importance by commercial printing. The principal firms in this industry are the Seattle Times, Hearst, Tribune, Craftsman Press, Everett Herald, Republic Publishing, Bank Check Supply, Tri-City Herald, and Bremerton Sun.

The initial input-output distributions for Printing and Publishing are based on questionnaire responses received from 12 establishments, covering 33 percent of industry employment and 38 percent of shipments, supplemented by national purchases and sales data. The published distributions are the result of arbitrage among all sectors to achieve consistency.

Industry 25: Industrial Chemicals

Sector 25 includes establishments producing basic chemicals, including industrial inorganic chemicals, industrial organic chemicals, agricultural chemicals, and miscellaneous chemical products. Industrial Chemicals is defined as SIC 281, 286, 287, and 289 and corresponds to U.S. I/O sectors 27.01-27.04.

The 1972 Census of Manufactures reports the operating statistics for several components of this sector, from which we have made estimates of inventory change and the value of production, as follows:

	SIC 281 Industrial Inorganic Chemicals	SIC 286 287, 289 Other Industrial Chemicals	SIC 281, 286 287, 289 Industrial Chemicals
Number of establishments	21	54	75
Employment (thousands)	3.8	1.1	4.9
Payrolls ($ mil.)	44.9	11.6	56.5
Shipments ($ mil.)	153.5	82.7	236.2
Net inventory change ($ mil.)	-0.2	+2.8	+2.6
Production ($ mil.)	153.3	85.5	238.8

The Washington Employment Security Department reports 79 establishments with employment of 4,500 workers, inclusive of administrative and auxiliary staff, and payrolls of $54.7 million. Note that there has been a major redefinition of the chemical industries with the 1972 SIC manual, so that the ESD estimates, which are based on the 1967 manual, and the Census estimates are not fully comparable.

The principal activity of Industrial Chemicals is the operation of nuclear reactors and nuclear research by establishments at Hanford, Washington, with the Atlantic Richfield Hanford Company and Douglas-United Incorporated being the major employers. Other establishments at the Hanford complex are classified elsewhere: Battelle, Computer Sciences Corporation, and Hanford Environmental Health Foundation are classified in Services, while J.A. Jones is included in Construction.

The purchases and sales estimates for this sector are based on questionnaire responses received from six establishments covering 70 percent of employment and 56 percent of shipments. An MBA report by Kenneth J. Anderson, 1972 Input-Output Analysis of Hanford, has been particularly useful in the analysis of the Hanford nuclear industry complex.

Industry 26: Other Chemicals

Other Chemicals includes establishments producing plastics materials and synthetic resins; drugs, soap, detergents, and cleaning preparations; and paints, varnishes, lacquers, enamels and related products. The industry is defined as SIC 282-285 and corresponds to U.S. I/O sectors 28.01-30.00.

The 1972 Census of Manufactures reports the operating statistics for paints (SIC 285), the major component of this sector. We have estimated the undisclosed components, as well as the net inventory changes and values of production for this sector, as follows:

	SIC 282-284 Plastics, Drugs, Soap	SIC 285 Paints	SIC 282-285 Other Chemicals
Number of establishments	27	25	52
Employment (thousands)	0.2	0.6	0.8
Payrolls ($ mil.)	1.7	5.5	7.2
Shipments ($ mil.)	7.6	28.3	35.9
Net inventory change ($ mil.)	-0.1	-0.8	-0.9
Production ($ mil.)	7.5	27.5	35.0

The Washington Employment Security Department reports 60 establishments employing 1,000 workers, inclusive of administrative and auxiliary staff, with payrolls of $10.7 million. Note that there has been a significant redefinition of the chemical industries between 1967 and 1972 according to the SIC manuals, so that the ESD and Census estimates are not fully comparable.

Establishments manufacturing paints and varnishes dominate this sector. These operations are all relatively small in size, among the larger firms being Parker Paint Manufacturing Company, Preservative Paint, and Olympic Stain. The major plastics, drugs, and soap manufacturers are Hollister-Stier, General Plastics, and Magnolia Fertilizer.

The initial input-output distributions have been estimated on the basis of four questionnaires, covering 21 percent of industry employment and 17 percent of shipments, and augmented by national coefficients and telephone interviews. Since the sample is small, the initial estimates are subject to large errors. These errors are probably reduced by the arbitrage process, which forces consistency between the estimates of this sector and those of the other industrial sectors of the Washington table.

Industry 27: Petroleum

The Petroleum sector, defined as SIC 29, includes establishments engaged in petroleum refining and the manufacture of paving and roofing materials and miscellaneous petroleum products. This industry corresponds to U.S. I/O sectors 31.01-31.03. The activities of oil distributors and gasoline stations are part of the Trade sector; and bulk petroleum movements by water, truck, rail or pipeline are activities of establishments included in Transportation Services. Washington State is entirely dependent upon U.S. or foreign imports for crude petroleum.

The 1972 Census of Manufactures reports the operating statistics for SIC 29, and we have estimated the net inventory change, manufacturers federal excise taxes, and the value of production, as shown in the table below. Also shown are estimates of the combined operating statistics for six refineries - Shell, Arco, Texaco, Mobil, U.S. Oil, and Sound Refining. (While the Census reports eight refineries in Washington State, one may be a small re-refinery and another an asphalt refinery. Neither is a significant energy supplier in the state.) The figures for other petroleum products are the differences between the statistics reported by the Census for the entire petroleum industry and the six refineries.

	SIC 2911 Petroleum Refining (six refineries)	SIC 292-299 Other Petroleum Products	SIC 29 Petrolem
Number of establishments	6	24	30
Employment (thousands)	1.6	0.5	2.1
Payrolls ($ mil.)	19.5	9.7	29.2
Shipments ($ mil.)	515.8	48.2	564.0
Net inventory change ($ mil.)	+14.0	+1.5	+15.5
Manufacturers excise tax ($ mil.)	8.5	0.0	8.5
Production ($ mil.)	538.3	49.7	588.0

The Washington Employment Security Department estimates the average monthly employment in 18 establishments in this sector as 1,600, including administrative and auxiliary staff, with payrolls of $20.0 million. There are inexplicable differences between the Census and ESD reports of payroll and employment for SIC 29. Furthermore, the difference between our estimates for six refineries and the Census report for SIC 29 leaves a residual with an unlikely payroll to employment ratio. While we have no reason to doubt the estimates of the value of shipments, the Census estimates of payroll and employment for SIC 29 are questionable.

The purchases and sales analysis for the Petroleum sector is based on information (Census reports and questionnaire responses) provided by ten establishments, accounting for 93 percent of shipments and 88 percent of employment (as measured by ESD). Questionnaire responses generally have not been helpful in determining the distribution of sales; hence the market distribution of petroleum is estimated primarily on the basis of secondary sources and the purchases of petroleum products as reported by other industries. The sales distribution should be regarded with more than usual caution because of the difficulties in estimation. Attention is brought to the valuation of petroleum sales at producers prices: state and federal gasoline sales taxes are part of the margins of the distributors and therefore included in the value of output of the Trade sector.

The estimates for the six petroleum refineries have been combined with those of establishments producing other petroleum products to give the distributions shown in the input-output tables. However, because of the interest in Puget Sound petroleum refineries, the accompanying flow chart is presented to depict in broad outline the input-output distribution of Washington State refineries for 1972. These six refineries have imported about 107 million barrels of crude petroleum (principally from Canada) worth about $390 million, and have converted this input to products with a producers' value of $538 million. The disposition of the refinery output is shown in the flow chart. About 45 percent of Washington refinery production is exported, primarily to Oregon.

Washington State also imports significant amounts of refined petroleum products. These imports, mostly originating from other states, are valued at about $140 million. In addition to rounding out the product-mix requirements of the State, these imports help serve markets in Eastern Washington, which are beyond the economic market boundaries of Puget Sound refineries. There is, in addition, an estimated $30-35 million of petroleum coke imported from other states by the aluminum industry.

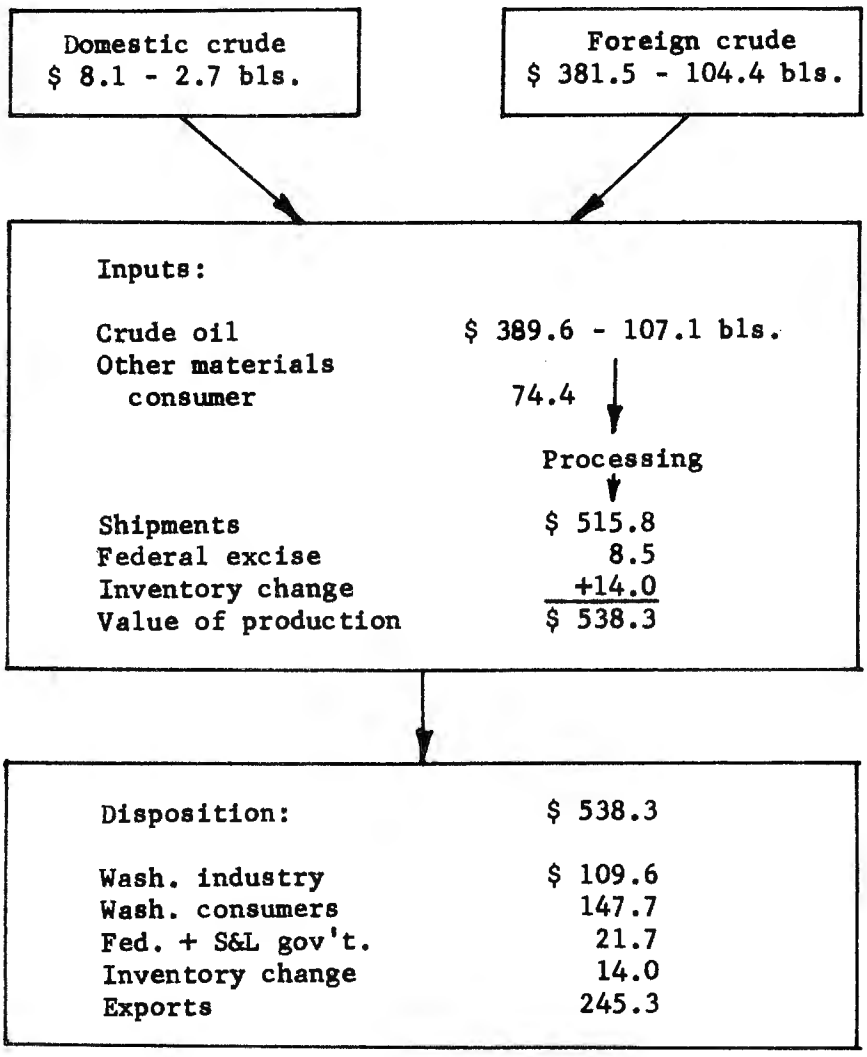
A variety of secondary data sources have been utilized in the development of the regional and total sales and purchases distributions for the Petroleum sector. In addition to the 1972 Census of Manufactures and Employment Security Department publications, the principal published data sources are as follows:

American Petroleum Institute, Petroleum Facts and Figures, 1971.

Butcher, Walter and George Hinman, Guidelines for a Northwest Energy Policy. Environmental Research Center, Washington State University, 1973.

Hinman, George et al. Energy Use in Transportation in the Pacific Northwest, Environmental Research Center, Washington State University, 1973.

Input-Output Distribution of Six Washington State Refineries, 1972
(dollars and barrels in millions)



Oil and Gas Journal, various issues, 1970-1972.

Romer, Henry F., Steven H. Flajser, and Celeste H. Martin, Energy Profile of the State of Washington. Institute for Environmental Studies and Institute of Government Research, University of Washington, 1973.

State of Washington House Transportation Committee, Energy Map for the State of Washington, 1974.

Task Force on Energy Profile of Washington, Energy in the State of Washington, State of Washington Energy Policy Council, 1974.

U.S. Bureau of Census, 1972 Census of Manufactures, Fuels and Electric Energy Consumed.

U.S. Bureau of Mines, Minerals Yearbook, 1971.

U.S. Department of the Interior, United States Energy Fact Sheets, 1971.

Western Oil and Gas Association "Economic Importance of the West Coast Oil Industry", 1973.

Washington Energy Policy Council, Newsletter, various issues, 1974.

Whittlesey, Norman, Impact of the Energy Crisis on Washington Agriculture, Washington State University, 1974.

Whittlesey, Norman, and George Pfeiffer, Energy Used for Food Processing in Washington. College of Agriculture Research Center, Washington State University, 1974.

Industry 28: Glass Products

Establishments in Glass Products engage in the manufacture of glass containers, pressed and blown glass and glassware, as well as glass products made of purchased glass. Products not classified in this sector include optical lenses (Other Manufacturing), glass wool used in insulation (Cement, Stone, and Clay), and electric light bulbs (Electrical Machinery). This industry is defined as SIC 321-323 and corresponds to U.S. I/O sectors 35.01-35.02.

The dimensions of the industry, as deduced from the 1972 Census of Manufactures and supporting information, are as follows:

	SIC 321-323 Glass Products
Number of establishments	12
Employment (thousands)	0.7
Payrolls ($ mil.)	7.2
Shipments ($ mil.)	23.0
Net inventory change ($ mil.)	-0.1
Production ($ mil.)	22.9

The Washington State Employment Security Department reports the average 1972 employment in 12 establishments to be 700 workers, inclusive of administrative and auxiliary staff, with total wages of $7.6 million.

Glass Products is a small industry in the state with only one major employer, Northwestern Glass, which manufactures glass containers, bottles, and jars.

Two survey questionnaires have been received from establishments in this sector, covering 89 percent of total employment and 91 percent of total sales for the industry. These responses provide an excellent factual basis for estimating interindustry purchases and sales. The published interindustry transactions within Washington State are the result of arbitrage among all industries to achieve consistency.

Industry 29: Cement, Stone, and Clay

Activities in Cement, Stone, and Clay include the manufacture of hydraulic cement; structural clay products; pottery; concrete, gypsum, and plaster products; cut stone and stone products; and abrasive, asbestos, and miscellaneous nonmetallic mineral products. Excluded from these activities is the quarrying of stone, sand, and gravel, which is classified in Mining. Defined on an establishment basis as SIC 324-329, this sector corresponds to U.S. I/O sectors 36.01-36.22.

Operating statistics for the cement, stone, and clay industry are deduced from information reported in the 1972 Census of Manufactures; however, figures on concrete, gypsum, and plastic products, a major component of this sector, are disclosed. There has been a deduction in employment and payrolls of 300 employees and $3.5 million from the census-based estimates in this sector to take account of the quarrying operations transferred to Mining. We have also estimated net inventory change and the value of production.

	SIC 327 Concrete Gypsum, and Plaster Products	SIC 324-326, 328-329 Other Cement, Stone, and Clay	SIC 324-329 Cement, Stone, and Clay
Number of establishments	171	63	234
Employment (thousands)	3.3	1.2	4.5
Payrolls ($ mil.)	34.6	10.4	45.0
Shipments ($ mil.)	128.8	57.2	186.0
Net inventory change ($ mil.)	+1.4	-0.2	+1.2
Production ($ mil.)	130.2	57.0	187.2

For 234 establishments the Washington State Employment Security Department reports 4,900 employees, inclusive of administrative and auxiliary staff, with a wage bill of $51.4 million.

The cement, stone, and clay industry in Washington State is characterized by geographically dispersed establishments manufacturing products primarily for use in local construction projects. Large firms include Associated Sand and Gravel Company, Concrete Technology Corporation, Lone Star Industries, Pacific Grinding Wheel Company, The Carborundum Company, and Columbia Cement Company.

Eight responses representing 13 percent of employment and 21 percent of sales constitute the survey sample used for estimating purchases and sales of the industry. As noted above, quarrying activity by this industry has been transferred to Mining. Estimates of each input for quarrying

are deducted from the vector of total inputs estimated for the industry and in their place is shown a single purchase from Mining. Note that this transfer of activity does not affect the total value of inputs. The final published estimates are the result of arbitrage among all sectors to achieve consistency.

Industry 30: Iron and Steel

The iron and steel industry includes establishments engaged in the smelting and refining of ferrous metals, steel rolling mills, and the manufacturers of castings and basic steel products. The industry is defined as SIC 331, 332, and 339 and corresponds to U.S. I/O sectors 37.01-37.02 and 37.04.

The operating statistics for the major industry components are reported in the 1972 Census of Manufactures. We have estimated these statistics for SIC 339, along with net inventory change and the value of production for the entire sector.

	SIC 331 Steel Mills	SIC 332 Steel Foundaries	SIC 339 Miscel-laneous Steel	SIC 331, 332, 339 Iron and Steel
Number of establishments	10	28	7	45
Employment (thousands)	1.8	1.3	0.0	3.1
Payrolls ($ mil.)	19.9	12.2	0.4	32.5
Shipments ($ mil.)	74.8	28.6	2.6	106.0
Net inventory change ($ mil.)	+0.9	+0.3	0.0	+1.2
Production	75.7	28.9	2.6	107.2

The Washington Employment Security Department reports 32 establishments in this section employing 2,700 workers, inclusive of administrative and auxiliary staff, with payrolls of $27.9 million. These estimates are not fully comparable to those of the Census.

Iron and Steel in Washington State includes two scrap mills producing plate, bar, rod, and beams primarily to serve local manufacturing and construction firms, as well as a number of foundries and producers of miscellaneous primary metal products. Washington steel mills differ from those of the national industry in that they utilize electric furnaces and rely entirely on scrap for the production of basic steel. Imported scrap is shown as a purchase from the Trade sector in the Rest of the U.S., and the value of locally supplied scrap (net of trade margins) is included in the value added of Iron and Steel. The principal firms in this industry are Bethlehem Steel, Atlas Foundry and Machine, Northwest Steel, Olympic Foundry, Foote Mineral, Fick Foundry, and Ohio Ferro Alloys.

The initial purchases and sales estimates are based on questionnaires received from five respondents accounting for 25 percent of industry employment and 22 percent of shipments. Response deficiencies have been made up by simulating responses of the two scrap mills for 1972 from 1967 questionnaire responses and newspaper reports of activities. The published estimates of interindustry transactions in Washington State are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 31: Other Nonferrous Metals

The Other Nonferrous Metals sector includes the smelting and refining of copper, lead, zinc, and other nonferrous metals (except aluminum); the rolling, drawing, and extruding of basic shapes and wire; and the production of castings from such materials. The industry is defined to include SIC 3331-3333, 3339, 334, 3351, 3356, 3357, 3362, and 3369. The allied U.S. I/O sectors are 38.01-38.03, 38.05-38.07, 38.09-38.10, and 38.12-38.13.

The 1972 Census of Manufactures does not disclose the operating statistics for this sector or any of the industry categories included therein. We have inferred the following statistics for 1972 from Census aggregates and other sources of information:

	SIC 3331-3333, 3339 334, 3351, 3356 3357, 3362, 3369 Other Nonferrous Metals
Number of establishments	21
Employment (thousands)	1.7
Payrolls ($ mil.)	16.7
Shipments ($ mil.)	47.0
Net inventory change ($ mil.)	-0.5
Production ($ mil.)	46.5

The Washington Employment Security Department reports average monthly covered employment in 27 establishments as 1,900 workers, inclusive of administrative and auxiliary staff, with payrolls of $19.8 million. These estimates are not fully comparable to those of the Census.

The primary smelting and refining of copper dominates the activities of the Other Nonferrous Metals sector. The largest establishment is American Smelting and Refining Corporation, a custom smelter which processes ores on a toll basis, so that the value of the imported ore is not included in the value of shipments as an input cost. (In the 1963 and 1967 input-output studies for Washington State, we have included the estimated value of the imported ores processed on a toll basis as part of shipments and material costs. In this respect the 1972 table is not comparable with its predecessors.)

The initial input-output distributions are based on questionnaire responses from four firms covering 63 percent of industry employment and 79 percent of shipments. The published estimates of interindustry transactions in Washington State are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 32: Aluminum

The Aluminum sector includes establishments primarily engaged in producing aluminum from alumina, rolling aluminum and alloys into basic shapes, and extruding aluminum into rod and bar, pipe and tube, wire, and foundry products. The industry definition encompasses SIC 3334, 3353-3355, and 3361 and corresponds to U.S. I/O sectors 38.04, 38.08 and 38.11.

The 1972 Census of Manufactures does not reveal operating statistics for Aluminum. We have inferred the following statistics for 1972 from Census aggregates and other sources of information:

	SIC 3334, 3353-3355, 3361 Aluminum
Number of establishments	19
Employment (thousands)	8.2
Payrolls ($ mil.)	96.6
Shipments ($ mil.)	879.0
Net inventory change ($ mil.)	-18.8
Production ($ mil.)	860.2

The Washington Employment Security Department reports average monthly covered employment in 23 establishments as 9,200 workers, inclusive of administrative and auxiliary workers, with payrolls of $107.8 million.

The largest establishments in this sector are operated by Kaiser Aluminum and Chemical, Intalco Aluminum, Aluminum Company of America, Reynolds Metals, Martin-Marietta, Colotrym Company, and Sandvik Special Metals.

The initial input-output distributions for this sector have been prepared on the basis of questionnaire responses from four firms accounting for 84 percent of industry employment. These firms apparently have provided data on integrated operations in Washington State which exclude inter-establishment transfers. After adjustment to an establishment basis, approximately 65 percent of Census shipments is accounted for by respondent firms. The adjustments required in order to make alignments on an establishment basis, together with the absence of questionnaires covering extruding and casting operations, mean that the distributions for this sector should be regarded with more than usual caution. The published interindustry transactions estimates are on a firmer foundation, as the result of the arbitrage process among all industrial sectors, but this procedure cannot validate the estimates of intra-industry shipments.

Industry 33: Structural Metal Products

The Structural Metal Products sector includes establishments primarily engaged in manufacturing iron and steel or other metal into products for structural purposes. Such products include metal doors and frames, fabricated plate, sheet metal, architectural and ornamental metal, prefabricated metal buildings, and miscellaneous metal. This sector, which has been designated "heavy fabricated metals" in previous Washington I/O studies, is defined as SIC 344 and corresponds to U.S. I/O sectors 40.04-40.09.

The 1972 Census of Manufactures does not disclose the operating statistics for this industry, but we have inferred the following estimates for 1972 from Census aggregates and other sources of information:

	SIC 344 Structural Metal Products
Number of establishments	177
Employment (thousands)	4.4
Payrolls ($ mil.)	48.0
Shipments ($ mil.)	159.9
Net inventory change ($ mil.)	-0.1
Production ($ mil.)	159.8

The Washington Employment Security Department reports average monthly covered employment in 190 establishments to be 3,900 workers, inclusive of administrative and auxiliary staff, with payrolls of $42.5 million.

The products produced in this sector are highly varied, and establishments are related mainly in terms of materials used and processes employed in production. The largest establishements are operated by Fentron Industries, Isaacson Structural Steel, Leckenby Steel, PACCAR (whose plant closed after 1972), H & D, and Coeur D'Alenes.

The initial purchases and sales estimates are based on questionnaires received from 13 respondents covering 29 percent of employment and 25 percent of shipments. The published estimates of interindustry transactions in Washington State are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 34: Other Fabricated Metal Products

The Other Fabricated Metal Products sector includes establishments engaged in fabricating metal products, such as metal cans, tinware, hand tools, cutlery, general hardware, metal forgings, and metal stampings, as well as a variety of metal and wire products not elsewhere classified. U.S. I/O sectors are 39.01-39.02, 40.01-40.03, 41.01-41.02, and 42.01-42.11. This sector has been called "light metals" in the two previous Washington I/O studies.

The 1972 Census of Manufactures does not disclose the operating statistics for this industry, but we have inferred the following statistics for 1972 from Census aggregates and other information:

	SIC 34, except 344 Other Fabricated Metal Products
Number of establishments	170
Employment (thousands)	3.1
Payrolls ($ mil.)	28.6
Shipments ($ mil.)	139.5
Net inventory change ($ mil.)	-0.2
Production ($ mil.)	139.3

The Washington Employment Security Department reports average monthly covered employment in 165 establishments to be 2,700, inclusive of administrative and auxiliary staff, with payrolls of $25.8 million.

The largest establishments in Washington are operated by American Can (whose plant is reported to be closing in 1976), Earle M. Jorgensen, Continental Can, Alaskan Copper, Northwest Metal Products, and H. K. Porter.

The initial purchases and sales estimates are based on questionnaires received from 12 establishments covering 52 percent of sector employment and 47 percent of shipments. The published estimates of interindustry transactions in Washington State are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 35: Nonelectrical Motive Equipment

The Nonelectrical Motive Equipment sector is composed of establishments primarily engaged in the manufacture of engines and turbines, farm and garden machinery and equipment, and construction, mining, and materials handling machinery and equipment. The industry is defined as SIC 351-353 and corresponds to U.S. I/O sectors 43.01-43.02, 44.00, 45.01-45.03, and 46.01-46.04.

The 1972 Census of Manufactures only reveals operating statistics for SIC 352. We have inferred the operating statistics for the other components from Census aggregates and other information:

	SIC 351-352 Engines, Turbines, and Farm Machinery	SIC 353 Construction Machinery	SIC 351-353 Nonelectric Motive Equipment
Number of establishments	33	39	72
Employment (thousands)	0.4	2.1	2.5
Payrolls ($ mil.)	3.6	23.0	26.6
Shipments ($ mil.)	15.1	68.0	83.1
Net inventory change ($ mil.)	NA	NA	+0.1
Production ($ mil.)	NA	NA	83.2

The Washington Employment Security Department reports average monthly covered employment in 83 establishments to be 4,000 workers, inclusive of administrative and auxiliary staff, with payrolls of $42.7 million.

The principal firms in this sector are Washington Iron Works, Skagit, Western Gear, Star Iron and Steel, The Robbins Company, and Calkins Manufacturing.

The initial interindustry distributions have been based on ten questionnaire responses, which account for 94 percent of (ESD) employment and 101 percent of industry shipments. It appears that there are differences in the classification of establishments among the Census, Employment Security Department, and the I/O study - or irreconciliable statistical estimates - which lead to these inconsistent coverage factors. The published estimates of interindustry transactions in Washington State are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 36: Machine Tools and Shops

Machine Tools and Shops includes machine shops and establishments primarily engaged in the manufacture of machine tools and accessories. The sector is defined to encompass SIC 354 and 359, and the related U.S. I/O sectors are 47.01-47.04 and 50.00.

	SIC 354 Metalworking Machinery	SIC 359 Machine Shops	SIC 354, 359 Machine Tools and Shops
Number of establishments	30	256	286
Employment (thousands)	0.6	2.7	3.3
Payrolls ($ mil.)	6.6	25.6	32.2
Shipments ($ mil.)	14.8	65.4	80.2
Net inventory change ($ mil.)	0.0	+1.3	+1.3
Production ($ mil.)	14.8	66.7	81.5

The Washington Employment Security Department estimates average monthly covered employment in 264 establishments as 2,200 workers, inclusive of administrative and auxiliary staff, with payrolls of $20.8 million. Differences in classifying individual firms by industry and changes in the SIC coding system account for the discrepancy between ESD and Census estimates.

The largest employer in this sector is a can-making plant operated by Continental Can. Most establishments are small jobbing shops.

The initial purchases and sales distributions have been based on questionnaire responses from nine firms covering 18 percent of sector employment and 16 percent of shipments. The published input-output flows are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 37: Nonelectrical Industrial Equipment

The Nonelectrical Industrial Equipment sector includes establishments primarily engaged in the production of specialized industrial machinery. Among the more important products are food products machinery, woodworking machinery, paper industry machinery, and electronic computing equipment. These tend to reflect the capital goods requirements of Washington manufacturing industries, although the markets for these goods are not limited to local users. The sector is defined to include SIC 355-358; the corresponding U.S. I/O sectors are 48.01-48.06, 49.01-49.07, 51.01-51.04, and 52.01-52.05.

The 1972 Census of Manufactures does not disclose the operating statistics for this sector in Washington State. We have inferred the following estimates on the basis of Census aggregates and other sources of information for 1972:

	SIC 355-358 Nonelectrical Industrial Equipment
Number of establishments	107
Employment (thousands)	4.5
Payrolls ($ mil.)	48.2
Shipments ($ mil.)	143.8
Net inventory change ($ mil.)	+0.1
Production ($ mil.)	143.9

The Washington Employment Security Department estimates average monthly covered employment in 112 establishments as 4,400 workers, inclusive of administrative and auxiliary staff, with payrolls of $44.5 million.

The largest establishments in this sector are operated by Tally Corporation, Columbia Machine, Black-Clawson, Lamb-Grays Harbor, Nicholson Manufacturing, American Manufacturing, Sweden Freezer, Automix Keyboards, Key Tronic, and Lewis Refrigeration.

The initial input-output distributions have been based on questionnaire responses received from 14 firms covering 34 percent of sector employment and 40 percent of shipments. The published estimates of interindustry transactions in Washington State are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 38: Electrical Machinery

The Electrical Machinery sector includes establishments primarily engaged in the manufacture of electrical and electronic machinery, equipment, and supplies. The industry is defined as SIC 36, and the corresponding U.S. I/O sectors include 53.01-58.05.

The operating statistics for the sector are reported by the 1972 Census of Manufactures, from which we have made estimates of inventory change and the value of production, as follows:

	SIC 36 Electrical Machinery
Number of establishments	123
Employment (thousands)	3.5
Payrolls ($ mil.)	31.4
Shipments ($ mil.)	109.2
Net inventory change ($ mil.)	+4.6
Production ($ mil.)	113.8

The Washington Employment Security Department reports average monthly covered employment in 121 establishments as 5,900 workers, inclusive of administrative and auxiliary staff, with payrolls of 55.4 million. Substantial reliance by the Census upon administrative records of other government agencies occurs in this industry group; but the reasons for the discrepancy between ESD and Census estimates are not known.

The establishments of this sector in Washington State specialize in the production of electric transmission and distribution equipment and communications equipment. The principal establishments in this sector are operated by Western Electric, Sundstrand Data Control, John Fluke Manufacturing, Columbia Lighting, Honeywell, Electro Development, Korry Manufacturing, and General Electric.

The initial sales and purchases flows have been estimated on the basis of questionnaire responses received from 19 establishments covering 90 percent of sector employment (ESD basis) and 117 percent of the shipments reported by the Census. The published estimates of interindustry transactions in Washington State are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 39: Aerospace

The Aerospace sector is defined to include SIC 372 and SIC 376. The major products include aircraft, guided missiles, and aerospace parts. The corresponding sectors in the national I/O study are 60.01-60.04.

The 1972 Census of Manufactures does not disclose the operating statistics for this industry in Washington State. We have inferred the following estimates on the basis of Census aggregates and other sources of information for 1972:

	SIC 372, 376 Aerospace
Number of establishments	38
Employment (thousands)	41.4
Payrolls ($ mil.)	535.2
Shipments ($ mil.)	2,073.1
Net inventory change ($ mil.)	-211.3
Production ($ mil.)	1,861.8

The Washington Employment Security Department estimates employment in Aerospace as 41,400, inclusive of administrative and auxiliary staff, with payrolls of $535.2 million.

The principal firm in this industry is the Boeing Company, its three establishments (Everett, Renton, Seattle) accounting for approximately 94 percent of employment and 97 percent of aerospace shipments in Washington State. Boeing Computer Services Corporation is classified in Services, sector 51. Other firms in this industry include Rocket Research, Heath Techna Corporation, and Rohr Corporation.

The preliminary estimates of purchases have been based on an analysis of the committment procurement activity of the Boeing Company and its Census reports. Due to the company size and complexity, the estimates are subject to error. The principal difficulty in estimating inputs is assigning the appropriate industrial coding to suppliers. The final published interindustry transactions in Washington State are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 40: Motor Vehicles and Railroad Cars

This industry includes SIC 371, 374, 375, and 379 and corresponds to U.S. I/O sectors 59.01-59.03, 61.03-61.05, part of 61.06, and 61.07. Products include motor vehicles and equipment; railroad equipment; motorcycles, bicycles, and parts; and miscellaneous transportation equipment, including campers and travel trailers. Note that, in accordance with the 1972 SIC code, the production of mobile homes has been classified in Other Wood Products, SIC 2451.

With the exception of SIC 379, the Census of Manufactures does not disclose operating statistics for this industry. We have made the following estimates on the basis of Census aggregates and other sources of information:

	SIC 371 Motor Vehicles	SIC 374 Railroad Equipment	SIC 375, 379 Other Vehicles	SIC 372, 374, 375, 379 Motor Vehicles
Number of establishments	37	1	34	72
Employment (thousands)	2.1	1.8	0.5	4.5
Payrolls ($ mil.)	21.0	20.6	3.3	44.9
Shipments ($ mil.)	NA	NA	16.9	270.0
Net inventory change ($ mil.)	NA	NA	+0.2	+20.0
Federal excise taxes ($ mil.)	33.4	0.0	0.0	33.4
Production ($ mil.)	NA	NA	17.1	323.4

For this industry in 1972 the Washington Employment Security Department reports 5,300 wage and salary workers, inclusive of administrative and auxiliary staff, with payrolls of $50.7 million.

The two largest establishments in Motor Vehicles and Railroad Cars are Kenworth Truck and Pacific Car and Foundry, both divisions of PACCAR.

The preliminary purchase and sales estimates are based on two questionnaire responses, covering 69 percent of industry employment and 76 percent of sales, as well as on national input-output coefficients. The published estimates are the resultant of arbitrage among all industrial sectors to achieve consistency.

Industry 41: Ship and Boat Building and Repair

This sector corresponds to SIC 373, but also includes the Puget Sound Naval Shipyard. The corresponding U.S. I/O sectors are 61.01-61.02. Note that the national I/O table appears to include government shipyards in Government Enterprises.

The Census of Manufactures does not disclose estimates of the activity of this sector. Our estimates of the components for the year 1972 are as follows:

	SIC 9337 Puget Sound Naval Shipyard	SIC 3731 Ship Building	SIC 3732 Boat Building	SIC 373 and 9337 Ship and Boat Building
Number of establishments	1	30	100	131
Employment (thousands)	8.7	4.9	2.4	16.0
Payrolls ($ mil.)	108.5	57.0	19.8	185.3
Shipments ($ mil.)	143.9	128.7	76.3	348.9
Net inventory change ($ mil.)	0.0	0.0	+0.4	+0.4
Production ($ mil.)	143.9	128.7	76.7	349.3

For the Puget Sound Naval Shipyard, output is measured by value of work done (exclusive of depreciation costs) rather than value of shipments.

This sector is dominated by large steel-vessel construction and repair activity. The largest establishments include Puget Sound Naval Shipyard, Lockheed Shipbuilding, Todd Shipyards, Tacoma Boatbuilding, Uniflite, J. Martinac, Reinell Industries, and U.S. Industries. Also included are numerous small boat building and repair establishments. Marinas and boatyards primarily engaged in storage and repair services are classified in Transportation Services.

The preliminary purchase and sales estimates are based on questionnaires received from nine establishments which account for 89 percent of industry employment and 80 percent of output. The final published estimates are the resultant of arbitrage among all industrial sectors. The lengthy production period for ship construction and the cyclical instability of the industry means the composition of inputs for 1972 may not be typical (e.g., in 1972 the shipyards were primarily engaged in repairs and refitting).

In addition to the information obtained from the survey of establishments, the principal published sources of information include the Financial and Operating Statements of Puget Sound Naval Shipyard and the Census of Government Establishments.

Industry 42: Other Manufacturing

Other Manufacturing embraces a variety of activities. Products classified in this sector include rubber and miscellaneous plastic products, leather goods, instruments, and miscellaneous manufactured goods not classified elsewhere. This industry is defined on an establishment basis as SIC 30, 31, 38, and 39 and corresponds to U.S. I/O sectors 32.01-32.04, 33.00, 34.01-34.03, 62.01-62.07, 63.01-63.03, and 64.01-64.12.

The 1972 Census of Manufactures reports the operating statistics of Other Manufacturing. We have estimated net inventory change, federal excise taxes, and the value of production as follows:

	SIC 30 Rubber, Plastic Products	SIC 38 Instruments	SIC 31, 39 Misc. Manufacturing	SIC 30, 31 38, 39 Other Manufacturing
Number of establishments	109	66	237	412
Employment (thousands)	2.0	2.8	3.2	8.0
Payrolls ($ mil.)	15.4	26.6	24.0	66.0
Shipments ($ mil.)	60.8	78.6	77.9	217.3
Net inventory change ($ mil.)	+1.1	+0.2	+2.1	+3.4
Excise taxes ($ mil.)	0.3	0.0	0.0	0.3
Production ($ mil.)	61.9	78.8	80.0	221.0

The Washington State Employment Security Department reports average 1972 employment in 516 establishments to be 5,700 workers, inclusive of administrative and auxiliary staff, with payrolls of $44.5 million. Problems of definition and classification account for the differences in the Census and ESD figures.

With the relatively recent growth of the plastic products and instruments subsectors, Other Manufacturing is one of the more rapidly changing industries in the Washington economy. The largest establishments are operated by K2 Corporation, Skyway Luggage Company, American Sign and Indicator Corporation, Posey Manufacturing Company, Yakima Bath Company, and Physio-Control Corporation.

The initial purchases and sales estimates are based on 21 survey questionnaires, covering 12 percent of industry employment and 17 percent of sales, as well as on national input-output information. The published figures are the result of the arbitrage process to achieve a consistent set of estimates among all sectors.

Industry 43: Transportation Services

Transportation Services includes establishments providing passenger and freight transportation for business enterprises and the general public. The sector embraces SIC 40-47 and corresponds to U.S. I/O sectors 65.01-65.07, 78.01, and 79.01. Classified in this sector are governmental transportation service establishments, including the U.S. Postal Service, Washington State Ferries, and municipal transit systems. The operation of port authorities, toll roads, and school buses operated by educational institutions are not included in this sector.

The relative importance of the various components of this sector is indicated by the following estimates of revenue, employment, and payrolls for 1972:

SIC	Sub-Sector	Revenue ($ mil.)	Employment (thousands)	Payrolls ($ mil.)
40	Railroads	285.9	11.8	136.0
41	Highway passenger and city transit	46.1	4.5	32.8
42	Motor freight and warehousing	296.7	15.1	153.4
43	U.S. Postal Service	133.8	10.6	110.5
44	Water transport, including ferry system	261.2	8.4	115.6
45	Air transportation	221.4	6.5	92.7
46	Pipeline transportation	14.0	0.1	0.9
47	Transportation services	32.3	2.6	21.4
	Federal excise taxes on transport services (principally air and highway)	4.2	-	-
	Total	1,295.6	59.6	663.3

We use local revenue data for transportation services performed within the state when available. For many transportation sectors engaged in interstate and foreign commerce, the estimates of Washington State transportation service revenue are based on a proration of national revenue estimates. The complications involved in estimating the input-output relationships of the Transportation Services sector have already been discussed (see pp. 34-35). but the specific conventions employed for estimating revenue in each component are summarized as follows:

SIC 40: The revenue estimate for railroads is based on national rail revenue prorated according to employment. For the Railroad Express Agency, its revenue is prorated on the basis of track mileage.

SIC 41: For highway passenger transportation, except city transit, national revenue is prorated on the basis of employment. For city transit we use revenues reported in the 1972 Census of Government for Washington State.

SIC 42: For motor freight carriers national revenue (by carrier class) is prorated on the basis of employment. For warehousing, data from the Washington Utilities and Transportation Commission on storage warehouse companies are used, an adjustment being made for incomplete coverage.

SIC 43: The U.S. Postal Service reports expenditures in the three districts serving Washington State. As two districts overlap state lines, these expenditures are prorated on the basis of population.

SIC 44: For water transportation (except ferries) national output is prorated on the basis of employment. For ferry routes revenue is obtained from reports of the Washington State Ferries.

SIC 45: For air transportation, an MBA research report by Eva S. Johnson (An Input-Output Study of the Air Transportation Section in the State of Washington, University of Washington, 1972) is the source of estimates of total purchases plus value created associated with the airlines and related establishments operating in Washington State. This expenditure approach is based on surveys of airlines station operations, including in-flight kitchens.

SIC 46: For pipelines (excluding natural gas), survey responses plus company data published in Transport Statistics in the U.S. provide revenue totals. For one interstate pipeline revenue is estimated by prorating on the basis of pipeline miles. Natural gas pipelines are not included here, being counted in the Natural Gas sector.

SIC 47: For transportation services the revenue estimate is based on national output prorated according to payrolls.

For most of the components of the Transportation Services sector, the distribution of costs is made utilizing national expense data and the U.S. I/O studies. For some components--including city transit, warehousing, U.S. Postal Service, and ferries--financial statements of local enterprises are used. The division of procurement between in-state and out-of-state has been discussed previously. Surveys have limited value in these sectors, given the difficulties of defining the relevant control totals at the establishment level. However, for air transportation and pipelines the distribution of expenses and sources of supply are based on questionnaire responses. Questionnaires have been obtained from 11 airlines, representing 88 percent of employment in SIC 45, and from three pipeline companies, accounting for 93 percent of employment and 97 percent

of pipeline revenues. Four additional firms with sales of $28.0 million and 1,109 employees also have provided questionnaires. Supplementary information has been provided by numerous business firms and government agencies involved in the transportation service subsectors.

The published sources of information found most useful in this analysis are as follows:

Interstate Commerce Commission, Bureau of Accounts, Transport Statistics in the United States, Part 1 (Railroads), Part 5 (Carriers by Water), and Part 6 (Pipelines).

Washington Utilities and Transportation Commission, Statistics of Class I, II Common and Contract Motor Carriers of Property, 1972.

Washington Utilities and Transportation Commission, Statistics of Passenger Auto Transportation Companies and Intercity Motor Carriers of Passengers, 1972.

Washington Utilities and Transportation Commission, Statistics of Storage Warehouse Companies, 1972.

Industry 44: Electric Companies

This sector includes establishments engaged in the generation, transmission, and distribution of electric energy for sale. It is defined to encompass SIC 491 and part of SIC 493 and corresponds to U.S. I/O sectors 68.01, 78.02, and 79.02. Included are the activities of private electric power companies, public utility districts, municipal electric utilities, cooperatives, and the Bonneville Power Administration (BPA) system (i.e., that portion operating within Washington State).

The control total for the industry is the total operating revenue in Washington State. For multi-state firms the operating revenues assigned to Washington State are reported by the Washington Utilities Transportation Commission. For BPA operating revenues are estimated on the basis of the proportion of total system power generated within Washington State and includes wheeling revenue and the Centralia and Hanford output purchased for resale. The BPA system includes generating facilities operated by the Bureau of Reclamation and Corps of Engineers.

The estimated 1972 operating revenues, employment, and payrolls in Washington State are as follows:

	Total Operating Revenues ($ mil.)	Employment (thousands)	Payrolls ($ mil.)
Investor-owned utilities	167.4	3.3	40.6
Cooperatives	16.5		
Public Utility Districts	153.1	2.2	26.4
Municipalities	122.6	2.6	30.2
BPA System in Washington	120.3	2.1	24.6
Total	579.9	10.2	121.8

A substantial portion of the employment and payrolls in this industry represents "capitalized" labor costs which are transferred to the construction industry. Employment and payrolls chargeable to current costs are estimated to be 6,800 workers and $80.8 million, respectively.

The distribution of energy sales among customers has been estimated from sources covering both the producers' and purchasers' views of the transactions. The Edison Electric Institute (EEI) provides gross breakdowns of markets, while the company reports give even more detail. Officials of BPA, the Corps of Engineers, and the Bureau of Reclamation have been helpful in providing information for the BPA system; and the Hinman studies at Washington State University of the BTU distribution among users also have been useful. Finally, completed questionnaires have been returned by five utilities representing 40 percent of sales and 47 percent of employment; but all utilities contacted have provided assistance in various ways. Estimat-

ing the distributions of costs and of sales has involved the reconciliation of sometimes conflicting data and the use of indirect estimating techniques (and even some educated guesses). The final published estimates of purchases and sales are the result of arbitrage among all industrial sectors to achieve consistency. With regard to these estimates, note that the large intra-industry transaction of $138.0 million represents the value of energy purchased for resale, wheeling charges, and other miscellaneous intra-industry transactions. Also, exports of electricity, estimated at $38.5 million, are net of imports of electricity from other regions.

The principal publications used for the analysis of Electric Companies are as follows:

Bonneville Power Administration, Annual Report, 1972 and 1973.

Bonneville Power Administration, Generation and Sales Statistics, Calendar Year 1972.

Bonneville Power Administration, Power System Statement, 1972.

City of Tacoma, Light Division, Annual Report, 1972.

Edison Electric Institute, Edison Electric Institute Statistical Year Book of the Electric Utility Industry for 1972.

E. W. Beck and Associates, Facts and Statistics, Twenty-Two Public Utility Districts in Washington.

Pacific Power and Light, Annual Report, 1972.

Puget Sound Power, Annual Report, 1972.

Romer, H. F., S. H. Flasjer, and C. H. Martin, Energy Profile of the State of Washington. Institute for Environmental Studies and the Institute of Governmental Research, University of Washington, 1973.

Seattle City Light, Annual Report, 1972.

State of Washington Energy Policy Council, Energy in the State of Washington, 1974.

State of Washington House Transportation and Utilities Committee, "Energy Map for Washington State", 1974.

U.S. Department of Agriculture, Rural Electrification Administration 1972.

U.S. Federal Power Commission, Statistics of Privately Owned Electric Utilities in the Unites States, 1971.

U.S. Federal Power Commission, Statistics of Publicly Owned Electric Utilities in the U.S., 1972.

Washington Public Power Supply System, Annual Report, 1972.

Washington Utilities and Transportation Commission, Statistics of Electric Companies, 1972.

Washington Water Power Company, Annual Report, 1972.

Industry 45: Gas Companies

This sector includes establishments engaged in the transmission and distribution of natural gas. Gas Companies is defined as SIC 492 and part of SIC 493, which corresponds to U.S. I/O sectors 68.02 and part of 79.03. The following are estimates of employment, payrolls, and revenues for this sector:

	Employment (thousands)	Payrolls ($ mil.)		Revenues ($ mil.)
Expensed	1.2	12.6	Transmission	76.5
Capitalized	0.4	4.2	Distribution	143.5
Total	1.6	16.8	Total	220.0

Capitalized employment represents workers in this sector engaged in new construction activities. These are transferred to the construction industry.

The major distribution companies in this industry include Washington Natural Gas Company, Cascade Natural Gas Company, Washington Water Power Company, Columbia Gas Company, and Northwest Natural Gas Company.

The two principal transmission companies are El Paso Natural Gas Company and Pacific Gas Transmission Company. Virtually all natural gas consumed in Washington State in 1972 is reported to be of Canadian origin, having an estimated import value of $56 million. A negligible amount of gas may have come from the San Juan basin. Natural gas moving from Canada to Oregon through Washington is neither counted as an import or an export for the purposes of this study, as it is handled on a margin basis.

Questionnaires have been received from the three major distribution companies, accounting for 93 percent of sales and 97 percent of employment in the distribution component of the industry. Questionnaires have not been sent to smaller gas companies nor to transmission companies. Apart from the survey responses, a variety of sources have been used in estimating the sales and purchases patterns. Some of the estimates are based on 1971 data (the latest available information at the time of estimation) and involve the reconciliation of sometimes conflicting data. The final published interindustry estimates are the result of arbitrage among industrial sectors to achieve consistency among all purchases and sales. Note that the large intra-industry transaction of $76.2 million shown in the gross flows table represents the value of natural gas purchased by distributors from transmission companies plus a small amount of natural gas used by transmission and distribution companies themselves. The net inventory accumulation of $1.0 million is an estimate of the increased storage of natural gas by distributors.

The most important sources of published data used in this analysis are as follows:

American Gas Association, Gas Facts, 1972.

Federal Power Commission, Sales by Producers of Natural Gas Pipeline Companies, 1972.

Federal Power Commission, Statistics for Interstate Natural Gas Pipeline Companies, 1972.

Romer, H. F., S. H. Flasjer, and C. H. Martin, Energy Profile of the State of Washington, 1972.

State of Washington Energy Policy Council, Energy in the State of Washington, 1974, (together with supplementary data provided by Professor George Hinman, Washington State University).

U.S. Bureau of Mines, Minerals Yearbook, 1971.

Washington Utilities and Transportation Commission, Statistics of Gas Companies, 1972.

Industry 46: Other Utilities

This sector includes public and private establishments primarily engaged in providing water supply, sanitary services (sewage systems and refuse disposal), miscellaneous sanitary services, public steam supply, and the services of irrigation systems. Other Utilities embraces SIC 494-497 and that part of combination utilities providing water supply. The distinction between general government and government enterprises is marginal in some cases, but the control total for this sector includes irrigation water revenues of the Bureau of Reclamation and Bureau of Indian Affairs. This industry corresponds to U.S. I/O sector 68.03 plus related activities that are parts of 78.04 (other federal government enterprises) and 79.03 (other state and local government enterprises).

Public water supply and sewage are the dominant components of this sector, but because of the highly diverse nature of activities and the uncertain data base, more than usual caution should be taken in regard to the accuracy of the input-output estimates. The following are estimates of employment, payrolls, and total revenue for Other Utilities:

	Employment (thousands)	Payrolls ($ mil.)	Revenue ($ mil.)
Private	0.7	5.1	NA
State and local	3.6	34.7	NA
Federal	0.2	1.5	NA
Total	4.5	41.3	164.0

These estimates are based on information from the Washington Employment Security Department, the U.S. Bureau of the Census, the Washington Department of Revenue, and the Washington Utilities and Transportation Commission.

The principal data drawn upon to estimate the interindustry purchases and sales come from numerous financial reports of government establishments and the U.S. I/O study. In addition, two questionnaires have been received, accounting for one percent of industry sales and two percent of employment. The final published estimates of purchases and sales are the resultant of arbitrage among all industrial sectors.

The following are the major sources of information used in this analysis:

Washington Department of Revenue, Quarterly Statistical Report of Revenue from Excise Taxes, 1972 (all quarters).

Washington Utilities and Transportation Commission, Water Companies, 1972.

U.S. Bureau of the Census, 1969 Census of Agriculture.

U.S. Bureau of the Census, 1972 Census of Governments.

U.S. Bureau of the Census, Governmental Finances in 1972-1973.

Industry 47: Communications

The Communications sector is defined as SIC 48 and includes telephone and telegraph, radio and television, and miscellaneous communications services. The corresponding U.S. I/O sectors are 66 and 67.

The control total, employment, and payrolls for this sector for 1972 are estimated as follows:

	Revenue ($ mil.)	Employment (thousands)	Payrolls ($ mil.)
Telephone, telegraph, and other communications	480.7	14.8	156.4
Radio and television	64.0	2.4	22.6
Total	544.7	17.2	179.0

In addition to operating revenue, the revenue total for telephone and telegraph includes federal excise taxes amounting to $43.9 million. A portion of employment and payrolls represents capitalized labor costs, which are transferred to the Construction sector. Employment and payrolls chargeable to current operations are estimated to be 15,200 workers and $150.4 million, respectively.

There are 41 telephone companies operating in Washington State, the largest being Pacific Northwest Bell and General Telephone. There are more than 100 television and radio stations in the region, the largest being King Broadcasting Company, KIRO Incorporated, Fishers Blend Station Incorporated, and Tribune Publishing Company.

Seven completed questionnaires have been returned, covering 81 percent of operating revenues and 85 percent of employment in Communications. The distribution of expenditures are based on these responses and published financial data; and this estimation has presented only minor difficulties. The estimation of sales, particularly for telephone and telegraph, has been more troublesome. Even though every industrial sector purchases phone services, the economic classification of subscribers is difficult to ascertain. Initially, a sales distribution has been made on the basis of estimates made by firms responding to our questionnaires. The final published estimates of both purchases and sales are the resultant of arbitrage among all industrial sectors to achieve consistency.

Note that interstate and foreign exports shown in the Washington input-output table are principally net broadcast revenues earned by radio and TV stations for the sales of station time to networks and national (as well as foreign) advertisers. No exports (or imports) of telephone and telegraph services are shown in the table, it being assumed that long-distance call reimbursements among telephone companies are offsetting.

The principal published data sources used in this analysis are as follows:

Washington Utilities and Transportation Commission, Statistics of Telephone Companies, 1972.

U.S. Department of Agriculture, Rural Electrification Administration, 1972 Annual Statistical Report, Rural Telephone Borrowers.

U.S. Federal Communications Commission, NEWS (AM-FM Broadcast Financial Data), 1972.

U.S. Federal Communications Commission, NEWS (TV Broadcast Financial Data), 1972.

Industry 48: Construction

Corresponding to SIC 15-17 and U.S. I/O sectors 11.01-11.05 and 12.01-12.02, construction output includes new construction put in place and maintenance and repair. However, only construction activity taking place within Washington State is counted. Thus, there are no imports or exports of construction output shown in the input-output tables. Defined on an activity basis, new construction includes construction whether or not it is performed by contract construction establishments. For example, "do-it-yourself" construction by the utilities is part of new construction. Furthermore, additions and alterations that increase the stock of facilities and equipment that is an integral part of the facility and essential for its use (e.g., elevators and heating fixtures) are counted in the output. Defined on an establishment basis, maintenance and repair construction counts only construction that is purchased from contract construction establishments. In contrast to new construction, maintenance and repair expenditures are on current account.

The Washington State Employment Security Department reports average 1972 employment in 9,274 establishments to be 52,200 workers with total payrolls of $584.5 million. In order to arrive at the employment and payroll figures shown in the input-output table, we have further added 7,100 workers with payrolls of $78.8 million to cover capitalized labor costs in the utilities and communications industries.

Construction is a volatile industry. Not only does its total output fluctuate considerably from year to year but its mix of activities (e.g., housing and highway construction) can change dramatically as well. One important component in recent years (and probably in the future) has been public utility construction, especially that for electric utilities. The figures below show a breakdown of activity for 1972.

Type of Construction	Value ($ mil.)
Residential housing	715.0
Other buildings	693.5
Highways	227.5
Other nonbuilding structures	527.8
Maintenance and repair	160.2
Total	2,324.0

The industry is characterized by many small establishments, but some of the larger firms include Bechtel Incorporated, Ralph M. Parsons Corporation, Baugh Construction Company, Dravo Corporation, Haskell Corporation, Sybron Corporation, Tyee Construction Company, Morrison Knudsen Company, J. A. Jones Construction Company, Howard S. Wright Construction Company, and Hoffman Construction Company.

No survey of establishments is feasible for the construction industry. Therefore, most input-output estimates have been made from secondary information. The control total estimate is based on information on the value of construction contracts in the state and the value of new construction-put-in-place in the U.S. for 1972. Technical data for specific types of structures from both government and industry publications underlie the estimates of the total requirements for the sector. The regional portions of the total purchases have been estimated during the arbitrage process, largely from the sales information in survey questionnaires of the supplying industries. The purchasers of construction are primarily identifiable from the types of structures. For example, residential housing is sold to the private investment sector, while highways are purchased by state and local governments. The only construction sales shown to Washington industries are for maintenance and repair. Survey questionnaires of purchases by industries are the basis for these estimates. The overall dependence upon secondary sources of information probably makes the input-output estimates for the construction industry less reliable than those for most other sectors.

Published sources of information used in this analysis include:

Engineering News Record, various issues.

F. W. Dodge Division, McGraw Hill Information Systems Company, "Construction Contracts - Value by States, 1972," Dodge Construction Potentials.

Pacific Builder and Engineer, various issues.

The Seattle Post Intelligencer, various issues.

The Seattle Times, various issues.

U.S. Bureau of Labor Statistics, "Labor and Material Requirements for Private One-Family House Construction" (and similar reports on college housing, public housing, office buildings, schools, hospitals, highways, sewer works, and civil works).

U.S. Bureau of the Census, Census of Construction, 1967, Area Series, Washington.

U.S. Bureau of the Census, Governmental Finances in 1972.

U.S. Bureau of the Census, State Government Finances in 1972.

U.S. Department of Commerce, Input-Output Structure of the U.S.: 1967.

U.S. Department of Commerce, "Value of New Construction-Put-in-Place - U.S., 1972," Construction Reports.

Industry 49: Wholesale and Retail Trade

Wholesale and Retail Trade is defined as SIC 50-59, but also includes (by redefinition) retail trade activities of hotels and lodging places. The sector includes all establishments primarily engaged in the distribution of goods from producers to users. Coverage corresponds to U.S. I/O sectors 69.01-69.02, except that the national study includes trading stamp redemption centers (SIC 7396) and some health services (part of SIC 8099).

Trade is the largest sector in the Washington economy, whether measured by employment, value added, or output. The activities of the Wholesale and Retail Trade sector are covered by the 1972 Census of Wholesale Trade and the 1972 Census of Retail Trade. These reports provide detailed information by kind of business. The following table summarizes this activity for 1972:

	Wholesale Trade	Retail Trade	Wholesale and Retail Trade
Number of establishments	6,532	36,611	43,143
Sales ($ mil.)	10,007.0	7,494.9	17,501.9
Inventories, end of year ($ mil.)	720.3	NA	NA
Operating expenses, including payroll ($ mil.)	1,052.2	NA	NA
Payroll ($ mil.)	607.0	959.8	1,566.8
Paid employees, week of March 12, (thousands)	65.3	180.5	245.8

The Washington Employment Security Department reports covered employment in Wholesale and Retail Trade of 249,300 workers with payrolls of $1,716.9 million. These estimates exceed Census estimates by 1.4 percent and 9.6 percent, respectively. Inclusive of retail trade activity in hotels and lodging places, the Washington input-output estimate of employment is 255,400 and of payrolls is $1,741.9 million.

The Census reports trade sales of $17,501.9 million, which compares to the reported gross operating revenue by the Department of Revenue of $17,377.6 million. However, for input-output purposes, the control total for this industry is estimated on a margin basis, which is the difference between total sales (inclusive of excise and sales taxes) and the cost of goods purchased for resale. The margin approach is preferred in order to display the links between the producers and users of commodities. If the gross flows were traced through middlemen, virtually all of the output of goods by industry would be shown as a sale to trade; and most consumer purchases would be shown as originating from trade and not the industries which produced them.

In order to estimate the margins earned by the trade sector, we have heavily relied upon national ratios. Thus, the estimates are only rough approximations. The gross margins earned in the Washington trade sector are estimated to be $4,200.0 million.

The conceptual difficulties introduced by the margin concept, the practical difficulty respondents have in assigning the margins earned on sales to industrial and final users, and the sheer size of the industry have made the utilization of questionnaires infeasible. Instead, reliance has been placed on published sources of information, primarily national data, to estimate the column and row distributions for this industry (see the discussion on pp. 34-35). The final published estimates of purchases and sales are the resultant of arbitrage among all industrial sectors.

The principal supplementary sources of published information used in the analysis are as follows:

Dun and Bradstreet, Inc., Costs of Doing Business, Partnerships and Proprietorships, Key Business Ratios, 1971.

Laventhol, Krekstein, Horwarth, and Horwath, Restaurants, Country Clubs, City Clubs, 1971 Edition Reports on Operations, 1971.

NCR, Expenses in Retail Business, 1970.

Troy, L., Almanac of Business and Industrial Financial Ratios, 1974.

Industry 50: Finance, Insurance, and Real Estate

Finance, Insurance, and Real Estate (FIRE) is defined as SIC 60-67. It includes establishments primarily engaged in finance, insurance, and real estate activities. In terms of U.S. I/O sectors, it corresponds to sectors 70.01-70.05 and 71.02. Note that there is a considerable difference in the treatment of rental income between the Washington and U.S. I/O tables.

The analysis for this sector has been undertaken separately for each of its principal components. Since these industries are not included in the quinquennial censuses, primary reliance has been placed on the reports of regulatory agencies and trade associations for data. As reported by the Washington Employment Security Department, the number of establishments, covered employment, and payrolls for 1972 are as follows:

SIC	Sub-Sector	Employer Units (4th qt., 1972)	Employment (thousands)	Payrolls ($ mil.)
60	Banking	223	17.1	132.5
61	Credit agencies other than banks	826	6.8	53.9
62	Security and commodity brokers and exchanges	184	1.8	26.8
63	Insurance carriers	474	13.4	112.6
64	Insurance agents	1,186	4.9	43.0
65	Real estate, excluding operative builders	3,768	12.0	67.7
66	Combination real estate, insurance, loan, law	126	0.5	4.1
67	Holding and other investment companies	128	0.4	5.8
	Total	6,915	56.9	446.3

For the three principal components of FIRE, the control totals are estimated to be:

	Control Total ($ mil.)
Finance	723.4
Insurance	582.9
Real estate	145.6
Total	1,451.9

For banks and credit agencies (including savings and loan associations) the total output is defined as operating income less interest expense. The activities of this sub-sector are treated on a margin basis, which serves to emphasize the role of banking institutions as financial intermediaries. The value added of these enterprises is net of interest payments; the equivalent interest earnings are reflected in the value added of other sectors. The control totals for banks and credit agencies are based on data provided by the Federal Deposit Insurance Corporation, the Federal Home Loan Bank, the Washington State Division of Savings and Loan Associations, and the Washington State Supervisor of Banking. For security dealers, brokers, and security exchanges, the control total estimates are made from Department of Revenue figures on gross income.

For insurance companies output is measured by the value of the services they perform in functioning to spread risks. Hence, insurance output is defined as (1) total premiums on policies written in Washington State net of benefits paid, plus (2) home office overhead on policies written by Washington firms in other states, less (3) office overhead on policies written in Washington by insurance firms located elsewhere. The latter two terms measure the exports and imports of insurance services, respectively. The large exports of FIRE originate principally in the Insurance sector, where it is estimated that 79 percent of the premium dollars earned by Washington carriers is obtained on policies written to cover out-of-state persons and property. Investment revenues are not included in the control total for the insurance sector, since these are reflected in the value-added of the industries in which investments are made. Activities of private firms in the administration of their own pension funds are also not included, since such activities are already reflected in the costs of doing business in the non-insurance sectors.

The output of real estate establishments is based on the gross income reported by the Washington State Department of Revenue. Unlike the national accounts, the space rental value of residential housing is not included in this sector, as it is included in the value added component of Personal Consumption Expenditures. Commissions of rental agents and managers on residential properties are shown as a purchase by consumers from Real Estate.

The input distributions for FIRE have been estimated primarily from published regional data. In a few cases, it has been necessary to turn to national ratios, estimates from industry spokesmen, and the judgment of analysts where industry estimates have not been available. Questionnaires have not been used in this sector due to the abundance of data published by regulatory authorities. However, conversations with representatives of the various branches covered have aided in the estimation of costs.

The distributions of output have been estimated principally from national coefficients and assumptions concerning in-state and out-of-state sources of FIRE inputs. As purchases from FIRE are relatively small and

frequently not identified in the questionnaire responses of purchasing sectors, the arbitraging process cannot be relied upon to serve as a significant check on the accuracy of the interindustry estimates. Therefore, caution with respect to the reliability of this allocation should be taken.

In addition to information obtained from the Washington Employment Security Department, the Department of Revenue, and the U.S. I/O studies, the following sources of published data are used in the analysis of this sector:

A. B. Best Company, Best's Aggregates and Averages, Property-Liability, 1972.

American Agency Management Bureau, Inc., The 1971 Agency Performance Report.

Federal Deposit Insurance Corporation, Assets and Liabilities of Member Banks by State, 1972.

Federal Home Loan Bank of Seattle, Semi-Annual Comparative Statistical Analysis of Member Insitutions, 1972.

Federal Reserve Bank of San Francisco, Operating Ratios of Member Banks, Twelfth Federal Reserve District, for the Year 1972.

Institute of Life Insurance, Life Insurance Factbook, 1972.

Mortgage Bankers Association of America, Mortgage Banking, 1972 - Financial Statement and Operating Ratios.

National Association of Insurance Agents, Inc., Insurance Agency Cost Analysis, undated.

State of Washington, Division of Savings and Loan Associations, Roster of State-Chartered Savings and Loan Associations and Credit Unions with Comparative Statement, 1972.

State of Washington, Insurance Commissioner's 78th Annual Report, 1972.

State of Washington, Insurance Commissioner's 79th Annual Report, 1973.

Supervisor of Banking, State of Washington, Earnings, Expenses, and Dispositions of Profits of 67 State Commercial Banks for the Year 1972.

Washington Mortgage Bankers Association, 1973-74 WMBA Membership List.

Industry 51: Services

This sector is defined to encompass Division I in the SIC system, that is, SIC 70-89, plus some agricultural services, SIC 07 (except 071). The retail trade activities of hotels and lodging places are included in the Trade sector. Coverage is similar to U.S. I/O sectors 72-77, except that the national study excludes trading stamp redemption centers (SIC 7396) and some miscellaneous health services (part of SIC 8099).

The services industry is very important to the Washington economy. In size it is second only to the Trade sector. The diverse scope of activities encompassed by Services is indicated in the following tabulation:

SIC	Sub-Sector	Employer Units (4th qt. 1972)	Covered Employment (thousands)	Payrolls ($ mil.)	Gross Revenue ($ mil.)
70	Hotels and other lodging places (excluding food and drink sales)	1,207	5.9	24.1	90.0
72	Personal services	3,040	13.2	65.8	205.6
73	Miscellaneous business services	2,230	21.8	157.3	400.5
75	Auto repair, services, garages	1,765	7.1	51.2	192.1
76	Miscellaneous repair services	840	3.1	24.5	90.7
78	Motion pictures	200	2.4	8.2	40.8
79	Amusement and recreation services, nec.	1,175	8.1	35.7	121.4
80	Medical and other health services	4,958	60.0	365.8	747.0
81	Legal services	1,096	4.0	30.3	142.5
82	Educational services	411	6.2	37.7	160.3
84	Botanical and zoological gardens	11	0.1	0.4	207.8
86	Nonprofit membership organizations	2,113	15.4	83.9	
89	Miscellaneous services	1,567	10.6	112.8	260.9
072-078	Agricultural services	846	3.1	16.3	90.1
	Total	21,459	161.0	1,014.0	2,749.7

The data shown above are of covered employer units, employment, and payrolls as reported by the Washington Employment Security Department. The principal source for estimating gross revenue is the 1972 Census of Selected Services. Since not all service activities are encompassed by the census report, it has been necessary to make estimates for SIC 84, 86, 89, and 072-078 from other sources. The activities reported by the ESD and the Census are not strictly comparable, since the Census classifies establishments according to the 1972 SIC code, while ESD follows the 1967 SIC manual. The 1972 Census of Selected Services reports employment, as of the week of March 12, along with annual payrolls and receipts.

Covered employment and payrolls considerably underestimate total employment and payrolls in this sector. For 1972 the Employment Security Department (in its monthly report of "Labor Force and Employment in Washington State") estimates total employment of 194,000 in Services (including SIC 07-09, 70-89, 99), which compares to covered employment of about 165,100. After adjustments to exclude SIC 07-09 (except 071) and to exclude the retail trade activity of hotels and lodging places, we estimate total employment and payrolls in this sector to be 159,400 and $1,004.1 million, respectively.

The gross revenue for hotels and other lodging places, SIC 70, is based on Census estimates, with a deduction to approximate retail trade activity (i.e., the operation of restaurants and cocktail lounge sales) by hotels and lodging places (which is included in Trade by redefinition). For the sub-sectors covering SIC 72-79 and 81, the receipts reported by the Census are the respective control totals. For the remaining sub-sectors the control totals are based partially on Census data and partially on other sources listed at the end of this report.

Due to lags in the availability of Census reports, preliminary estimates of the control totals were made, input-output (row and column) distributions were estimated for component industries at the two-digit (or even greater detail) level, and these estimates were aggregated to the sector level. With the subsequent availability of final Census estimates of receipts, the component control totals have been revised. However, the sector input-output distributions are adjusted by scaling rather than completely re-weighting the purchase-sale distributions of each of the component industries.

Questionnaires have been used selectively to assist in the analysis of this sector. Although responses have been received from 60 establishments, these questionnaires account for only about two percent of employment and four percent of revenues in Services. However, the response rates in the sub-sector components covered by the questionnaires are much higher.

The greatest difficulty in preparing input-output estimates for the Services sector is its size and diversity. A plethora of secondary mate-

rial is available, but access to it is often difficult, and the information is not easy to systematize and assimilate. However, the consistently low ratio of intermediate inputs into Services, the obvious markets for many components (e.g., barber shops), and their low export orientation give reason for confidence in the sales and purchases distributions. The published estimates of purchases and sales are the result of arbitrage to achieve consistency among the purchases and sales of all industries.

The principal published data sources used in this analysis are as follows:

American Hospital Association, Hospital Statistics 1971.

American Hospital Association, The AHA Guide to the Health Care Field, 1972.

American Medical Association, Socioeconomic Issues of Health, 1973.

California Medical Association, Data on Physicians' Income: California and the United States, 1966.

Financial Statistics of Higher Education.

Frederick, Arthur L., Churches in the State of Washington: A Statistical Analysis, The Washington State Council of Churches, 1967.

Goldstein, Mariam S., Income of Physicians, Osteopaths, and Dentists from Professional Practice 1965-1969, U.S. Department of Health, Education and Welfare, Social Security Administration, Office of Research and Statistics, (undated).

Harris, Kerr, Forster and Company, Trends in the Hotel Industry, 1972.

Hospitals, Guide Issue, 1968.

Laventhol, Krekstein, Horwath and Horwath, Lodging Industry: 39th Annual Report on Hotel and Motor Hotel Operations, 1971.

Office of Program Planning and Financial Management, State of Washington Pocket Data Book, 1972.

Snodgrass, Milton M. "The 1965 Economic Survey of Veterinarians in Private Practice," Journal of the American Veterinary Medical Association, 1967.

U.S. Department of Health, Education and Welfare, Office of Education, Digest of Education Statistics, 1972.

Washington State Health Facilities Association, "Nursing Home Facility Report and Proposed Reimbursement System", 1972.

Washington State Hospital Association, Fact Sheet of the Hospital Industry in the State of Washington, 1973.

Washington State Medical Association, Role of Medicine in Society, 1970.

Washington Personal Consumption Expenditures

Washington Personal Consumption Expenditures (PCE), shown as a column vector of purchases, represent the value of goods and services purchased by individuals or households for personal use. The estimates include personal consumption expenditures of both permanent and temporary residents, including tourists, non-resident students, and business travellers. However, the expenditures for hotel lodging services by out-of-state visitors are treated as an export.

Included in the Washington PCE estimate is the space rental value of rental and owner-occupied housing. The space rental value of residential housing is not shown in a separate real estate sector, as in the U.S. I/O studies, but is included in the Washington accounts as value created by households. The calculation of explicit and implicit residential dwelling rents is based on U.S. Department of Commerce estimates of imputed and specific net non-farm rents for Washington State ("blown up" to a space rental value on the basis of national relationships) and supplemented by U.S. Department of Agriculture estimates of farm rents. The estimate of the rental value of mobile homes has been made on the basis of national relationships.

The value of payments of households for the services of domestics is included as a part of the value created by households. This estimate is based upon national expenditures of households for the services of domestics.

Total PCE of households in Washington State for 1972 are estimated to be approximately $12,000 million. This estimate has been reached after consideration of results obtained from a number of alternative calculations. Allocating national PCE to Washington on the basis of personal income and disposable income shares yields $12,067 and $12,118 million, respectively. Techniques extrapolating Census retail sales data yield four estimates ranging between $11,002 and $11,691 million, depending upon assumptions concerning the allocation of receipts reported in the 1972 Census of Business for Selected Services and upon the choice of estimates of residential rents. Finally, the Bank of California has estimated "personal spending" for Washington to be $12,704 million. The estimate of $12,000 million is deliberately rounded to emphasize its "ballpark" character. It should be noted that total value of PCE has no influence upon the values regional income and output multipliers for Washington State; for such multipliers it is the consumption expenditures from in-state industries that are significant.

The estimates of PCE for locally supplied goods and services are developed primarily from the sales analysis of individual Washington industrial sectors. The sales by industry to Washington PCE are valued at producers' prices, with transportation and trade margins in PCE shown as purchases from the Trade and Transportation Services sectors. Although

the process of arbitrage among industrial sectors undoubtedly has improved the estimates of sales to Washington consumers, it is not possible to arbitrage the personal consumption vector itself, as no consumer surveys have been undertaken as part of this study. The recent Consumer Expenditures Surveys undertaken by the U.S. Department of Labor do not report sufficient regional detail to be of assistance either. (The 1951 and 1961 Consumer Expenditure Surveys have provided considerable geographic detail, but unfortunately this information is not available from the 1972-1973 surveys.) However, some checks for consistency have been made with the national I/O consumer expenditures patterns for 1967.

The estimate of imported goods and services by households is the difference between total PCE and the expenditures for Washington produced goods and services. The division of imports between foreign and interstate is an approximation based on an examination of the composition of foreign imports (less transshipments) reported by Management Services International.

The estimates of total PCE and most of the major components of those expenditures are arrived at by indirect statistical calculations and therefore should be regarded with more than usual caution when precision is required. A number of tests of reasonableness have been applied (e.g., the ratio of PCE to Gross State Product, PCE per capita, location quotients, and regional versus national patterns), but short of an expensive household survey of Washington consumers we see little opportunity for a significant improvement in methodology. Even with a survey of consumer expenditures in Washington, there appears to be little chance of improving upon the critical in-state purchases estimates, except possibly by refinement of methods already employed in the study.

A principal publication used on the analysis of PCE foreign imports is Management Sciences International, A Foreign Trade Expansion Strategy for the Pacific Northwest, 1974.

Washington Gross Private Fixed Investment

Washington Gross Private Fixed Investment (GPFI), represented by a column vector of purchases, describes the sources of new private dwellings and new equipment and structures acquired by regional private business and non-profit institutions. Conceptually, aggregate GPFI is the regional counterpart of gross private fixed domestic investment as reported in the national income accounts (NIA). Capital expenditures by government enterprises are shown in the government purchases columns.

The basic data used for estimating aggregate GPFI are new plant and equipment expenditures by Washington manufacturers as reported by the 1972 Census of Manufactures and F.W. Dodge estimates of construction contracts in Washington State. These series are modified on the basis of national relationships to make them correspond to the NIA concepts.

The estimates of the portion of GPFI supplied by each Washington industry are obtained from the sales analysis of each industry producing capital goods. Interstate and foreign imports are estimated as a residual. The foreign import component has been estimated by an analysis of the commodity composition of foreign imports (less transshipments) as reported by Management Services International.

Slightly more than 60 percent of the estimated value of GPFI originates with Washington producers, so that the reliability of this portion of the total is dependent upon the sales analysis of Washington industrial sectors. Since Construction accounts for about 88 percent of the regional supply of Washington fixed investment, readers are referred to the analysis of that sector in evaluating this largest single component of the GPFI estimate.

It should be emphasized that the vector of GPFI describes the sources of supply of fixed investment and not the Washington receivers of this capital. A capital flows matrix showing both sources and destinations has not been developed for Washington State. There is useful information about total capital expenditures by industry in the 1972 Census of Manufactures, but this does not provide detail concerning either the industrial or regional source of this supply.

Net Inventory Change

Net Inventory Change, represented by a column vector of purchases, measures the net change in the inventories of goods-in-process and final products held by Washington producers. Data limitations confine the estimate of net inventory change to the agriculture, manufacturing, and natural gas sectors.

For agriculture the net change in inventories measures the change in the value of livestock and crops held on farms as reported by the U.S. Department of Agriculture.

For each manufacturing sector the net change in goods-in-process and final-product inventories has been estimated by subtracting the corresponding value of shipments from the cost of materials and value added as given by the 1972 Census of Manufactures. Inventory change for Bremerton Naval Shipyard is assumed to be zero, since for I/O accounting purposes "sales" to the Federal Government by the facility are set equal to the value of work done.

For Gas Companies the net change in inventories is estimated by multiplying the change in the quantity of natural gas in storage by the average 1972 import price as reported by the Bureau of Mines.

These estimates of net inventory change include neither the changes in the value of raw materials nor the change in the value of inventories held by the trade sector. For this reason, net inventory change in the Washington I/O table is not comparable in scope to net inventory change in the national income accounts.

The principal sources used in preparing the net inventory change estimates are as follows:

U.S. Bureau of Mines, Minerals Yearbook, 1972.

U.S. Bureau of the Census, 1972 Census of Manufactures.

U.S. Department of Commerce, Farm Income State Estimates 1959-1972.

Washington State and Local Government Expenditures

Expenditures for the Washington State and Local Governments (S&L) sector are represented by a column vector describing the purchases of goods and services by state and local governments. These purchases exclude operating expenses of government enterprises, all transfer payments, and purchases of land or existing structures.

All purchases by S&L governments are included without regard to source of funding. With the exceptions specified below, included within this sector are all activities of the legislative, judicial, and administrative branches of S&L governments, including health and safety departments, institutions, educational systems, special districts, and port authorities. Both current operating and capital expenditures are included. All intergovernmental transfers and all transfer payments (public welfare) to individuals are excluded. Following the conventions in the national income and product accounting system, the value added in S&L governments is measured as employee compensation.

The operating expenditures of the following S&L government enterprises have been transferred to the appropriate industrial sectors: municipal electric and gas companies and electric Public Utility Districts; municipal transit companies; water, sewage, sanitation, and irrigation districts; the Washington State ferry system (except toll roads); the forestry management service of the Department of Natural Resources; and the retail stores of the Washington State Liquor Board.

The estimates of S&L governments purchases have been made from a variety of sources of information. An initial analysis of S&L government purchases has been made by the Washington State Department of Commerce and Economic Development. The purchases from Washington suppliers have been reconciled through the arbitrage process with the reported sales by Washington industries to Washington S&L governments. The published results must be regarded as an approximation of the distribution of expenditures, because individual cells are subject to error due to problems of classification and evaluation.

The principal published sources used in preparing the estimates for the S&L governments sector are as follows:

U.S. Bureau of the Census, City Government Finances in 1971-1972.

U.S. Bureau of the Census, Governmental Finances in 1971-1972.

U.S. Bureau of the Census, Governmental Finances in 1972-1973.

U.S. Bureau of the Census, Local Government Finances in Selected Metropolitan Areas and Large Counties: 1971-1972.

U.S. Bureau of the Census, 1967 Census of Government.

U.S. Bureau of the Census, 1972 Census of Governments.

Washington State Auditor's Office, Financial Transactions of Counties and Taxing Districts, 1972.

Washington State Research Council, The Research Council's Handbook, 1974.

Federal Government Expenditures

The Federal Government purchases vector describes the purchases by federal agencies of goods and services produced in the state of Washington. These purchases include both expensed and capital goods. The Federal Government sector is geographically undefined so that the destination of purchased goods and services is not identified (i.e., federally purchased goods may be used either in the state, in other areas of the country, or abroad). The value created by the federal sector measures employee compensation (including military) earned in Washington State.

The Federal Government purchases vector excludes all transfer payments (i.e., intergovernmental transfers and transfer payments to persons). Also excluded are the current expenditures of federal enterprises operating within Washington State, specifically for the U.S. Postal Service, Bremerton Naval Shipyard, and the Bonneville Power Administration, as well as for activities of the Bureau of Reclamation and Corps of Engineers related to power generation and the sale of irrigation water, and that portion of the Forest Service and Bureau of Indian Affairs activities related to the management of forest lands. These activities have been transferred to the appropriate industrial sectors. However, their capital expenditures, including "do-it-yourself" capital formation, are counted in the Federal Government sector.

Purchases by the Federal Government are derived principally from the sales reports of the industrial sectors. Since surveys covering federal government procurements are not possible, the estimates are not subject to the arbitrage process. Payroll and employee compensation estimates are made from U.S. Department of Commerce data, deductions being made for the expensed payrolls and compensation of workers in federal government enterprises.

Exports to Rest of U.S.

The Exports to Rest of U.S. sector describes the sales of goods and services by Washington industrial sectors to industries, consumers, and governments in the rest of the country. Both current account and capital goods are included.

Exports to Rest of U.S. have been estimated from the sales reports of the industrial sectors. The geographic destinations of interstate exports have not been analyzed.

Foreign Exports

The Foreign Exports sector describes the sales of goods and services by Washington industries to industries, consumers, and governments outside the United States.

Based on the sales reports of all Washington industrial sectors, total foreign exports are estimated to be $1,952.7 million. The estimates of manufacturing exports derived from the Washington I/O study are somewhat less than those reported by the U.S. Department of Commerce's survey of exports by state of origin ($1,302.4 versus $1,494.2 million), but both estimates are subject to sampling error. There is some indication that the foreign exports of Motor Vehicles might be understated, while the interstate exports might be overstated, in the I/O study.

Foreign exports reported here differ substantially in concept from those reported by the Seattle Customs District. On the one hand, the Seattle Customs District does not count all foreign exports by Washington producers, as some Washington products are exported through other customs districts. On the other hand, the Seattle Customs District's tabulation includes goods produced elsewhere but transshipped through Washington State to foreign markets. Furthermore, state exports reported in the I/O table include the value of exported services, especially those of trade and transportation services associated with regionally produced goods and transshipments, as well as the value of business services performed in Washington for foreign clients.

The principal sources of information used in the analysis of Foreign Exports are as follows:

U.S. Department of Commerce, "Survey of the Origin of Exports of Manufacturing Establishments in 1972," Current Industrial Reports.

Customs District 30, Seattle, Washington, U.S. Exports, 1972.

PART III. THE 1972 WASHINGTON INPUT-OUTPUT TABLES

Two sets of input-output tables are presented in this section. Nine tables are included for a 51-industry classification of the economy. These cover regional transactions, direct regional coefficients, sales coefficients, inverse coefficients, induced inverse coefficients, total purchases, imports, total sales, and exports. For a 27-industry grouping, there are tables of regional transactions, direct regional coefficients, inverse coefficients, and induced inverse coefficients. Following is a brief description of each type of input-output table.

Description of Input-Output Tables

Transactions Table

The regional transactions, or gross flows, table depicts the operating purchases and sales patterns of the state's industries. The industries are listed across the top of the table as purchasers of inputs and along the left side of the table as sellers of output. Numbers down a column, given in millions of dollars, represent for the sector at the top the 1972 transactions involved in procuring the inputs necessary to produce that sector's output. Numbers across the row show for each industry named at the left the disposition of that industry's output. According to input-output conventions, for a given industry total purchases must equal total sales.

As shown in the table, transactions occur not only between regional industries. An industry will also make purchases from establishments located outside the region and from factors of production. These are represented by transactions in the import and value added rows, respectively. Moreover, an industry will sell its output to the final demand sectors. As an example, consider the activities of the livestock industry (3) in the 51-industry table. In 1972 its total gross output, and total gross input, is shown to be $353.6 million. Among its many inputs are purchases from Washington Grain Mill Products (9) amounting to $34.8 million. Value added is $100.9 million in that industry, while imports from establishments in the rest of the U.S. total $62.8 million. As for its output distribution in 1972, estimated sales include $107.1 million to Meat Products (6) and $69.4 million to Washington consumers.

Direct Regional Coefficients Table

The direct regional coefficients table shows the direct regional input requirements for each industry named at the top as fractions of that industry's total input. Continuing our example, the regional coef-

ficient representing the purchase by Livestock from Grain Mill Products is shown to be 0.09842, which is calculated by dividing $34.8 million by $353.6 million. The value added and U.S. import coefficients are 0.28535 and 0.17760, respectively. Note that all input coefficients down a column add to unity. An alternative interpretation of regional coefficients is that they represent the value of the direct requirements in dollars per dollar of industry output.

Sales Coefficients Table

Sales coefficients show the output distribution for each industry named at the left as fractions of that industry's total sales. The coefficient representing Livestock's sales to Meat Products is 0.30288, which is calculated by dividing $107.1 million by $353.6 million. The coefficient for sales to Washington households is 0.19627. As shown in the table, all sales coefficients across a row sum to unity.

Inverse Coefficients Table

The inverse coefficients are interpreted as the value of output required directly and indirectly to support a dollar of final demand delivered from the industry named at the top. For example, to support a dollar of livestock exports, the Grain Mills Products' inverse coefficient of 0.11453 indicates that the economy as a whole requires 11.5 cents of output from the regional grain mill industry. The direct coefficients matrix shows the direct requirements by Livestock from Grain Mills Products to be 9.8 cents. This implies that the production required elsewhere in the economy (such as in Field and Seed Crops and Industrial Chemicals) to support the dollar of livestock exports indirectly leads to industrial demands on Grain Mill Products amounting to 1.7 cents (= 11.5 - 9.8). Note that the value added row in the inverse table constitutes the Type I value added multipliers discussed in Section 5.

Induced Inverse Coefficients Table

The induced inverse coefficients represent the value of output required directly, indirectly, and through induced household consumption to support a dollar of final demand delivered from the industry named at the top. In other words, the income-consumption linkage is now captured by incorporating the household sector into the interindustry structure. This of course leads to higher coefficients in the induced inverse matrix, as evident by the Livestock-Grain Mill coefficient, which is raised to 0.11746. The induced inverse coefficients along the value added row are the Type II value added multipliers.

Total Purchases Table

Entries in the total purchases table represent the operating expenditures made by the regional industries named at the top from industries

named at the left both in Washington and the rest of the U.S. For example, Washington Livestock purchased $51.1 million from grain mill establishments in Washington and the rest of the nation. Note that foreign imports are not identified by industry and remain as an aggregated sector.

Imports Table

The imports table shows the purchases from the U.S. industries named at the left by the Washington industry named at the top. The import transaction shown in each cell is simply the difference between the corresponding total and regional purchases, as given in the total purchases and regional gross flows tables. Thus, the imports from the U.S. of grain mill products by Livestock is calculated to be $16.3 million, the difference between total purchases of $51.1 million and regional purchases of $34.8 million. We should point out again that the industrial disaggregation of imports is only with respect to U.S. imports.

Total Sales Table

Each cell in the total sales table shows the sales from the regional industry named at the left to industries and final demand sectors named at the top without regard to location. Referring to our example, total sales by Livestock to regional and U.S. establishments in Meat Products amount to $122.0 million. Note that foreign exports are not identified by purchaser.

Exports Table

Entries in the exports table represent sales from the Washington industry named at the left to the U.S. sector named at the top. Exports are the difference between the corresponding total and regional sales. Livestock exports to the U.S. meat products industry are estimated to be $14.9 million, the difference between $122.0 million and $107.1 million.

1972 WASHINGTON TRANSACTIONS TABLE

		1 FIELD CROP	2 VEGETABLES	3 LIVESTOCK	4 OTHER AGRI	5 FISHING	6 MEAT PROD	7 DAIRY PROD	8 CANNING	9 GRAIN MILL	10 BEVERAGES
1	FIELD CROP	15.2	3.7	71.3	.9	.0	.0	.0	.0	29.0	4.9
2	VEGETABLES	.0	3.1	2.5	.0	.0	.0	.2	100.0	.0	2.7
3	LIVESTOCK	.0	.0	33.9	.0	.0	107.1	107.2	.1	.0	.0
4	OTHER AGRI	.0	1.0	.6	3.5	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.1	.0	.0	35.1	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.2	7.9	.0	.6	4.7	.0
7	DAIRY PROD	.0	.0	.0	.0	.1	.3	35.1	1.7	.0	.0
8	CANNING	.0	.0	.0	.0	.1	.0	1.0	2.6	1.2	.0
9	GRAIN MILL	.0	.0	34.8	.0	.0	.2	.0	3.5	7.5	.0
10	BEVERAGES	.0	.0	.0	.0	.2	.0	.1	.0	.0	14.7
11	OTHER FOOD	.0	.0	3.6	.0	.2	1.5	1.5	6.7	2.0	6.0
12	TEXTILES	.1	.1	.0	.0	.5	.0	.0	.0	.0	.0
13	APPAREL	2.0	.0	.0	.0	.0	.0	.0	.0	.3	.2
14	MINING	.3	.2	.0	.0	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	OTHER WOOD	.0	1.0	.0	.0	.0	.2	.0	.5	.0	.2
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	.3	.3	.0	.0	.0	.0	.0	.0	.0
23	PAPBD MILL	.2	1.1	.0	.0	.0	3.6	8.1	10.2	2.1	7.0
24	PRINTING	.0	.0	.0	.0	.0	.3	.0	.6	.0	.5
25	INDUS CHEM	13.3	10.2	2.5	1.5	.1	.3	.2	.2	.0	.1
26	OTHER CHEM	.0	.0	.8	.1	.0	.2	.1	.0	.0	.0
27	PETROLEUM	3.3	1.3	1.8	1.1	2.6	.3	.7	.3	.1	.1
28	GLASS	.0	.0	.0	.0	.0	.3	.0	5.0	.0	14.1
29	CEMENT	.1	.2	.1	.0	.0	.1	.0	.0	.2	.0
30	FERR METAL	.4	.0	.1	.1	.0	.0	.0	.0	.0	.0
31	NONFER MET	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
32	ALUMINUM	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
33	HEAVY METL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
34	LIGHT METL	.4	.3	.3	.0	.0	.4	.0	16.8	1.3	38.3
35	NONELC EQP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.0	.1	.4	.0	.5	.0	.1
37	INDUS EQP	.0	.0	.0	.0	.0	.2	.0	.6	.0	.0
38	ELEC MACH	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
41	SHIP BLDG	.0	.0	.0	.0	2.2	.0	.0	.0	.0	.0
42	OTHER MFG	.0	.1	.0	.0	.1	.1	.3	.4	.0	.3
43	TRANS SERV	4.0	3.0	7.0	.5	1.3	6.6	1.2	14.4	3.4	4.1
44	ELEC CO	2.0	1.2	1.5	.2	.1	.9	1.2	2.3	.6	.7
45	GAS CO	.0	.0	.0	.0	.0	.5	1.0	4.0	.0	.8
46	OTH UTILS	2.5	1.3	1.5	1.0	.0	.2	.1	.4	.0	.2
47	COMMUNICAT	1.4	2.0	1.4	.6	.1	.9	.7	1.3	.3	.4
48	CONSTRUCTN	5.0	3.0	2.5	.4	.0	.2	.2	.2	.0	.1
49	TRADE	14.8	15.5	12.4	2.3	3.2	5.1	6.0	17.8	4.1	8.2
50	FIN,INS,RE	3.6	1.9	1.7	.3	.7	.7	1.7	1.2	.4	1.3
51	SERVICES	18.3	6.7	4.8	1.9	.8	3.7	6.7	10.8	4.9	3.7
52	SUBTOTAL	87.0	57.2	185.4	14.4	12.8	142.6	173.3	237.8	62.1	106.8
53	VAL ADDED	252.3	290.9	100.9	33.9	23.2	55.2	45.4	181.3	43.0	125.6
54	IMPORT US	43.3	19.9	62.8	8.3	2.2	119.3	25.8	61.7	67.8	50.0
55	IMPORT FOR	10.7	3.2	4.5	.9	1.5	10.5	.0	3.0	.0	.2
56	TOTAL	393.3	371.2	353.6	57.7	39.7	327.6	244.5	483.8	172.9	282.6

1972 WASHINGTON TRANSACTIONS TABLE

		11 OTHER FOOD	12 TEXTILES	13 APPAREL	14 MINING	15 FORESTRY	16 LOGGING	17 SAWMILLS	18 PLYWOOD	19 OTHER WOOD	20 FURNITURE
1	FIELD CROP	1.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	37.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	2.7	.1	.1	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.1	.0	.0	.0	.8	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.9	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	1.9	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	9.5	.0	.0	.0	.0	.0	.0	.3	.0	.0
10	BEVERAGES	1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	8.7	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	TEXTILES	.0	.0	.1	.0	.1	.0	.0	.0	.0	.2
13	APPAREL	.0	.0	.5	.0	.0	.0	.0	.0	.0	.0
14	MINING	.5	.0	.0	1.0	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	9.4	179.1	56.0	4.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.6	49.2	187.8	64.3	4.9	.0
17	SAWMILLS	.0	.0	.0	.3	.1	5.6	34.1	12.0	34.0	2.3
18	PLYWOOD	.0	.0	.0	.0	.0	3.6	5.0	11.6	9.4	.2
19	OTHER WOOD	.1	.0	.0	.0	.0	.1	11.2	.3	4.4	.8
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0
22	PAPER MILL	.4	.0	1.8	.0	.0	.0	.0	.2	.1	1.3
23	PAPBD MILL	4.3	.0	.1	.2	.0	.1	1.3	.9	.5	.3
24	PRINTING	.5	.0	.0	.0	.2	.1	.0	.2	.1	.0
25	INDUS CHEM	.8	.0	.0	.3	.7	.2	.0	.2	.0	.0
26	OTHER CHEM	.0	.0	.0	.0	.1	.2	.7	3.1	.2	.2
27	PETROLEUM	.3	.0	.1	.5	.3	2.2	1.3	.2	.2	.1
28	GLASS	.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	CEMENT	.0	.0	.0	1.5	.4	.0	.0	.0	.0	.0
30	FERR METAL	.0	.0	.0	.2	.0	.2	.1	.1	.1	.0
31	NONFER MET	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.0	.0	.5	.1
33	HEAVY METL	.0	.0	.0	.0	.3	.0	.8	.1	.1	.0
34	LIGHT METL	.6	.0	.0	.1	.0	1.3	.4	.1	.6	.1
35	NONELC EQP	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.3	.0	2.5	.8	.3	.1	.1
37	INDUS EQP	.0	.0	.1	.0	.0	.0	.9	.3	.8	.0
38	ELEC MACH	.0	.0	.0	.0	.0	.0	.2	.1	.2	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
42	OTHER MFG	.2	.0	.0	.2	.1	.2	.0	.1	.5	1.7
43	TRANS SERV	1.8	.1	.2	.5	2.9	3.6	29.2	14.2	7.8	.4
44	ELEC CO	.8	.2	.2	1.2	.3	.8	3.7	1.7	1.1	.2
45	GAS CO	4.3	.2	.0	.1	.0	.0	.6	1.3	.0	.0
46	OTH UTILS	.3	.0	.1	.2	.0	.0	.9	.1	.1	.0
47	COMMUNICAT	.8	.2	.6	.2	.7	.9	.9	.6	1.0	.3
48	CONSTRUCTN	.2	.0	.1	.4	2.0	1.2	2.1	.2	.3	.2
49	TRADE	5.6	.2	1.7	1.0	3.5	10.4	22.5	12.4	10.7	1.6
50	FIN,INS,RE	1.4	.0	.5	.7	.5	4.5	4.5	1.7	1.3	.3
51	SERVICES	5.3	.1	1.5	1.6	1.2	14.7	14.0	4.6	4.5	1.7
52	SUBTOTAL	93.0	1.1	7.7	10.5	24.2	280.9	379.1	135.4	83.5	12.4
53	VAL ADDED	83.3	9.6	62.7	47.6	231.2	253.7	371.6	147.2	101.1	30.8
54	IMPORT US	46.2	4.7	66.7	13.9	4.5	23.1	36.5	53.0	63.8	16.0
55	IMPORT FOR	8.2	.1	2.2	4.4	.0	16.5	35.8	16.6	36.8	.1
56	TOTAL	230.7	15.5	139.3	76.4	259.9	574.2	823.0	352.2	285.2	59.3

1972 WASHINGTON TRANSACTIONS TABLE

		21 PULPMILLS	22 PAPER MILL	23 PAPBD MILL	24 PRINTING	25 INDUS CHEM	26 OTHER CHEM	27 PETROLEUM	28 GLASS	29 CEMENT	30 FERR METAL
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0
12	TEXTILES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	APPAREL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	MINING	.1	.1	.2	.0	.2	.0	.1	1.3	14.7	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	13.9	13.5	12.7	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	25.5	8.2	8.0	.0	.0	.0	.0	.0	.0	.2
18	PLYWOOD	8.0	1.3	.0	.0	.0	.0	.0	.0	.0	.0
19	OTHER WOOD	.0	.1	.4	.0	.1	.1	.1	.1	.2	.1
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	1.0	14.7	26.3	.0	1.1	.0	.0	.0	.0	.0
22	PAPER MILL	.1	.9	34.8	11.6	.1	.0	.0	.0	.0	.0
23	PAPBD MILL	.6	7.8	17.4	.2	1.7	.2	.3	1.3	1.2	.0
24	PRINTING	.0	.1	.1	3.1	.1	.2	.0	.0	.1	.1
25	INDUS CHEM	10.1	7.5	1.5	.0	9.4	.7	1.4	.0	.0	.3
26	OTHER CHEM	.0	.2	1.6	.2	.7	1.7	.1	.0	.2	.1
27	PETROLEUM	8.4	5.5	.4	.1	.6	.1	3.9	.1	1.5	.1
28	GLASS	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
29	CEMENT	.0	.0	.0	.0	.0	.0	.1	.0	28.9	.2
30	FERR METAL	.1	.2	.1	.0	.0	.0	.2	.0	.0	1.5
31	NONFER MET	.2	.3	.0	.0	.0	.0	.1	.0	.0	.1
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
33	HEAVY METL	.2	.3	.0	.0	.0	.0	.3	.0	.0	.1
34	LIGHT METL	.4	.4	.0	.0	1.2	.5	.1	.0	.2	.1
35	NONELC EQP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.0	.0	.0	.0	.0	.1	1.4
37	INDUS EQP	.2	.9	.3	.0	.3	.0	.3	.0	.1	.0
38	ELEC MACH	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	.0	.0	.1	.0	.4	.1	.1	.0	.0	.1
43	TRANS SERV	6.9	10.7	12.3	4.0	3.5	.5	4.5	.4	9.0	1.7
44	ELEC CO	3.3	3.3	6.8	.5	4.1	.2	2.8	.3	2.8	2.5
45	GAS CO	8.5	6.3	4.5	.0	7.1	.3	9.6	.6	3.5	1.5
46	OTH UTILS	2.4	.4	1.3	.1	.4	.0	.8	.0	.2	.1
47	COMMUNICAT	.3	1.0	1.4	2.9	.8	.3	.6	.0	1.0	.4
48	CONSTRUCTN	.7	2.0	1.8	.4	1.6	.1	1.7	.1	1.0	.2
49	TRADE	3.8	7.0	12.3	3.7	3.2	.7	1.8	.3	3.8	4.8
50	FIN,INS,RE	.8	1.8	1.6	1.1	.8	.2	4.6	.1	1.1	.5
51	SERVICES	4.7	6.3	9.8	8.7	12.2	1.5	2.7	.3	.7	2.5
52	SUBTOTAL	100.2	100.8	155.7	36.6	50.6	7.4	36.3	4.9	70.3	18.6
53	VAL ADDED	82.5	149.0	200.8	159.8	148.3	15.8	116.4	15.7	86.2	67.3
54	IMPORT US	35.6	88.1	80.5	28.5	39.6	11.8	50.3	2.1	12.0	21.2
55	IMPORT FOR	7.5	7.8	9.0	16.5	.3	.0	385.0	.2	18.7	.1
56	TOTAL	225.8	345.7	446.0	241.4	238.8	35.0	588.0	22.9	187.2	107.2

1972 WASHINGTON TRANSACTIONS TABLE

		31 NONFER MET	32 ALUMINUM	33 HEAVY METL	34 LIGHT METL	35 NONELC EQP	36 MACH TOOL	37 INDUS EQP	38 ELEC MACH	39 AEROSPACE	40 MOTOR VEH
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
11	OTHER FOOD	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
12	TEXTILES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	APPAREL	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	MINING	.5	.0	.0	.0	.0	.0	.0	.0	.4	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.1	.0	.1	.0	.4	.9
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.9
19	OTHER WOOD	.1	.3	.0	.2	.1	.0	.2	.2	.3	.2
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1
23	PAPBD MILL	.0	.2	.0	.4	.0	.0	.0	.4	3.0	.2
24	PRINTING	.0	.1	.0	.0	.2	.0	.1	.1	.3	.2
25	INDUS CHEM	.1	.2	.0	.4	.1	.1	.1	.1	.1	.4
26	OTHER CHEM	.1	.4	.3	.4	.2	.0	.1	.2	1.0	.2
27	PETROLEUM	.4	3.0	.2	.1	.1	.1	.1	.0	1.8	.3
28	GLASS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	CEMENT	.1	.3	.0	.3	.1	.3	.1	.0	.2	.0
30	FERR METAL	.3	.5	11.0	3.1	4.2	2.7	3.1	.3	.7	8.9
31	NONFER MET	.1	1.8	.4	.6	.0	.0	.1	.0	.0	.4
32	ALUMINUM	1.1	135.4	6.4	2.1	.0	.1	1.5	.6	.4	1.0
33	HEAVY METL	.0	.2	5.7	.3	.1	.7	1.0	.1	2.0	.7
34	LIGHT METL	.1	.4	1.6	1.4	.6	.1	.5	.9	2.5	1.0
35	NONELC EQP	.0	.0	.0	.0	.9	.0	.0	.0	.0	.0
36	MACH TOOL	.0	1.9	1.7	2.9	2.0	4.2	3.5	1.3	6.0	1.0
37	INDUS EQP	.1	.8	.4	.0	.2	.0	4.0	.5	1.6	.1
38	ELEC MACH	.0	.5	.0	.0	.4	.0	.8	1.5	2.0	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	2.5	16.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.4	.0	.0	.0	.0	2.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
42	OTHER MFG	.1	.0	.0	.2	.2	.4	.4	1.5	3.5	.4
43	TRANS SERV	1.6	12.5	1.4	.9	.4	.4	.4	.3	.5	.6
44	ELEC CO	.6	36.8	.6	.9	.4	.3	.4	.4	3.9	1.5
45	GAS CO	1.6	4.0	.2	.9	.2	.1	.1	.0	1.8	.4
46	OTH UTILS	.0	.4	.1	.2	.1	.0	.1	.1	1.2	.2
47	COMMUNICAT	.1	.9	2.3	1.1	.8	.9	1.6	.9	7.7	2.8
48	CONSTRUCTN	.0	1.0	.3	.1	.8	.0	.2	.2	.8	.1
49	TRADE	.7	5.7	2.9	1.4	1.3	1.5	3.2	2.1	4.2	3.2
50	FIN,INS,RE	.0	3.2	.9	.5	.4	.3	.6	.4	3.5	.7
51	SERVICES	.7	4.2	3.0	2.7	2.1	1.5	2.5	1.6	56.1	2.7
52	SUBTOTAL	8.8	214.7	39.4	21.1	16.4	13.7	24.8	16.2	122.6	31.1
53	VAL ADDED	26.2	260.5	72.0	61.0	39.3	45.1	72.4	57.0	863.4	86.2
54	IMPORT US	11.1	252.9	36.3	45.8	27.1	22.4	40.1	39.0	850.0	205.4
55	IMPORT FOR	.4	132.1	12.1	11.4	.4	.3	6.6	1.6	25.8	.7
56	TOTAL	46.5	860.2	159.8	139.3	83.2	81.5	143.9	113.8	1861.8	323.4

1972 WASHINGTON TRANSACTIONS TABLE

		41 SHIP BLDG	42 OTHER MFG	43 TRANS SERV	44 ELEC CO	45 GAS CO	46 OTH UTILS	47 COMMUNICAT	48 CONSTRUCTN	49 TRADE	50 FIN,INS,RE
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.1	.0	.0	.0	1.7	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.4	1.4	.7	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.0	.0	.4	.4	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.4	.1	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.1	.0	.2	.0	.0	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	.5	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	.0	.1	.9	1.0	.0	.0	.0	.0	.4	.0
12	TEXTILES	.1	.0	.1	.1	.0	.0	.0	.0	.0	.0
13	APPAREL	.2	.0	.1	.0	.0	.0	.0	.1	.5	.1
14	MINING	.0	.0	.2	18.0	.0	.0	.0	22.0	.0	.0
15	FORESTRY	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
17	SAWMILLS	1.8	.2	.2	1.0	.0	.0	.0	45.0	1.2	.0
18	PLYWOOD	.9	.0	.0	.0	.0	.0	.0	29.9	.8	.0
19	OTHER WOOD	.1	.3	.2	.0	.0	.0	.0	30.2	.4	.0
20	FURNITURE	.9	.0	.0	.0	.0	.0	.1	2.3	.4	.1
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.1	.4	.3	.1	.0	.0	1.6	.0	16.2	1.0
23	PAPBD MILL	.1	.4	.2	1.4	.1	.1	.2	.7	4.5	5.5
24	PRINTING	.1	.1	.8	1.2	.3	.3	2.6	.1	74.0	29.1
25	INDUS CHEM	.6	.1	.2	.0	.0	.2	.0	.3	1.1	.0
26	OTHER CHEM	.5	1.9	.0	.2	.0	.0	.1	3.3	2.5	.2
27	PETROLEUM	1.0	.2	38.4	.6	.2	1.0	.6	37.9	11.4	2.1
28	GLASS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	CEMENT	.1	.3	.1	.1	.0	.0	.1	132.2	.2	.0
30	FERR METAL	.7	.0	.1	.1	.0	.0	.1	30.0	.0	.0
31	NONFER MET	.7	.1	.0	.1	.0	.0	.1	3.8	.0	.0
32	ALUMINUM	.1	.4	.0	.0	.0	.0	.0	6.8	.0	.0
33	HEAVY METL	1.0	.0	.0	.1	.0	.0	.1	67.0	.7	.0
34	LIGHT METL	1.3	2.2	.1	1.4	.1	.0	.0	4.5	1.0	.0
35	NONELC EQP	.8	.0	.0	.1	.0	.0	.0	.1	.0	.0
36	MACH TOOL	.5	.9	.5	.1	.0	.0	.0	1.0	1.0	.0
37	INDUS EQP	.1	.2	.0	.4	.0	.0	.1	.4	.0	.0
38	ELEC MACH	.5	.2	.0	.3	.0	.0	2.6	4.9	.1	.0
39	AEROSPACE	.0	.0	1.5	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.2	.0	.0	.0	.0	.3	.0	.0
41	SHIP BLDG	3.5	.0	1.7	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	.5	4.9	.1	.1	.1	.0	.3	8.0	4.3	2.1
43	TRANS SERV	1.9	2.5	96.0	3.1	.3	.4	3.0	40.0	30.0	9.5
44	ELEC CO	.7	.6	6.7	138.0	.5	2.2	1.7	2.0	44.5	14.9
45	GAS CO	.1	.1	.4	.4	76.2	.2	.1	.1	6.0	1.5
46	OTH UTILS	.2	.1	.4	.2	.1	12.4	.5	.8	7.0	3.2
47	COMMUNICAT	1.0	1.3	11.3	3.0	.5	1.1	1.9	11.0	46.5	30.1
48	CONSTRUCTN	.7	.3	6.0	.5	.1	1.6	2.1	.5	15.6	19.8
49	TRADE	7.8	3.6	15.0	1.9	.5	.7	2.7	118.7	40.0	13.2
50	FIN,INS,RE	.9	.9	15.8	2.7	.8	1.3	3.3	15.5	50.0	106.5
51	SERVICES	4.4	3.8	29.1	18.0	1.5	3.0	20.1	76.7	205.0	112.7
52	SUBTOTAL	34.0	26.5	229.7	195.6	81.3	24.5	44.0	697.9	565.3	351.6
53	VAL ADDED	225.8	124.7	922.3	350.9	76.4	135.4	456.2	1022.4	3500.0	1026.4
54	IMPORT US	86.3	62.6	126.9	32.4	6.2	4.1	44.5	595.5	202.1	68.9
55	IMPORT FOR	3.2	7.2	16.7	1.0	56.1	.0	.0	8.2	32.6	5.0
56	TOTAL	349.3	221.0	1295.6	579.9	220.0	164.0	544.7	2324.0	4300.0	1451.9

1972 WASHINGTON TRANSACTIONS TABLE

		51 SERVICES	52 SUBTOTAL	53 CONSUMPTN	54 INVESTMENT	55 INVEN CHNG	56 S L GOVT	57 FED GOVT	58 EXPORT US	59 EXPORT FOR	60 TOTAL
1	FIELD CROP	.0	126.6	3.5	.0	3.0	1.0	.0	52.5	206.7	393.3
2	VEGETABLES	.8	146.5	29.7	.0	.0	1.5	1.1	146.3	46.1	371.2
3	LIVESTOCK	.0	251.2	69.4	.0	.8	.6	.0	27.7	3.9	353.6
4	OTHER AGRI	.0	7.8	21.1	.0	.0	.2	.0	26.5	2.1	57.7
5	FISHING	.0	35.2	1.9	.0	.0	.0	.0	2.5	.1	39.7
6	MEAT PROD	.6	17.5	260.1	.0	6.9	1.1	1.6	40.4	.0	327.6
7	DAIRY PROD	1.0	40.9	153.0	.0	.3	4.3	5.4	27.4	13.2	244.5
8	CANNING	1.3	7.7	106.6	.0	-3.1	1.2	5.6	346.0	19.8	483.8
9	GRAIN MILL	.7	56.8	16.1	.0	2.3	1.0	3.3	63.4	30.0	172.9
10	BEVERAGES	1.8	16.4	79.9	.0	.3	.1	6.4	179.5	.0	282.6
11	OTHER FOOD	1.2	34.5	85.0	.0	3.7	1.2	2.2	94.8	9.3	230.7
12	TEXTILES	.0	1.4	1.7	.0	.1	.0	.0	12.1	.2	15.5
13	APPAREL	1.8	6.1	25.0	.0	5.2	.1	.1	102.8	.0	139.3
14	MINING	.1	59.9	1.2	.0	.0	1.3	1.5	11.7	.8	76.4
15	FORESTRY	.0	248.6	.6	.0	.0	.0	.0	10.4	.3	259.9
16	LOGGING	.0	347.1	.0	1.0	5.9	.0	.0	9.4	210.8	574.2
17	SAWMILLS	.0	181.2	4.0	3.0	-3.6	.9	.0	614.7	22.8	823.0
18	PLYWOOD	.0	71.6	.9	.0	.2	.8	2.0	270.4	6.3	352.2
19	OTHER WOOD	.2	53.0	2.5	6.2	.9	.6	.4	221.3	.3	285.2
20	FURNITURE	.0	4.3	28.9	1.0	.1	1.9	.1	23.0	.0	59.3
21	PULPMILLS	.0	43.3	.0	.0	21.8	.0	.0	80.7	80.0	225.8
22	PAPER MILL	.5	72.3	8.2	.0	-3.0	1.0	2.0	239.2	26.0	345.7
23	PAPBD MILL	2.5	90.8	15.8	.0	-2.0	1.9	6.4	320.5	12.6	446.0
24	PRINTING	40.0	155.9	48.1	.0	1.2	1.8	.3	34.1	.0	241.4
25	INDUS CHEM	2.2	67.8	.0	.0	2.6	2.1	113.0	33.3	20.0	238.8
26	OTHER CHEM	2.2	24.3	3.2	.0	-.9	1.1	.5	6.6	.2	35.0
27	PETROLEUM	5.1	142.1	153.0	.0	15.5	11.9	16.8	238.2	10.5	588.0
28	GLASS	.0	19.9	.0	.0	-.1	.1	.2	2.6	.2	22.9
29	CEMENT	.3	166.6	5.1	.0	1.2	2.0	4.7	6.6	1.0	187.2
30	FERR METAL	.0	69.2	.1	.0	1.2	.2	.5	35.8	.2	107.2
31	NONFER MET	.0	9.0	.0	.0	-.5	.0	.0	29.4	8.6	46.5
32	ALUMINUM	.0	156.7	.1	2.4	-18.8	.1	.6	696.4	22.7	860.2
33	HEAVY METL	.1	82.0	.4	22.7	-.1	2.1	.8	47.5	4.4	159.8
34	LIGHT METL	.2	83.8	.4	8.7	-.2	.2	.5	44.0	1.9	139.3
35	NONELC EQP	.0	2.1	.2	6.2	.1	1.7	7.8	56.4	8.7	83.2
36	MACH TOOL	7.0	42.2	2.0	1.2	1.3	1.3	.5	31.4	1.6	81.5
37	INDUS EQP	.6	14.5	.0	12.5	.1	.8	.6	94.4	21.0	143.9
38	ELEC MACH	.1	14.9	.5	2.5	4.6	.1	16.3	64.6	10.3	113.8
39	AEROSPACE	.0	20.0	.0	.0	-211.3	.0	660.0	653.1	740.0	1861.8
40	MOTOR VEH	.0	3.0	14.0	13.5	20.0	.0	4.0	262.9	6.0	323.4
41	SHIP BLDG	.0	7.6	7.0	.5	.4	12.5	258.2	59.2	3.9	349.3
42	OTHER MFG	14.5	46.7	7.7	4.9	3.4	3.2	2.0	143.2	9.9	221.0
43	TRANS SERV	17.7	383.1	200.0	10.0	.0	20.0	70.0	472.5	140.0	1295.6
44	ELEC CO	28.0	333.1	196.3	.0	.0	10.0	2.0	38.5	.0	579.9
45	GAS CO	7.4	156.5	55.6	.0	1.0	5.7	1.2	.0	.0	220.0
46	OTH UTILS	3.1	45.0	111.5	.0	.0	5.5	2.0	.0	.0	164.0
47	COMMUNICAT	93.0	243.8	229.1	.0	.0	33.0	2.8	31.0	5.0	544.7
48	CONSTRUCTN	9.3	87.9	50.2	1333.0	.0	622.0	230.9	.0	.0	2324.0
49	TRADE	45.5	476.2	2000.0	81.8	.0	8.0	20.0	874.0	240.0	4300.0
50	FIN,INS,RE	41.6	291.3	768.3	.0	.0	24.1	1.2	367.0	.0	1451.9
51	SERVICES	129.1	841.4	1739.3	.0	.0	40.9	74.5	48.3	5.3	2749.7
52	SUBTOTAL	459.5	5907.3	7107.2	1511.1	-139.5	831.1	1530.0	7294.2	1952.7	25994.1
53	VAL ADDED	2093.2	15049.1	1608.4	.0	.0	1659.2	854.4	.0	.0	19171.1
54	IMPORT US	187.0	4106.0	3044.4	933.9	.0	478.8	.0	.0	.0	8563.1
55	IMPORT FOR	10.0	931.7	240.0	30.0	.0	10.0	.0	.0	.0	1211.7
56	TOTAL	2749.7	25994.1	12000.0	2475.0	-139.5	2979.1	2384.4	7294.2	1952.7	54940.0

1972 WASHINGTON DIRECT REGIONAL COEFFICIENTS TABLE

		1 FIELD CROP	2 VEGETABLES	3 LIVESTOCK	4 OTHER AGRI	5 FISHING	6 MEAT PROD	7 DAIRY PROD	8 CANNING	9 GRAIN MILL	10 BEVERAGES
1	FIELD CROP	.03865	.00997	.20164	.01560	.00000	.00000	.00000	.00000	.16773	.01734
2	VEGETABLES	.00000	.00835	.00707	.00000	.00000	.00000	.00082	.20670	.00000	.00955
3	LIVESTOCK	.00000	.00000	.09587	.00000	.00000	.32692	.43845	.00021	.00000	.00000
4	OTHER AGRI	.00000	.00269	.00170	.06066	.00000	.00000	.00000	.00000	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00252	.00000	.00000	.07255	.00000	.00000
6	MEAT PROD	.00000	.00000	.00000	.00000	.00504	.02411	.00000	.00124	.02718	.00000
7	DAIRY PROD	.00000	.00000	.00000	.00000	.00252	.00092	.14356	.00351	.00000	.00000
8	CANNING	.00000	.00000	.00000	.00000	.00252	.00000	.00409	.00537	.00694	.00000
9	GRAIN MILL	.00000	.00000	.09842	.00000	.00000	.00061	.00000	.00723	.04338	.00000
10	BEVERAGES	.00000	.00000	.00000	.00000	.00504	.00000	.00041	.00000	.00000	.04494
11	OTHER FOOD	.00000	.00000	.01018	.00000	.00504	.00458	.00613	.01385	.01157	.02123
12	TEXTILES	.00025	.00027	.00000	.00000	.01259	.00000	.00000	.00000	.00000	.00000
13	APPAREL	.00509	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00174	.00071
14	MINING	.00076	.00054	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
15	FORESTRY	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
16	LOGGING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
17	SAWMILLS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
18	PLYWOOD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
19	OTHER WOOD	.00000	.00269	.00000	.00000	.00000	.00061	.00000	.00103	.00000	.00071
20	FURNITURE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
21	PULPMILLS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
22	PAPER MILL	.00000	.00081	.00085	.00000	.00000	.00000	.00000	.00000	.00000	.00000
23	PAPBD MILL	.00051	.00296	.00000	.00000	.00000	.01160	.03313	.02108	.01215	.02477
24	PRINTING	.00000	.00000	.00000	.00000	.00000	.00092	.00000	.00124	.00000	.00177
25	INDUS CHEM	.03382	.02748	.00707	.02600	.00252	.00092	.00082	.00041	.00000	.00035
26	OTHER CHEM	.00000	.00000	.00226	.00173	.00000	.00061	.00041	.00000	.00000	.00000
27	PETROLEUM	.00839	.00350	.00509	.01906	.06549	.00092	.00286	.00062	.00058	.00035
28	GLASS	.00000	.00000	.00000	.00000	.00000	.00092	.00000	.01033	.00000	.04989
29	CEMENT	.00025	.00054	.00028	.00000	.00000	.00031	.00000	.00000	.00116	.00000
30	FERR METAL	.00102	.00000	.00028	.00173	.00000	.00000	.00000	.00000	.00000	.00000
31	NONFER MET	.00000	.00000	.00000	.00000	.00252	.00000	.00000	.00000	.00000	.00000
32	ALUMINUM	.00025	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
33	HEAVY METL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
34	LIGHT METL	.00102	.00081	.00085	.00000	.00000	.00122	.00000	.03473	.00752	.13553
35	NONELC EQP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
36	MACH TOOL	.00000	.00000	.00000	.00000	.00252	.00122	.00000	.00103	.00000	.00035
37	INDUS EQP	.00000	.00000	.00000	.00000	.00000	.00061	.00000	.00124	.00000	.00000
38	ELEC MACH	.00000	.00000	.00000	.00000	.00000	.00061	.00000	.00000	.00000	.00000
39	AEROSPACE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
40	MOTOR VEH	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00035
41	SHIP BLDG	.00000	.00000	.00000	.00000	.05542	.00000	.00000	.00000	.00000	.00000
42	OTHER MFG	.00000	.00027	.00000	.00000	.00252	.00031	.00123	.00083	.00000	.00106
43	TRANS SERV	.01017	.00808	.01980	.00867	.03275	.02015	.00491	.02976	.01966	.01451
44	ELEC CO	.00509	.00323	.00424	.00347	.00252	.00275	.00491	.00475	.00347	.00248
45	GAS CO	.00000	.00000	.00000	.00000	.00000	.00153	.00409	.00827	.00000	.00283
46	OTH UTILS	.00636	.00350	.00424	.01733	.00000	.00061	.00041	.00083	.00000	.00071
47	COMMUNICAT	.00356	.00539	.00396	.01040	.00252	.00275	.00286	.00269	.00174	.00142
48	CONSTRUCTN	.01271	.00808	.00707	.00693	.00000	.00061	.00082	.00041	.00000	.00035
49	TRADE	.03763	.04176	.03507	.03986	.08060	.01557	.02454	.03679	.02371	.02902
50	FIN,INS,RE	.00915	.00512	.00481	.00520	.01763	.00214	.00695	.00248	.00231	.00460
51	SERVICES	.04653	.01805	.01357	.03293	.02015	.01129	.02740	.02232	.02834	.01309
52	SUBTOTAL	.22121	.15409	.52432	.24957	.32242	.43529	.70879	.49153	.35917	.37792
53	VAL ADDED	.64150	.78367	.28535	.58752	.58438	.16850	.18569	.37474	.24870	.44444
54	IMPORT US	.11009	.05361	.17760	.14731	.05542	.36416	.10552	.12753	.39213	.17693
55	IMPORT FOR	.02721	.00862	.01273	.01560	.03778	.03205	.00000	.00620	.00000	.00071
56	TOTAL	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

1972 WASHINGTON DIRECT REGIONAL COEFFICIENTS TABLE

		11 OTHER FOOD	12 TEXTILES	13 APPAREL	14 MINING	15 FORESTRY	16 LOGGING	17 SAWMILLS	18 PLYWOOD	19 OTHER WOOD	20 FURNITURE
1	FIELD CROP	.00694	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
2	VEGETABLES	.16038	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
3	LIVESTOCK	.01170	.00645	.00072	.00000	.00000	.00000	.00000	.00000	.00000	.00000
4	OTHER AGRI	.00043	.00000	.00000	.00000	.00308	.00000	.00000	.00000	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00390	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
7	DAIRY PROD	.00824	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
8	CANNING	.00433	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
9	GRAIN MILL	.04118	.00000	.00000	.00000	.00000	.00000	.00000	.00085	.00000	.00000
10	BEVERAGES	.00433	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
11	OTHER FOOD	.03771	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
12	TEXTILES	.00000	.00000	.00072	.00000	.00038	.00000	.00000	.00000	.00000	.00337
13	APPAREL	.00000	.00000	.00359	.00000	.00000	.00000	.00000	.00000	.00000	.00000
14	MINING	.00217	.00000	.00000	.01309	.00000	.00000	.00000	.00000	.00000	.00000
15	FORESTRY	.00000	.00000	.00000	.00000	.03617	.31191	.06804	.01136	.00000	.00000
16	LOGGING	.00000	.00000	.00000	.00000	.00231	.08568	.22819	.18257	.01718	.00000
17	SAWMILLS	.00000	.00000	.00000	.00393	.00038	.00975	.04143	.03407	.11921	.03879
18	PLYWOOD	.00000	.00000	.00000	.00000	.00000	.00627	.00608	.03294	.03296	.00337
19	OTHER WOOD	.00043	.00000	.00000	.00000	.00000	.00017	.01361	.00085	.01543	.01349
20	FURNITURE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00506
21	PULPMILLS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00057	.00000	.00000
22	PAPER MILL	.00173	.00000	.01292	.00000	.00000	.00000	.00000	.00057	.00035	.02192
23	PAPBD MILL	.01864	.00000	.00072	.00262	.00000	.00017	.00158	.00256	.00175	.00506
24	PRINTING	.00217	.00000	.00000	.00000	.00077	.00017	.00000	.00057	.00035	.00000
25	INDUS CHEM	.00347	.00000	.00000	.00393	.00269	.00035	.00000	.00057	.00000	.00000
26	OTHER CHEM	.00000	.00000	.00000	.00000	.00038	.00035	.00085	.00880	.00070	.00337
27	PETROLEUM	.00130	.00000	.00072	.00654	.00115	.00383	.00158	.00057	.00070	.00169
28	GLASS	.00173	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00000	.00000	.00000	.01963	.00154	.00000	.00000	.00000	.00000	.00000
30	FERR METAL	.00000	.00000	.00000	.00262	.00000	.00035	.00012	.00028	.00035	.00000
31	NONFER MET	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
32	ALUMINUM	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00175	.00169
33	HEAVY METL	.00000	.00000	.00000	.00000	.00115	.00000	.00097	.00028	.00035	.00000
34	LIGHT METL	.00260	.00000	.00000	.00131	.00000	.00226	.00049	.00028	.00210	.00169
35	NONELC EQP	.00000	.00000	.00000	.00000	.00000	.00035	.00000	.00000	.00000	.00000
36	MACH TOOL	.00000	.00000	.00000	.00393	.00000	.00435	.00097	.00085	.00035	.00169
37	INDUS EQP	.00000	.00000	.00072	.00000	.00000	.00000	.00109	.00085	.00281	.00000
38	ELEC MACH	.00000	.00000	.00000	.00000	.00000	.00000	.00024	.00028	.00070	.00000
39	AEROSPACE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
40	MOTOR VEH	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
41	SHIP BLDG	.00000	.00000	.00000	.00000	.00000	.00000	.00012	.00000	.00000	.00000
42	OTHER MFG	.00087	.00000	.00000	.00262	.00038	.00035	.00000	.00028	.00175	.02867
43	TRANS SERV	.00780	.00645	.00144	.00654	.01116	.00627	.03548	.04032	.02735	.00675
44	ELEC CO	.00347	.01290	.00144	.01571	.00115	.00139	.00450	.00483	.00386	.00337
45	GAS CO	.01864	.01290	.00000	.00131	.00000	.00000	.00073	.00369	.00000	.00000
46	OTH UTILS	.00130	.00000	.00072	.00262	.00000	.00000	.00109	.00028	.00035	.00000
47	COMMUNICAT	.00347	.01290	.00431	.00262	.00269	.00157	.00109	.00170	.00351	.00506
48	CONSTRUCTN	.00087	.00000	.00072	.00524	.00770	.00209	.00255	.00057	.00105	.00337
49	TRADE	.02427	.01290	.01220	.01309	.01347	.01811	.02734	.03521	.03752	.04698
50	FIN,INS,RE	.00607	.00000	.00359	.00916	.00192	.00784	.00547	.00483	.00456	.00506
51	SERVICES	.02297	.00645	.01077	.02094	.00462	.02560	.01701	.01306	.01578	.02867
52	SUBTOTAL	.40312	.07097	.05528	.13743	.09311	.48920	.46063	.38444	.29278	.20911
53	VAL ADDED	.36107	.61935	.45011	.62304	.88957	.44183	.45152	.41794	.35449	.51939
54	IMPORT US	.20026	.30323	.47882	.18194	.01731	.04023	.04435	.15048	.22370	.26981
55	IMPORT FOR	.03554	.00645	.01579	.05759	.00000	.02874	.04350	.04713	.12903	.00169
56	TOTAL	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

1972 WASHINGTON DIRECT REGIONAL COEFFICIENTS TABLE

		21 PULPMILLS	22 PAPER MILL	23 PAPBD MILL	24 PRINTING	25 INDUS CHEM	26 OTHER CHEM	27 PETROLEUM	28 GLASS	29 CEMENT	30 FERR METAL
1	FIELD CROP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
2	VEGETABLES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
3	LIVESTOCK	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
4	OTHER AGRI	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
7	DAIRY PROD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
8	CANNING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
9	GRAIN MILL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
10	BEVERAGES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
11	OTHER FOOD	.00000	.00000	.00000	.00000	.00251	.00000	.00000	.00000	.00000	.00000
12	TEXTILES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
13	APPAREL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
14	MINING	.00044	.00029	.00045	.00000	.00084	.00000	.00017	.05677	.07853	.00000
15	FORESTRY	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
16	LOGGING	.06156	.03905	.02848	.00000	.00000	.00000	.00000	.00000	.00000	.00000
17	SAWMILLS	.11293	.02372	.01794	.00000	.00000	.00000	.00000	.00000	.00000	.00187
18	PLYWOOD	.03543	.00376	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
19	OTHER WOOD	.00000	.00029	.00090	.00000	.00042	.00286	.00017	.00437	.00107	.00093
20	FURNITURE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
21	PULPMILLS	.00443	.04252	.05897	.00000	.00461	.00000	.00000	.00000	.00000	.00000
22	PAPER MILL	.00044	.00260	.07803	.04805	.00042	.00000	.00000	.00000	.00000	.00000
23	PAPBD MILL	.00266	.02256	.03901	.00083	.00712	.00571	.00051	.05677	.00641	.00000
24	PRINTING	.00000	.00029	.00022	.01284	.00042	.00571	.00000	.00000	.00053	.00093
25	INDUS CHEM	.04473	.02170	.00336	.00000	.03936	.02000	.00238	.00000	.00000	.00280
26	OTHER CHEM	.00000	.00058	.00359	.00083	.00293	.04857	.00017	.00000	.00107	.00093
27	PETROLEUM	.03720	.01591	.00090	.00041	.00251	.00286	.00663	.00437	.00801	.00093
28	GLASS	.00000	.00000	.00000	.00000	.00042	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00000	.00000	.00000	.00000	.00000	.00000	.00017	.00000	.15438	.00187
30	FERR METAL	.00044	.00058	.00022	.00000	.00000	.00000	.00034	.00000	.00000	.01399
31	NONFER MET	.00089	.00087	.00000	.00000	.00000	.00000	.00017	.00000	.00000	.00093
32	ALUMINUM	.00000	.00000	.00000	.00000	.00000	.00000	.00017	.00000	.00000	.00000
33	HEAVY METL	.00089	.00087	.00000	.00000	.00000	.00000	.00051	.00000	.00000	.00093
34	LIGHT METL	.00177	.00116	.00000	.00000	.00503	.01429	.00017	.00000	.00107	.00093
35	NONELC EQP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
36	MACH TOOL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00053	.01306
37	INDUS EQP	.00089	.00260	.00067	.00000	.00126	.00000	.00051	.00000	.00053	.00000
38	ELEC MACH	.00000	.00000	.00000	.00000	.00126	.00000	.00000	.00000	.00000	.00000
39	AEROSPACE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
40	MOTOR VEH	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
41	SHIP BLDG	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
42	OTHER MFG	.00000	.00000	.00022	.00000	.00168	.00286	.00017	.00000	.00000	.00093
43	TRANS SERV	.03056	.03095	.02758	.01657	.01466	.01429	.00765	.01747	.04808	.01586
44	ELEC CO	.01461	.00955	.01525	.00207	.01717	.00571	.00476	.01310	.01496	.02332
45	GAS CO	.03764	.01822	.01009	.00000	.02973	.00857	.01633	.02620	.01870	.01399
46	OTH UTILS	.01063	.00116	.00291	.00041	.00168	.00000	.00136	.00000	.00107	.00093
47	COMMUNICAT	.00133	.00289	.00314	.01201	.00335	.00857	.00102	.00000	.00534	.00373
48	CONSTRUCTN	.00310	.00579	.00404	.00166	.00670	.00286	.00289	.00437	.00534	.00187
49	TRADE	.01683	.02025	.02758	.01533	.01340	.02000	.00306	.01310	.02030	.04478
50	FIN,INS,RE	.00354	.00521	.00359	.00456	.00335	.00571	.00782	.00437	.00588	.00466
51	SERVICES	.02081	.01822	.02197	.03604	.05109	.04286	.00459	.01310	.00374	.02332
52	SUBTOTAL	.44376	.29158	.34910	.15162	.21189	.21143	.06173	.21397	.37553	.17351
53	VAL ADDED	.36537	.43101	.45022	.66197	.62102	.45143	.19796	.68559	.46047	.66780
54	IMPORT US	.15766	.25485	.18049	.11806	.16583	.33714	.08554	.09170	.06410	.19776
55	IMPORT FOR	.03322	.02256	.02018	.06835	.00126	.00000	.65476	.00873	.09989	.00093
56	TOTAL	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

1972 WASHINGTON DIRECT REGIONAL COEFFICIENTS TABLE

		31 NONFER MET	32 ALUMINUM	33 HEAVY METL	34 LIGHT METL	35 NONELC EQP	36 MACH TOOL	37 INDUS EQP	38 ELEC MACH	39 AEROSPACE	40 MOTOR VEH
1	FIELD CROP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
2	VEGETABLES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
3	LIVESTOCK	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
4	OTHER AGRI	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00005	.00000
7	DAIRY PROD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
8	CANNING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
9	GRAIN MILL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
10	BEVERAGES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00005	.00000
11	OTHER FOOD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00005	.00000
12	TEXTILES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
13	APPAREL	.00645	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
14	MINING	.01075	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00021	.00000
15	FORESTRY	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
16	LOGGING	.00215	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
17	SAWMILLS	.00000	.00000	.00000	.00000	.00120	.00000	.00069	.00000	.00021	.00278
18	PLYWOOD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00278
19	OTHER WOOD	.00215	.00035	.00000	.00144	.00120	.00000	.00139	.00176	.00016	.00062
20	FURNITURE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00011	.00000
21	PULPMILLS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
22	PAPER MILL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00005	.00031
23	PAPBD MILL	.00000	.00023	.00000	.00287	.00000	.00000	.00000	.00351	.00161	.00062
24	PRINTING	.00000	.00012	.00000	.00000	.00240	.00000	.00069	.00088	.00016	.00062
25	INDUS CHEM	.00215	.00023	.00000	.00287	.00120	.00123	.00069	.00088	.00005	.00124
26	OTHER CHEM	.00215	.00047	.00188	.00287	.00240	.00000	.00069	.00176	.00054	.00062
27	PETROLEUM	.00860	.00349	.00125	.00072	.00120	.00123	.00069	.00000	.00097	.00093
28	GLASS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00215	.00035	.00000	.00215	.00120	.00368	.00069	.00000	.00011	.00000
30	FERR METAL	.00645	.00058	.06884	.02225	.05048	.03313	.02154	.00264	.00038	.04752
31	NONFER MET	.00215	.00209	.00250	.00431	.00000	.00000	.00069	.00000	.00000	.00124
32	ALUMINUM	.02366	.15741	.04005	.01508	.00000	.00123	.01042	.00527	.00021	.00309
33	HEAVY METL	.00000	.00023	.03567	.00215	.00120	.00859	.00695	.00088	.00107	.00216
34	LIGHT METL	.00215	.00047	.01001	.01005	.00721	.00123	.00347	.00791	.00134	.00309
35	NONELC EQP	.00000	.00000	.00000	.00000	.01082	.00000	.00000	.00000	.00000	.00000
36	MACH TOOL	.00000	.00221	.01064	.02082	.02404	.05153	.02432	.01142	.00322	.00309
37	INDUS EQP	.00215	.00093	.00250	.00000	.00240	.00000	.02780	.00439	.00086	.00031
38	ELEC MACH	.00000	.00058	.00000	.00000	.00481	.00000	.00556	.01318	.00107	.00000
39	AEROSPACE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.02197	.00859	.00000
40	MOTOR VEH	.00000	.00000	.00000	.00000	.00481	.00000	.00000	.00000	.00000	.00618
41	SHIP BLDG	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00005	.00000
42	OTHER MFG	.00215	.00000	.00000	.00144	.00240	.00491	.00278	.01318	.00188	.00124
43	TRANS SERV	.03441	.01453	.00876	.00646	.00481	.00491	.00278	.00264	.00027	.00186
44	ELEC CO	.01290	.04278	.00375	.00646	.00481	.00368	.00278	.00351	.00209	.00464
45	GAS CO	.03441	.00465	.00125	.00646	.00240	.00123	.00069	.00000	.00097	.00124
46	OTH UTILS	.00000	.00047	.00063	.00144	.00120	.00000	.00069	.00088	.00064	.00062
47	COMMUNICAT	.00215	.00105	.01439	.00790	.00962	.01104	.01112	.00791	.00414	.00866
48	CONSTRUCTN	.00000	.00116	.00188	.00072	.00962	.00000	.00139	.00176	.00043	.00031
49	TRADE	.01505	.00663	.01815	.01005	.01563	.01840	.02224	.01845	.00226	.00989
50	FIN,INS,RE	.00000	.00372	.00563	.00359	.00481	.00368	.00417	.00351	.00188	.00216
51	SERVICES	.01505	.00488	.01877	.01938	.02524	.01840	.01737	.01406	.03013	.00835
52	SUBTOTAL	.18925	.24959	.24656	.15147	.19712	.16810	.17234	.14236	.06585	.09617
53	VAL ADDED	.56344	.30284	.45056	.43790	.47236	.55337	.50313	.50088	.46374	.28654
54	IMPORT US	.23871	.29400	.22716	.32879	.32572	.27485	.27867	.34271	.45655	.63513
55	IMPORT FOR	.00860	.15357	.07572	.08184	.00481	.00368	.04587	.01406	.01386	.00216
56	TOTAL	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

1972 WASHINGTON DIRECT REGIONAL COEFFICIENTS TABLE

		41 SHIP BLDG	42 OTHER MFG	43 TRANS SERV	44 ELEC CO	45 GAS CO	46 OTH UTILS	47 COMMUNICAT	48 CONSTRUCTN	49 TRADE	50 FIN.INS.RE
1	FIELD CROP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
2	VEGETABLES	.00000	.00000	.00015	.00000	.00000	.00000	.00000	.00000	.00000	.00000
3	LIVESTOCK	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
4	OTHER AGRI	.00000	.00000	.00000	.00017	.00000	.00000	.00000	.00073	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00000	.00181	.00108	.00121	.00000	.00000	.00000	.00000	.00000	.00000
7	DAIRY PROD	.00000	.00000	.00031	.00069	.00000	.00000	.00000	.00000	.00000	.00000
8	CANNING	.00000	.00000	.00031	.00017	.00000	.00000	.00000	.00000	.00000	.00000
9	GRAIN MILL	.00029	.00000	.00015	.00000	.00000	.00000	.00000	.00000	.00000	.00000
10	BEVERAGES	.00000	.00000	.00039	.00000	.00000	.00000	.00000	.00000	.00000	.00000
11	OTHER FOOD	.00000	.00045	.00069	.00172	.00000	.00000	.00000	.00000	.00009	.00000
12	TEXTILES	.00029	.00000	.00008	.00017	.00000	.00000	.00000	.00000	.00000	.00000
13	APPAREL	.00057	.00000	.00008	.00000	.00000	.00000	.00000	.00004	.00012	.00007
14	MINING	.00000	.00000	.00015	.03104	.00000	.00000	.00000	.00947	.00000	.00000
15	FORESTRY	.00000	.00000	.00000	.00017	.00000	.00000	.00000	.00000	.00000	.00000
16	LOGGING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00004	.00000	.00000
17	SAWMILLS	.00515	.00090	.00015	.00172	.00000	.00000	.00000	.01936	.00028	.00000
18	PLYWOOD	.00258	.00000	.00000	.00000	.00000	.00000	.00000	.01287	.00019	.00000
19	OTHER WOOD	.00029	.00136	.00015	.00000	.00000	.00000	.00000	.01299	.00009	.00000
20	FURNITURE	.00258	.00000	.00000	.00000	.00000	.00000	.00018	.00099	.00009	.00007
21	PULPMILLS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
22	PAPER MILL	.00029	.00181	.00023	.00017	.00000	.00000	.00294	.00000	.00377	.00069
23	PAPBD MILL	.00029	.00181	.00015	.00241	.00045	.00061	.00037	.00030	.00105	.00379
24	PRINTING	.00029	.00045	.00062	.00207	.00136	.00183	.00477	.00004	.01721	.02004
25	INDUS CHEM	.00172	.00045	.00015	.00000	.00000	.00122	.00000	.00013	.00026	.00000
26	OTHER CHEM	.00143	.00860	.00000	.00034	.00000	.00000	.00018	.00142	.00058	.00014
27	PETROLEUM	.00286	.00090	.02964	.00103	.00091	.00610	.00110	.01631	.00265	.00145
28	GLASS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00029	.00136	.00008	.00017	.00000	.00000	.00018	.05688	.00005	.00000
30	FERR METAL	.00200	.00000	.00008	.00017	.00000	.00000	.00018	.01291	.00000	.00000
31	NONFER MET	.00200	.00045	.00000	.00017	.00000	.00000	.00018	.00164	.00000	.00000
32	ALUMINUM	.00029	.00181	.00000	.00000	.00000	.00000	.00000	.00293	.00000	.00000
33	HEAVY METL	.00286	.00000	.00000	.00017	.00000	.00000	.00018	.02883	.00016	.00000
34	LIGHT METL	.00372	.00995	.00008	.00241	.00045	.00000	.00000	.00194	.00023	.00000
35	NONELC EQP	.00229	.00000	.00000	.00017	.00000	.00000	.00000	.00004	.00000	.00000
36	MACH TOOL	.00143	.00407	.00039	.00017	.00000	.00000	.00000	.00043	.00023	.00000
37	INDUS EQP	.00029	.00090	.00000	.00069	.00000	.00000	.00018	.00017	.00000	.00000
38	ELEC MACH	.00143	.00090	.00000	.00052	.00000	.00000	.00477	.00211	.00002	.00000
39	AEROSPACE	.00000	.00000	.00116	.00000	.00000	.00000	.00000	.00000	.00000	.00000
40	MOTOR VEH	.00000	.00000	.00015	.00000	.00000	.00000	.00000	.00013	.00000	.00000
41	SHIP BLDG	.01002	.00000	.00131	.00000	.00000	.00000	.00000	.00000	.00000	.00000
42	OTHER MFG	.00143	.02217	.00008	.00017	.00045	.00000	.00055	.00344	.00100	.00145
43	TRANS SERV	.00544	.01131	.07410	.00535	.00136	.00244	.00551	.01721	.00698	.00654
44	ELEC CO	.00200	.00271	.00517	.23797	.00227	.01341	.00312	.00086	.01035	.01026
45	GAS CO	.00029	.00045	.00031	.00069	.34636	.00122	.00018	.00004	.00140	.00103
46	OTH UTILS	.00057	.00045	.00031	.00034	.00045	.07561	.00092	.00034	.00163	.00220
47	COMMUNICAT	.00286	.00588	.00872	.00517	.00227	.00671	.00349	.00473	.01081	.04073
48	CONSTRUCTN	.00200	.00136	.00463	.00086	.00045	.00976	.00386	.00022	.00363	.01364
49	TRADE	.02233	.01629	.01158	.00328	.00227	.00427	.00496	.05108	.00930	.00909
50	FIN.INS.RE	.00258	.00407	.01220	.00466	.00364	.00793	.00606	.00667	.01163	.07335
51	SERVICES	.01260	.01719	.02246	.03104	.00682	.01829	.03690	.03300	.04767	.07762
52	SUBTOTAL	.09734	.11991	.17729	.33730	.36955	.14939	.08078	.30030	.13147	.24217
53	VAL ADDED	.64644	.56425	.71187	.60510	.34727	.82561	.83753	.43993	.81395	.70694
54	IMPORT US	.24707	.28326	.09795	.05587	.02818	.02500	.08170	.25624	.04700	.04746
55	IMPORT FOR	.00916	.03258	.01289	.00172	.25500	.00000	.00000	.00353	.00758	.00344
56	TOTAL	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

1972 WASHINGTON DIRECT REGIONAL COEFFICIENTS TABLE

		51 SERVICES
1	FIELD CROP	.00000
2	VEGETABLES	.00029
3	LIVESTOCK	.00000
4	OTHER AGRI	.00000
5	FISHING	.00000
6	MEAT PROD	.00022
7	DAIRY PROD	.00036
8	CANNING	.00047
9	GRAIN MILL	.00025
10	BEVERAGES	.00065
11	OTHER FOOD	.00044
12	TEXTILES	.00000
13	APPAREL	.00065
14	MINING	.00004
15	FORESTRY	.00000
16	LOGGING	.00000
17	SAWMILLS	.00000
18	PLYWOOD	.00000
19	OTHER WOOD	.00007
20	FURNITURE	.00000
21	PULPMILLS	.00000
22	PAPER MILL	.00018
23	PAPBD MILL	.00091
24	PRINTING	.01455
25	INDUS CHEM	.00080
26	OTHER CHEM	.00080
27	PETROLEUM	.00185
28	GLASS	.00000
29	CEMENT	.00011
30	FERR METAL	.00000
31	NONFER MET	.00000
32	ALUMINUM	.00000
33	HEAVY METL	.00004
34	LIGHT METL	.00007
35	NONELC EQP	.00000
36	MACH TOOL	.00255
37	INDUS EQP	.00022
38	ELEC MACH	.00004
39	AEROSPACE	.00000
40	MOTOR VEH	.00000
41	SHIP BLDG	.00000
42	OTHER MFG	.00527
43	TRANS SERV	.00644
44	ELEC CO	.01018
45	GAS CO	.00269
46	OTH UTILS	.00113
47	COMMUNICAT	.03382
48	CONSTRUCTN	.00338
49	TRADE	.01655
50	FIN.INS.RE	.01513
51	SERVICES	.04695
52	SUBTOTAL	.16711
53	VAL ADDED	.76125
54	IMPORT US	.06801
55	IMPORT FOR	.00364
56	TOTAL	1.00000

1972 WASHINGTON SALES COEFFICIENTS TABLE

		1 FIELD CROP	2 VEGETABLES	3 LIVESTOCK	4 OTHER AGRI	5 FISHING	6 MEAT PROD	7 DAIRY PROD	8 CANNING	9 GRAIN MILL	10 BEVERAGES
1	FIELD CROP	.03865	.00941	.18129	.00229	.00000	.00000	.00000	.00000	.07374	.01246
2	VEGETABLES	.00000	.00835	.00673	.00000	.00000	.00000	.00054	.26940	.00000	.00727
3	LIVESTOCK	.00000	.00000	.09587	.00000	.00000	.30288	.30317	.00028	.00000	.00000
4	OTHER AGRI	.00000	.01733	.01040	.06066	.00000	.00000	.00000	.00000	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00252	.00000	.00000	.88413	.00000	.00000
6	MEAT PROD	.00000	.00000	.00000	.00000	.00061	.02411	.00000	.00183	.01435	.00000
7	DAIRY PROD	.00000	.00000	.00000	.00000	.00041	.00123	.14356	.00695	.00000	.00000
8	CANNING	.00000	.00000	.00000	.00000	.00021	.00000	.00207	.00537	.00248	.00000
9	GRAIN MILL	.00000	.00000	.20127	.00000	.00000	.00116	.00000	.02024	.04338	.00000
10	BEVERAGES	.00000	.00000	.00000	.00000	.00071	.00000	.00035	.00000	.00000	.04494
11	OTHER FOOD	.00000	.00000	.01560	.00000	.00087	.00650	.00650	.02904	.00867	.02601
12	TEXTILES	.00645	.00645	.00000	.00000	.03226	.00000	.00000	.00000	.00000	.00000
13	APPAREL	.01436	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00215	.00144
14	MINING	.00393	.00262	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
15	FORESTRY	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
16	LOGGING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
17	SAWMILLS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
18	PLYWOOD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
19	OTHER WOOD	.00000	.00351	.00000	.00000	.00000	.00070	.00000	.00175	.00000	.00070
20	FURNITURE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
21	PULPMILLS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
22	PAPER MILL	.00000	.00087	.00087	.00000	.00000	.00000	.00000	.00000	.00000	.00000
23	PAPBD MILL	.00045	.00247	.00000	.00000	.00000	.00852	.01816	.02287	.00471	.01570
24	PRINTING	.00000	.00000	.00000	.00000	.00000	.00124	.00000	.00249	.00000	.00207
25	INDUS CHEM	.05570	.04271	.01047	.00628	.00042	.00126	.00084	.00084	.00000	.00042
26	OTHER CHEM	.00000	.00000	.02286	.00286	.00000	.00571	.00286	.00000	.00000	.00000
27	PETROLEUM	.00561	.00221	.00306	.00187	.00442	.00051	.00119	.00051	.00017	.00017
28	GLASS	.00000	.00000	.00000	.00000	.00000	.01310	.00000	.21834	.00000	.61572
29	CEMENT	.00053	.00107	.00053	.00000	.00000	.00053	.00000	.00000	.00107	.00000
30	FERR METAL	.00373	.00000	.00093	.00093	.00000	.00000	.00000	.00000	.00000	.00000
31	NONFER MET	.00000	.00000	.00000	.00000	.00215	.00000	.00000	.00000	.00000	.00000
32	ALUMINUM	.00012	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
33	HEAVY METL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
34	LIGHT METL	.00287	.00215	.00215	.00000	.00000	.00287	.00000	.12060	.00933	.27495
35	NONELC EQP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
36	MACH TOOL	.00000	.00000	.00000	.00000	.00123	.00491	.00000	.00613	.00000	.00123
37	INDUS EQP	.00000	.00000	.00000	.00000	.00000	.00139	.00000	.00417	.00000	.00000
38	ELEC MACH	.00000	.00000	.00000	.00000	.00000	.00176	.00000	.00000	.00000	.00000
39	AEROSPACE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
40	MOTOR VEH	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00031
41	SHIP BLDG	.00000	.00000	.00000	.00000	.00630	.00000	.00000	.00000	.00000	.00000
42	OTHER MFG	.00000	.00045	.00000	.00000	.00045	.00045	.00136	.00181	.00000	.00136
43	TRANS SERV	.00309	.00232	.00540	.00039	.00100	.00509	.00093	.01111	.00262	.00316
44	ELEC CO	.00345	.00207	.00259	.00034	.00017	.00155	.00207	.00397	.00103	.00121
45	GAS CO	.00000	.00000	.00000	.00000	.00000	.00227	.00455	.01818	.00000	.00364
46	OTH UTILS	.01524	.00793	.00915	.00610	.00000	.00122	.00061	.00244	.00000	.00122
47	COMMUNICAT	.00257	.00367	.00257	.00110	.00018	.00165	.00129	.00239	.00055	.00073
48	CONSTRUCTN	.00215	.00129	.00108	.00017	.00000	.00009	.00009	.00009	.00000	.00004
49	TRADE	.00344	.00360	.00288	.00053	.00074	.00119	.00140	.00414	.00095	.00191
50	FIN,INS,RE	.00248	.00131	.00117	.00021	.00048	.00048	.00117	.00083	.00028	.00090
51	SERVICES	.00666	.00244	.00175	.00069	.00029	.00135	.00244	.00393	.00178	.00135

1972 WASHINGTON SALES COEFFICIENTS TABLE

		11 OTHER FOOD	12 TEXTILES	13 APPAREL	14 MINING	15 FORESTRY	16 LOGGING	17 SAWMILLS	18 PLYWOOD	19 OTHER WOOD	20 FURNITURE
1	FIELD CROP	.00407	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
2	VEGETABLES	.09968	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
3	LIVESTOCK	.00764	.00028	.00028	.00000	.00000	.00000	.00000	.00000	.00000	.00000
4	OTHER AGRI	.00173	.00000	.00000	.00000	.01386	.00000	.00000	.00000	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00275	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
7	DAIRY PROD	.00777	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
8	CANNING	.00207	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
9	GRAIN MILL	.05495	.00000	.00000	.00000	.00000	.00000	.00000	.00174	.00000	.00000
10	BEVERAGES	.00354	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
11	OTHER FOOD	.03771	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
12	TEXTILES	.00000	.00000	.00645	.00000	.00645	.00000	.00000	.00000	.00000	.01290
13	APPAREL	.00000	.00000	.00359	.00000	.00000	.00000	.00000	.00000	.00000	.00000
14	MINING	.00654	.00000	.00000	.01309	.00000	.00000	.00000	.00000	.00000	.00000
15	FORESTRY	.00000	.00000	.00000	.00000	.03617	.68911	.21547	.01539	.00000	.00000
16	LOGGING	.00000	.00000	.00000	.00000	.00104	.08568	.32706	.11198	.00853	.00000
17	SAWMILLS	.00000	.00000	.00000	.00036	.00012	.00680	.04143	.01458	.04131	.00279
18	PLYWOOD	.00000	.00000	.00000	.00000	.00000	.01022	.01420	.03294	.02669	.00057
19	OTHER WOOD	.00035	.00000	.00000	.00000	.00000	.00035	.03927	.00105	.01543	.00281
20	FURNITURE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00506
21	PULPMILLS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00089	.00000	.00000
22	PAPER MILL	.00116	.00000	.00521	.00000	.00000	.00000	.00000	.00058	.00029	.00376
23	PAPBD MILL	.00964	.00000	.00022	.00045	.00000	.00022	.00291	.00202	.00112	.00067
24	PRINTING	.00207	.00000	.00000	.00000	.00083	.00041	.00000	.00083	.00041	.00000
25	INDUS CHEM	.00335	.00000	.00000	.00126	.00293	.00084	.00000	.00084	.00000	.00000
26	OTHER CHEM	.00000	.00000	.00000	.00000	.00286	.00571	.02000	.08857	.00571	.00571
27	PETROLEUM	.00051	.00000	.00017	.00085	.00051	.00374	.00221	.00034	.00034	.00017
28	GLASS	.01747	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00000	.00000	.00000	.00801	.00214	.00000	.00000	.00000	.00000	.00000
30	FERR METAL	.00000	.00000	.00000	.00187	.00000	.00187	.00093	.00093	.00093	.00000
31	NONFER MET	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
32	ALUMINUM	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00058	.00012
33	HEAVY METL	.00000	.00000	.00000	.00000	.00188	.00000	.00501	.00063	.00063	.00000
34	LIGHT METL	.00431	.00000	.00000	.00072	.00000	.00933	.00287	.00072	.00431	.00072
35	NONELC EQP	.00000	.00000	.00000	.00000	.00000	.00240	.00000	.00000	.00000	.00000
36	MACH TOOL	.00000	.00000	.00000	.00368	.00000	.03067	.00982	.00368	.00123	.00123
37	INDUS EQP	.00000	.00000	.00069	.00000	.00000	.00000	.00625	.00208	.00556	.00000
38	ELEC MACH	.00000	.00000	.00000	.00000	.00000	.00000	.00176	.00088	.00176	.00000
39	AEROSPACE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
40	MOTOR VEH	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
41	SHIP BLDG	.00000	.00000	.00000	.00000	.00000	.00000	.00029	.00000	.00000	.00000
42	OTHER MFG	.00090	.00000	.00000	.00090	.00045	.00090	.00000	.00045	.00226	.00769
43	TRANS SERV	.00139	.00008	.00015	.00039	.00224	.00278	.02254	.01096	.00602	.00031
44	ELEC CO	.00138	.00034	.00034	.00207	.00052	.00138	.00638	.00293	.00190	.00034
45	GAS CO	.01955	.00091	.00000	.00045	.00000	.00000	.00273	.00591	.00000	.00000
46	OTH UTILS	.00183	.00000	.00061	.00122	.00000	.00000	.00549	.00061	.00061	.00000
47	COMMUNICAT	.00147	.00037	.00110	.00037	.00129	.00165	.00165	.00110	.00184	.00055
48	CONSTRUCTN	.00009	.00000	.00004	.00017	.00086	.00052	.00090	.00009	.00013	.00009
49	TRADE	.00130	.00005	.00040	.00023	.00081	.00242	.00523	.00288	.00249	.00037
50	FIN,INS,RE	.00096	.00000	.00034	.00048	.00034	.00310	.00310	.00117	.00090	.00021
51	SERVICES	.00193	.00004	.00055	.00058	.00044	.00535	.00509	.00167	.00164	.00062

1972 WASHINGTON SALES COEFFICIENTS TABLE

		21 PULPMILLS	22 PAPER MILL	23 PAPBD MILL	24 PRINTING	25 INDUS CHEM	26 OTHER CHEM	27 PETROLEUM	28 GLASS	29 CEMENT	30 FERR METAL
1	FIELD CROP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
2	VEGETABLES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
3	LIVESTOCK	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
4	OTHER AGRI	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
7	DAIRY PROD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
8	CANNING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
9	GRAIN MILL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
10	BEVERAGES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
11	OTHER FOOD	.00000	.00000	.00000	.00000	.00260	.00000	.00000	.00000	.00000	.00000
12	TEXTILES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
13	APPAREL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
14	MINING	.00131	.00131	.00262	.00000	.00262	.00000	.00131	.01702	.19241	.00000
15	FORESTRY	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
16	LOGGING	.02421	.02351	.02212	.00000	.00000	.00000	.00000	.00000	.00000	.00000
17	SAWMILLS	.03098	.00996	.00972	.00000	.00000	.00000	.00000	.00000	.00000	.00024
18	PLYWOOD	.02271	.00369	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
19	OTHER WOOD	.00000	.00035	.00140	.00000	.00035	.00035	.00035	.00035	.00070	.00035
20	FURNITURE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
21	PULPMILLS	.00443	.06510	.11647	.00000	.00487	.00000	.00000	.00000	.00000	.00000
22	PAPER MILL	.00029	.00260	.10067	.03356	.00029	.00000	.00000	.00000	.00000	.00000
23	PAPBD MILL	.00135	.01749	.03901	.00045	.00361	.00045	.00067	.00291	.00269	.00000
24	PRINTING	.00000	.00041	.00041	.01284	.00041	.00083	.00000	.00000	.00041	.00041
25	INDUS CHEM	.04229	.03141	.00628	.00000	.03936	.00293	.00586	.00000	.00000	.00126
26	OTHER CHEM	.00000	.00571	.04571	.00571	.02000	.04857	.00286	.00000	.00571	.00286
27	PETROLEUM	.01429	.00935	.00068	.00017	.00102	.00017	.00663	.00017	.00255	.00017
28	GLASS	.00000	.00000	.00000	.00000	.00437	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00000	.00000	.00000	.00000	.00000	.00000	.00053	.00000	.15438	.00107
30	FERR METAL	.00093	.00187	.00093	.00000	.00000	.00000	.00187	.00000	.00000	.01399
31	NONFER MET	.00430	.00645	.00000	.00000	.00000	.00000	.00215	.00000	.00000	.00215
32	ALUMINUM	.00000	.00000	.00000	.00000	.00000	.00000	.00012	.00000	.00000	.00000
33	HEAVY METL	.00125	.00188	.00000	.00000	.00000	.00000	.00188	.00000	.00000	.00063
34	LIGHT METL	.00287	.00287	.00000	.00000	.00861	.00359	.00072	.00000	.00144	.00072
35	NONELC EQP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
36	MACH TOOL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00123	.01718
37	INDUS EQP	.00139	.00625	.00208	.00000	.00208	.00000	.00208	.00000	.00069	.00000
38	ELEC MACH	.00000	.00000	.00000	.00000	.00264	.00000	.00000	.00000	.00000	.00000
39	AEROSPACE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
40	MOTOR VEH	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
41	SHIP BLDG	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
42	OTHER MFG	.00000	.00000	.00045	.00000	.00181	.00045	.00045	.00000	.00000	.00045
43	TRANS SERV	.00533	.00826	.00949	.00309	.00270	.00039	.00347	.00031	.00695	.00131
44	ELEC CO	.00569	.00569	.01173	.00086	.00707	.00034	.00483	.00052	.00483	.00431
45	GAS CO	.03864	.02864	.02045	.00000	.03227	.00136	.04364	.00273	.01591	.00682
46	OTH UTILS	.01463	.00244	.00793	.00061	.00244	.00000	.00488	.00000	.00122	.00061
47	COMMUNICAT	.00055	.00184	.00257	.00532	.00147	.00055	.00110	.00000	.00184	.00073
48	CONSTRUCTN	.00030	.00086	.00077	.00017	.00069	.00004	.00073	.00004	.00043	.00009
49	TRADE	.00088	.00163	.00286	.00086	.00074	.00016	.00042	.00007	.00088	.00112
50	FIN.INS.RE	.00055	.00124	.00110	.00076	.00055	.00014	.00317	.00007	.00076	.00034
51	SERVICES	.00171	.00229	.00356	.00316	.00444	.00055	.00098	.00011	.00025	.00091

1972 WASHINGTON SALES COEFFICIENTS TABLE

		31 NONFER MET	32 ALUMINUM	33 HEAVY METL	34 LIGHT METL	35 NONELC EQP	36 MACH TOOL	37 INDUS EQP	38 ELEC MACH	39 AEROSPACE	40 MOTOR VEH
1	FIELD CROP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
2	VEGETABLES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
3	LIVESTOCK	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
4	OTHER AGRI	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00031	.00000
7	DAIRY PROD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
8	CANNING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
9	GRAIN MILL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
10	BEVERAGES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00035	.00000
11	OTHER FOOD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00043	.00000
12	TEXTILES	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
13	APPAREL	.00215	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
14	MINING	.00654	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00524	.00000
15	FORESTRY	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
16	LOGGING	.00017	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
17	SAWMILLS	.00000	.00000	.00000	.00000	.00012	.00000	.00012	.00000	.00049	.00109
18	PLYWOOD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00256
19	OTHER WOOD	.00035	.00105	.00000	.00070	.00035	.00000	.00070	.00070	.00105	.00070
20	FURNITURE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00337	.00000
21	PULPMILLS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
22	PAPER MILL	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00029	.00029
23	PAPBD MILL	.00000	.00045	.00000	.00090	.00000	.00000	.00000	.00090	.00673	.00045
24	PRINTING	.00000	.00041	.00000	.00000	.00083	.00000	.00041	.00041	.00124	.00083
25	INDUS CHEM	.00042	.00084	.00000	.00168	.00042	.00042	.00042	.00042	.00042	.00168
26	OTHER CHEM	.00286	.01143	.00857	.01143	.00571	.00000	.00286	.00571	.02857	.00571
27	PETROLEUM	.00068	.00510	.00034	.00017	.00017	.00017	.00017	.00000	.00306	.00051
28	GLASS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00053	.00160	.00000	.00160	.00053	.00160	.00053	.00000	.00107	.00000
30	FERR METAL	.00280	.00466	.10261	.02892	.03918	.02519	.02892	.00280	.00653	.08302
31	NONFER MET	.00215	.03871	.00860	.01290	.00000	.00000	.00215	.00000	.00000	.00860
32	ALUMINUM	.00128	.15741	.00744	.00244	.00000	.00012	.00174	.00070	.00047	.00116
33	HEAVY METL	.00000	.00125	.03567	.00168	.00063	.00438	.00626	.00063	.01252	.00438
34	LIGHT METL	.00072	.00287	.01149	.01005	.00431	.00072	.00359	.00646	.01795	.00718
35	NONELC EQP	.00000	.00000	.00000	.00000	.01082	.00000	.00000	.00000	.00000	.00000
36	MACH TOOL	.00000	.02331	.02086	.03558	.02454	.05153	.04294	.01595	.07362	.01227
37	INDUS EQP	.00069	.00556	.00278	.00000	.00139	.00000	.02780	.00347	.01112	.00069
38	ELEC MACH	.00000	.00439	.00000	.00000	.00351	.00000	.00703	.01318	.01757	.00000
39	AEROSPACE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00134	.00859	.00000
40	MOTOR VEH	.00000	.00000	.00000	.00000	.00124	.00000	.00000	.00000	.00000	.00618
41	SHIP BLDG	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00029	.00000
42	OTHER MFG	.00045	.00000	.00000	.00090	.00090	.00181	.00181	.00679	.01584	.00181
43	TRANS SERV	.00123	.00965	.00108	.00069	.00031	.00031	.00031	.00023	.00039	.00046
44	ELEC CO	.00103	.06346	.00103	.00155	.00069	.00052	.00069	.00069	.00673	.00259
45	GAS CO	.00727	.01818	.00091	.00409	.00091	.00045	.00045	.00000	.00818	.00182
46	OTH UTILS	.00000	.00244	.00061	.00122	.00061	.00000	.00061	.00061	.00732	.00122
47	COMMUNICAT	.00018	.00165	.00422	.00202	.00147	.00165	.00294	.00165	.01414	.00514
48	CONSTRUCTN	.00000	.00043	.00013	.00004	.00034	.00000	.00009	.00009	.00034	.00004
49	TRADE	.00016	.00133	.00067	.00033	.00030	.00035	.00074	.00049	.00098	.00074
50	FIN,INS,RE	.00000	.00220	.00062	.00034	.00028	.00021	.00041	.00028	.00241	.00048
51	SERVICES	.00025	.00153	.00109	.00098	.00076	.00055	.00091	.00058	.02040	.00098

1972 WASHINGTON SALES COEFFICIENTS TABLE

		41 SHIP BLDG	42 OTHER MFG	43 TRANS SERV	44 ELEC CO	45 GAS CO	46 OTH UTILS	47 COMMUNICAT	48 CONSTRUCTN	49 TRADE	50 FIN,INS,RE
1	FIELD CROP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
2	VEGETABLES	.00000	.00000	.00054	.00000	.00000	.00000	.00000	.00000	.00000	.00000
3	LIVESTOCK	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
4	OTHER AGRI	.00000	.00000	.00000	.00173	.00000	.00000	.00000	.02946	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00000	.00122	.00427	.00214	.00000	.00000	.00000	.00000	.00000	.00000
7	DAIRY PROD	.00000	.00000	.00164	.00164	.00000	.00000	.00000	.00000	.00000	.00000
8	CANNING	.00000	.00000	.00083	.00021	.00000	.00000	.00000	.00000	.00000	.00000
9	GRAIN MILL	.00058	.00000	.00116	.00000	.00000	.00000	.00000	.00000	.00000	.00000
10	BEVERAGES	.00000	.00000	.00177	.00000	.00000	.00000	.00000	.00000	.00000	.00000
11	OTHER FOOD	.00000	.00043	.00390	.00433	.00000	.00000	.00000	.00000	.00173	.00000
12	TEXTILES	.00645	.00000	.00645	.00645	.00000	.00000	.00000	.00000	.00000	.00000
13	APPAREL	.00144	.00000	.00072	.00000	.00000	.00000	.00000	.00072	.00359	.00072
14	MINING	.00000	.00000	.00262	.23560	.00000	.00000	.00000	.28796	.00000	.00000
15	FORESTRY	.00000	.00000	.00000	.00038	.00000	.00000	.00000	.00000	.00000	.00000
16	LOGGING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00017	.00000	.00000
17	SAWMILLS	.00219	.00024	.00024	.00142	.00000	.00000	.00000	.05468	.00146	.00000
18	PLYWOOD	.00256	.00000	.00000	.00000	.00000	.00000	.00000	.08489	.00227	.00000
19	OTHER WOOD	.00035	.00105	.00070	.00000	.00000	.00000	.00000	.10589	.00140	.00000
20	FURNITURE	.01518	.00000	.00000	.00000	.00000	.00000	.00169	.03879	.00675	.00169
21	PULPMILLS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
22	PAPER MILL	.00029	.00116	.00087	.00029	.00000	.00000	.00463	.00000	.04686	.00289
23	PAPBD MILL	.00022	.00090	.00045	.00314	.00022	.00022	.00045	.00157	.01009	.01233
24	PRINTING	.00041	.00041	.00331	.00497	.00124	.00124	.01077	.00041	.30655	.12055
25	INDUS CHEM	.00251	.00042	.00084	.00000	.00000	.00084	.00000	.00126	.00461	.00000
26	OTHER CHEM	.01429	.05429	.00000	.00571	.00000	.00000	.00286	.09429	.07143	.00571
27	PETROLEUM	.00170	.00034	.06531	.00102	.00034	.00170	.00102	.06446	.01939	.00357
28	GLASS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00053	.00160	.00053	.00053	.00000	.00000	.00053	.70620	.00107	.00000
30	FERR METAL	.00653	.00000	.00093	.00093	.00000	.00000	.00093	.27985	.00000	.00000
31	NONFER MET	.01505	.00215	.00000	.00215	.00000	.00000	.00215	.08172	.00000	.00000
32	ALUMINUM	.00012	.00047	.00000	.00000	.00000	.00000	.00000	.00791	.00000	.00000
33	HEAVY METL	.00626	.00000	.00000	.00063	.00000	.00000	.00063	.41927	.00438	.00000
34	LIGHT METL	.00933	.01579	.00072	.01005	.00072	.00000	.00000	.03230	.00718	.00000
35	NONELC EQP	.00962	.00000	.00000	.00120	.00000	.00000	.00000	.00120	.00000	.00000
36	MACH TOOL	.00613	.01104	.00613	.00123	.00000	.00000	.00000	.01227	.01227	.00000
37	INDUS EQP	.00069	.00139	.00000	.00278	.00000	.00000	.00069	.00278	.00000	.00000
38	ELEC MACH	.00439	.00176	.00000	.00264	.00000	.00000	.02285	.04306	.00088	.00000
39	AEROSPACE	.00000	.00000	.00081	.00000	.00000	.00000	.00000	.00000	.00000	.00000
40	MOTOR VEH	.00000	.00000	.00062	.00000	.00000	.00000	.00000	.00093	.00000	.00000
41	SHIP BLDG	.01002	.00000	.00487	.00000	.00000	.00000	.00000	.00000	.00000	.00000
42	OTHER MFG	.00226	.02217	.00045	.00045	.00045	.00000	.00136	.03620	.01946	.00950
43	TRANS SERV	.00147	.00193	.07410	.00239	.00023	.00031	.00232	.03087	.02316	.00733
44	ELEC CO	.00121	.00103	.01155	.23797	.00086	.00379	.00293	.00345	.07674	.02569
45	GAS CO	.00045	.00045	.00182	.00182	.34636	.00091	.00045	.00045	.02727	.00682
46	OTH UTILS	.00122	.00061	.00244	.00122	.00061	.07561	.00305	.00488	.04268	.01951
47	COMMUNICAT	.00184	.00239	.02075	.00551	.00092	.00202	.00349	.02019	.08537	.05526
48	CONSTRUCTN	.00030	.00013	.00258	.00022	.00004	.00069	.00090	.00022	.00671	.00852
49	TRADE	.00181	.00084	.00349	.00044	.00012	.00016	.00063	.02760	.00930	.00307
50	FIN,INS,RE	.00062	.00062	.01088	.00186	.00055	.00090	.00227	.01068	.03444	.07335
51	SERVICES	.00160	.00138	.01058	.00655	.00055	.00109	.00731	.02789	.07455	.04099

1972 WASHINGTON SALES COEFFICIENTS TABLE

		51 SERVICES	52 SUBTOTAL	53 CONSUMPTN	54 INVESTMENT	55 INVEN CHNG	56 S L GOVT	57 FED GOVT	58 EXPORT US	59 EXPORT FOR	60 TOTAL
1	FIELD CROP	.00000	.32189	.00890	.00000	.00763	.00254	.00000	.13349	.52555	1.00000
2	VEGETABLES	.00216	.39467	.08001	.00000	.00000	.00404	.00296	.39413	.12419	1.00000
3	LIVESTOCK	.00000	.71041	.19627	.00000	.00226	.00170	.00000	.07834	.01103	1.00000
4	OTHER AGRI	.00000	.13518	.36568	.00000	.00000	.00347	.00000	.45927	.03640	1.00000
5	FISHING	.00000	.88665	.04786	.00000	.00000	.00000	.00000	.06297	.00252	1.00000
6	MEAT PROD	.00183	.05342	.79396	.00000	.02106	.00336	.00488	.12332	.00000	1.00000
7	DAIRY PROD	.00409	.16728	.62577	.00000	.00123	.01759	.02209	.11207	.05399	1.00000
8	CANNING	.00269	.01592	.22034	.00000	-.00641	.00248	.01158	.71517	.04093	1.00000
9	GRAIN MILL	.00405	.32851	.09312	.00000	.01330	.00578	.01909	.36669	.17351	1.00000
10	BEVERAGES	.00637	.05803	.28273	.00000	.00106	.00035	.02265	.63517	.00000	1.00000
11	OTHER FOOD	.00520	.14954	.36844	.00000	.01604	.00520	.00954	.41092	.04031	1.00000
12	TEXTILES	.00000	.09032	.10968	.00000	.00645	.00000	.00000	.78065	.01290	1.00000
13	APPAREL	.01292	.04379	.17947	.00000	.03733	.00072	.00072	.73798	.00000	1.00000
14	MINING	.00131	.78403	.01571	.00000	.00000	.01702	.01963	.15314	.01047	1.00000
15	FORESTRY	.00000	.95652	.00231	.00000	.00000	.00000	.00000	.04002	.00115	1.00000
16	LOGGING	.00000	.60449	.00000	.00174	.01028	.00000	.00000	.01637	.36712	1.00000
17	SAWMILLS	.00000	.22017	.00486	.00365	-.00437	.00109	.00000	.74690	.02770	1.00000
18	PLYWOOD	.00000	.20329	.00256	.00000	.00057	.00227	.00568	.76775	.01789	1.00000
19	OTHER WOOD	.00070	.18583	.00877	.02174	.00316	.00210	.00140	.77595	.00105	1.00000
20	FURNITURE	.00000	.07251	.48735	.01686	.00169	.03204	.00169	.38786	.00000	1.00000
21	PULPMILLS	.00000	.19176	.00000	.00000	.09655	.00000	.00000	.35740	.35430	1.00000
22	PAPER MILL	.00145	.20914	.02372	.00000	-.00868	.00289	.00579	.69193	.07521	1.00000
23	PAPBD MILL	.00561	.20359	.03543	.00000	-.00448	.00426	.01435	.71861	.02825	1.00000
24	PRINTING	.16570	.64582	.19925	.00000	.00497	.00746	.00124	.14126	.00000	1.00000
25	INDUS CHEM	.00921	.28392	.00000	.00000	.01089	.00879	.47320	.13945	.08375	1.00000
26	OTHER CHEM	.06286	.69429	.09143	.00000	-.02571	.03143	.01429	.18857	.00571	1.00000
27	PETROLEUM	.00867	.24167	.26020	.00000	.02636	.02024	.02857	.40510	.01786	1.00000
28	GLASS	.00000	.86900	.00000	.00000	-.00437	.00437	.00873	.11354	.00873	1.00000
29	CEMENT	.00160	.88996	.02724	.00000	.00641	.01068	.02511	.03526	.00534	1.00000
30	FERR METAL	.00000	.64552	.00093	.00000	.01119	.00187	.00466	.33396	.00187	1.00000
31	NONFER MET	.00000	.19355	.00000	.00000	-.01075	.00000	.00000	.63226	.18495	1.00000
32	ALUMINUM	.00000	.18217	.00012	.00279	-.02186	.00012	.00070	.80958	.02639	1.00000
33	HEAVY METL	.00063	.51314	.00250	.14205	-.00063	.01314	.00501	.29725	.02753	1.00000
34	LIGHT METL	.00144	.60158	.00287	.06246	-.00144	.00144	.00359	.31587	.01364	1.00000
35	NONELC EQP	.00000	.02524	.00240	.07452	.00120	.02043	.09375	.67788	.10457	1.00000
36	MACH TOOL	.08589	.51779	.02454	.01472	.01595	.01595	.00613	.38528	.01963	1.00000
37	INDUS EQP	.00417	.10076	.00000	.08687	.00069	.00556	.00417	.65601	.14593	1.00000
38	ELEC MACH	.00088	.13093	.00439	.02197	.04042	.00088	.14323	.56766	.09051	1.00000
39	AEROSPACE	.00000	.01074	.00000	.00000	-.11349	.00000	.35450	.35079	.39746	1.00000
40	MOTOR VEH	.00000	.00928	.04329	.04174	.06184	.00000	.01237	.81293	.01855	1.00000
41	SHIP BLDG	.00000	.02176	.02004	.00143	.00115	.03579	.73919	.16948	.01117	1.00000
42	OTHER MFG	.06561	.21131	.03484	.02217	.01538	.01448	.00905	.64796	.04480	1.00000
43	TRANS SERV	.01366	.29569	.15437	.00772	.00000	.01544	.05403	.36470	.10806	1.00000
44	ELEC CO	.04828	.57441	.33851	.00000	.00000	.01724	.00345	.06639	.00000	1.00000
45	GAS CO	.03364	.71136	.25273	.00000	.00455	.02591	.00545	.00000	.00000	1.00000
46	OTH UTILS	.01890	.27439	.67988	.00000	.00000	.03354	.01220	.00000	.00000	1.00000
47	COMMUNICAT	.17074	.44759	.42060	.00000	.00000	.06058	.00514	.05691	.00918	1.00000
48	CONSTRUCTN	.00400	.03782	.02160	.57358	.00000	.26764	.09935	.00000	.00000	1.00000
49	TRADE	.01058	.11074	.60465	.01902	.00000	.00186	.00465	.20326	.05581	1.00000
50	FIN,INS,RE	.02865	.20063	.52917	.00000	.00000	.01660	.00083	.25277	.00000	1.00000
51	SERVICES	.04695	.30600	.63254	.00000	.00000	.01487	.02709	.01757	.00193	1.00000

1972 WASHINGTON INVERSE COEFFICIENTS TABLE

		1 FIELD CROP	2 VEGETABLES	3 LIVESTOCK	4 OTHER AGRI	5 FISHING	6 MEAT PROD	7 DAIRY PROD	8 CANNING	9 GRAIN MILL	10 BEVERAGES
1	FIELD CROP	1.04022	.01051	.25251	.01728	.00101	.08494	.12948	.00454	.18511	.01948
2	VEGETABLES	.00005	1.00845	.01024	.00004	.00154	.00425	.00846	.21214	.00375	.01386
3	LIVESTOCK	.00004	.00002	1.10749	.00003	.00355	.37167	.56715	.00336	.01087	.00048
4	OTHER AGRI	.00001	.00290	.00205	1.00458	.00002	.00069	.00107	.00063	.00004	.00006
5	FISHING	.00000	.00000	.00006	.00000	1.00271	.00003	.00039	.07315	.00054	.00001
6	MEAT PROD	.00004	.00003	.00330	.00003	.00528	1.02590	.00177	.00203	.02928	.00016
7	DAIRY PROD	.00004	.00002	.00017	.00003	.00305	.00122	1.16783	.00453	.00022	.00025
8	CANNING	.00003	.00002	.00089	.00003	.00261	.00035	.00532	1.00577	.00740	.00013
9	GRAIN MILL	.00003	.00002	.11453	.00002	.00066	.03931	.05903	.00862	1.04712	.00106
10	BEVERAGES	.00005	.00002	.00010	.00004	.00535	.00008	.00062	.00050	.00010	1.04719
11	OTHER FOOD	.00016	.00011	.01324	.00013	.00557	.00938	.01436	.01514	.01303	.02318
12	TEXTILES	.00027	.00028	.00007	.00001	.01265	.00003	.00005	.00099	.00006	.00001
13	APPAREL	.00535	.00008	.00152	.00012	.00009	.00053	.00081	.00008	.00281	.00087
14	MINING	.00139	.00098	.00084	.00042	.00032	.00056	.00082	.00120	.00064	.00343
15	FORESTRY	.00011	.00021	.00014	.00007	.00011	.00030	.00079	.00051	.00028	.00060
16	LOGGING	.00023	.00049	.00032	.00014	.00022	.00076	.00210	.00133	.00073	.00158
17	SAWMILLS	.00043	.00074	.00045	.00027	.00045	.00065	.00149	.00110	.00054	.00117
18	PLYWOOD	.00022	.00026	.00020	.00014	.00020	.00015	.00026	.00021	.00010	.00018
19	OTHER WOOD	.00023	.00292	.00024	.00015	.00010	.00077	.00024	.00185	.00014	.00133
20	FURNITURE	.00002	.00002	.00002	.00002	.00016	.00001	.00002	.00002	.00001	.00001
21	PULPMILLS	.00025	.00040	.00029	.00018	.00009	.00090	.00272	.00159	.00095	.00199
22	PAPER MILL	.00047	.00138	.00153	.00037	.00060	.00169	.00422	.00253	.00145	.00284
23	PAPBD MILL	.00107	.00353	.00234	.00045	.00085	.01349	.04201	.02436	.01441	.03129
24	PRINTING	.00195	.00139	.00192	.00178	.00253	.00226	.00243	.00313	.00158	.00320
25	INDUS CHEM	.03676	.02942	.01766	.02962	.00313	.00711	.01058	.00738	.00701	.00234
26	OTHER CHEM	.00024	.00020	.00282	.00213	.00025	.00170	.00219	.00035	.00023	.00064
27	PETROLEUM	.00988	.00453	.00952	.02155	.06790	.00505	.00900	.00809	.00354	.00203
28	GLASS	.00002	.00001	.00005	.00001	.00031	.00097	.00012	.01045	.00013	.05229
29	CEMENT	.00133	.00129	.00147	.00062	.00018	.00096	.00090	.00052	.00177	.00062
30	FERR METAL	.00134	.00020	.00084	.00205	.00034	.00041	.00050	.00101	.00047	.00348
31	NONFER MET	.00004	.00003	.00004	.00003	.00267	.00003	.00004	.00037	.00005	.00064
32	ALUMINUM	.00042	.00008	.00019	.00006	.00016	.00011	.00012	.00071	.00023	.00263
33	HEAVY METL	.00045	.00029	.00039	.00029	.00029	.00019	.00027	.00025	.00014	.00043
34	LIGHT METL	.00136	.00106	.00239	.00027	.00119	.00216	.00159	.03580	.00860	.14358
35	NONELC EQP	.00000	.00000	.00000	.00000	.00013	.00000	.00000	.00001	.00000	.00000
36	MACH TOOL	.00025	.00013	.00022	.00019	.00294	.00152	.00027	.00229	.00040	.00372
37	INDUS EQP	.00009	.00007	.00006	.00007	.00009	.00069	.00010	.00135	.00008	.00006
38	ELEC MACH	.00012	.00010	.00010	.00013	.00013	.00070	.00009	.00008	.00007	.00004
39	AEROSPACE	.00002	.00001	.00004	.00002	.00005	.00005	.00003	.00005	.00003	.00003
40	MOTOR VEH	.00000	.00000	.00001	.00000	.00001	.00001	.00001	.00001	.00000	.00038
41	SHIP BLDG	.00002	.00001	.00004	.00002	.05618	.00005	.00005	.00415	.00007	.00003
42	OTHER MFG	.00051	.00058	.00040	.00041	.00303	.00061	.00198	.00153	.00038	.00162
43	TRANS SERV	.01357	.01071	.03107	.01207	.03839	.03379	.02474	.04005	.02723	.02116
44	ELEC CO	.00982	.00650	.01099	.00774	.00665	.00851	.01547	.01083	.00841	.00817
45	GAS CO	.00245	.00187	.00201	.00237	.00296	.00380	.00995	.01546	.00173	.00994
46	OTH UTILS	.00745	.00418	.00719	.02035	.00047	.00324	.00455	.00218	.00163	.00154
47	COMMUNICAT	.00693	.00742	.00842	.01387	.00597	.00683	.00997	.00725	.00530	.00481
48	CONSTRUCTN	.01423	.00904	.01209	.00804	.00135	.00509	.00790	.00323	.00320	.00178
49	TRADE	.04246	.04500	.05497	.04581	.08567	.03604	.06012	.05663	.03596	.03724
50	FIN.INS.RE	.01251	.00724	.01094	.00832	.02222	.00707	.01603	.00805	.00660	.00804
51	SERVICES	.05785	.02565	.03923	.04436	.03100	.02826	.05879	.03793	.04601	.02499
52	VAL ADDED	.82353	.91303	.67374	.78820	.81232	.46874	.68188	.78410	.52125	.71314

1972 WASHINGTON INVERSE COEFFICIENTS TABLE

		11 OTHER FOOD	12 TEXTILES	13 APPAREL	14 MINING	15 FORESTRY	16 LOGGING	17 SAWMILLS	18 PLYWOOD	19 OTHER WOOD	20 FURNITURE
1	FIELD CROP	.02182	.00164	.00019	.00001	.00006	.00003	.00003	.00018	.00002	.00002
2	VEGETABLES	.16949	.00008	.00002	.00003	.00001	.00002	.00004	.00004	.00003	.00003
3	LIVESTOCK	.02034	.00717	.00081	.00004	.00002	.00002	.00005	.00006	.00004	.00007
4	OTHER AGRI	.00101	.00002	.00000	.00001	.00341	.00117	.00053	.00028	.00010	.00003
5	FISHING	.00036	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00551	.00005	.00001	.00005	.00002	.00003	.00007	.00010	.00006	.00009
7	DAIRY PROD	.01006	.00002	.00001	.00003	.00001	.00002	.00004	.00004	.00003	.00003
8	CANNING	.00493	.00002	.00001	.00002	.00001	.00002	.00003	.00004	.00003	.00002
9	GRAIN MILL	.04693	.00075	.00009	.00002	.00001	.00002	.00003	.00095	.00005	.00003
10	BEVERAGES	.00476	.00001	.00001	.00002	.00001	.00003	.00004	.00004	.00003	.00003
11	OTHER FOOD	1.04031	.00013	.00002	.00008	.00003	.00004	.00007	.00009	.00006	.00006
12	TEXTILES	.00006	1.00000	.00072	.00001	.00040	.00014	.00007	.00004	.00002	.00339
13	APPAREL	.00023	.00002	1.00361	.00002	.00001	.00003	.00003	.00003	.00003	.00003
14	MINING	.00288	.00056	.00010	1.01596	.00035	.00027	.00039	.00035	.00030	.00030
15	FORESTRY	.00049	.00002	.00029	.00074	1.03849	.35659	.15961	.08527	.02846	.00748
16	LOGGING	.00128	.00003	.00078	.00128	.00283	1.09905	.26418	.21715	.05859	.01338
17	SAWMILLS	.00097	.00005	.00047	.00447	.00066	.01180	1.04832	.03954	.12861	.04376
18	PLYWOOD	.00018	.00001	.00010	.00013	.00014	.00730	.00888	1.03584	.03592	.00456
19	OTHER WOOD	.00105	.00001	.00003	.00019	.00013	.00046	.01464	.00157	1.01755	.01452
20	FURNITURE	.00001	.00000	.00000	.00001	.00001	.00001	.00001	.00001	.00001	1.00509
21	PULPMILLS	.00155	.00001	.00063	.00022	.00003	.00005	.00015	.00083	.00020	.00135
22	PAPER MILL	.00410	.00014	.01319	.00039	.00015	.00026	.00043	.00115	.00087	.02286
23	PAPBD MILL	.02245	.00011	.00113	.00315	.00010	.00041	.00202	.00314	.00237	.00617
24	PRINTING	.00386	.00053	.00056	.00100	.00128	.00175	.00163	.00222	.00186	.00138
25	INDUS CHEM	.00990	.00014	.00037	.00426	.00304	.00153	.00069	.00129	.00026	.00079
26	OTHER CHEM	.00028	.00005	.00004	.00015	.00048	.00071	.00128	.00983	.00134	.00405
27	PETROLEUM	.00331	.00040	.00115	.00749	.00192	.00540	.00459	.00345	.00264	.00295
28	GLASS	.00210	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00052	.00005	.00008	.02404	.00246	.00108	.00068	.00037	.00025	.00039
30	FERR METAL	.00021	.00002	.00005	.00299	.00023	.00078	.00056	.00059	.00066	.00024
31	NONFER MET	.00003	.00001	.00002	.00003	.00002	.00003	.00002	.00002	.00003	.00006
32	ALUMINUM	.00011	.00001	.00002	.00008	.00010	.00011	.00016	.00008	.00225	.00218
33	HEAVY METL	.00014	.00002	.00006	.00024	.00150	.00067	.00146	.00057	.00067	.00025
34	LIGHT METL	.00424	.00008	.00004	.00152	.00008	.00261	.00126	.00105	.00249	.00224
35	NONELC EQP	.00000	.00000	.00000	.00000	.00000	.00039	.00010	.00008	.00002	.00001
36	MACH TOOL	.00026	.00004	.00007	.00441	.00008	.00527	.00251	.00215	.00109	.00221
37	INDUS EQP	.00008	.00002	.00079	.00006	.00002	.00004	.00126	.00098	.00314	.00021
38	ELEC MACH	.00007	.00008	.00003	.00006	.00004	.00005	.00032	.00035	.00083	.00010
39	AEROSPACE	.00002	.00001	.00000	.00001	.00002	.00002	.00006	.00007	.00006	.00002
40	MOTOR VEH	.00000	.00000	.00000	.00000	.00000	.00000	.00001	.00001	.00001	.00000
41	SHIP BLDG	.00004	.00001	.00000	.00001	.00002	.00002	.00019	.00007	.00007	.00002
42	OTHER MFG	.00133	.00009	.00010	.00296	.00051	.00083	.00047	.00069	.00212	.02980
43	TRANS SERV	.01452	.00759	.00244	.00909	.01324	.01350	.04576	.05040	.03833	.01213
44	ELEC CO	.00846	.01751	.00261	.02268	.00224	.00400	.00870	.00912	.00800	.00685
45	GAS CO	.03134	.01987	.00059	.00347	.00037	.00061	.00176	.00660	.00084	.00145
46	OTH UTILS	.00269	.00012	.00087	.00306	.00014	.00019	.00144	.00057	.00074	.00029
47	COMMUNICAT	.00726	.01368	.00515	.00451	.00357	.00478	.00441	.00472	.00607	.00759
48	CONSTRUCTN	.00351	.00029	.00102	.00596	.00827	.00560	.00518	.00254	.00240	.00429
49	TRADE	.03846	.01384	.01319	.01567	.01529	.02710	.03865	.04500	.04637	.03219
50	FIN,INS,RE	.01016	.00076	.00448	.01137	.00286	.01146	.01073	.00961	.00825	.00764
51	SERVICES	.03730	.00923	.01319	.02634	.00738	.03519	.03194	.02694	.02632	.03651
52	VAL ADDED	.68108	.67746	.49437	.73254	.97163	.89814	.85939	.75049	.59871	.68229

1972 WASHINGTON INVERSE COEFFICIENTS TABLE

		21 PULPMILLS	22 PAPER MILL	23 PAPBD MILL	24 PRINTING	25 INDUS CHEM	26 OTHER CHEM	27 PETROLEUM	28 GLASS	29 CEMENT	30 FERR METAL
1	FIELD CROP	.00003	.00002	.00002	.00001	.00008	.00002	.00000	.00001	.00002	.00002
2	VEGETABLES	.00006	.00004	.00004	.00003	.00049	.00005	.00001	.00003	.00004	.00003
3	LIVESTOCK	.00006	.00005	.00006	.00003	.00011	.00004	.00001	.00004	.00007	.00005
4	OTHER AGRI	.00015	.00008	.00007	.00001	.00001	.00001	.00000	.00001	.00001	.00001
5	FISHING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00009	.00007	.00008	.00004	.00008	.00005	.00002	.00006	.00011	.00007
7	DAIRY PROD	.00005	.00004	.00005	.00003	.00008	.00004	.00001	.00003	.00005	.00005
8	CANNING	.00004	.00003	.00003	.00003	.00005	.00003	.00001	.00002	.00003	.00003
9	GRAIN MILL	.00007	.00003	.00003	.00002	.00015	.00003	.00001	.00002	.00003	.00002
10	BEVERAGES	.00004	.00004	.00004	.00004	.00006	.00004	.00001	.00002	.00004	.00003
11	OTHER FOOD	.00022	.00014	.00012	.00005	.00281	.00012	.00003	.00007	.00011	.00010
12	TEXTILES	.00002	.00001	.00001	.00000	.00001	.00000	.00000	.00001	.00001	.00001
13	APPAREL	.00004	.00003	.00003	.00003	.00004	.00004	.00001	.00002	.00002	.00003
14	MINING	.00136	.00100	.00144	.00021	.00185	.00041	.00046	.05840	.09525	.00127
15	FORESTRY	.04330	.02039	.01793	.00103	.00042	.00024	.00004	.00122	.00030	.00037
16	LOGGING	.10592	.05588	.04867	.00280	.00103	.00057	.00008	.00316	.00066	.00064
17	SAWMILLS	.12135	.03166	.03024	.00164	.00113	.00073	.00013	.00269	.00105	.00227
18	PLYWOOD	.03841	.00623	.00336	.00034	.00034	.00019	.00005	.00043	.00019	.00010
19	OTHER WOOD	.00185	.00090	.00152	.00009	.00061	.00317	.00023	.00461	.00143	.00105
20	FURNITURE	.00001	.00001	.00001	.00001	.00001	.00001	.00000	.00001	.00001	.00001
21	PULPMILLS	1.00495	.04447	.06532	.00223	.00535	.00054	.00005	.00374	.00054	.00005
22	PAPER MILL	.00100	1.00475	.08190	.04917	.00129	.00105	.00010	.00479	.00090	.00037
23	PAPBD MILL	.00373	.02418	1.04307	.00217	.00811	.00667	.00065	.05954	.00841	.00029
24	PRINTING	.00148	.00155	.00175	1.01421	.00194	.00758	.00042	.00089	.00173	.00254
25	INDUS CHEM	.04722	.02506	.00878	.00130	1.04148	.02208	.00252	.00079	.00057	.00307
26	OTHER CHEM	.00078	.00098	.00418	.00099	.00337	1.05131	.00021	.00029	.00144	.00111
27	PETROLEUM	.04017	.01967	.00653	.00215	.00385	.00397	1.00709	.00601	.01247	.00191
28	GLASS	.00002	.00001	.00001	.00000	.00044	.00001	.00000	1.00000	.00000	.00000
29	CEMENT	.00050	.00058	.00049	.00019	.00060	.00033	.00043	.00174	1.18532	.00252
30	FERR METAL	.00083	.00097	.00051	.00009	.00031	.00044	.00046	.00029	.00048	1.01483
31	NONFER MET	.00093	.00095	.00015	.00005	.00005	.00008	.00018	.00002	.00003	.00097
32	ALUMINUM	.00018	.00019	.00007	.00002	.00017	.00032	.00026	.00005	.00009	.00014
33	HEAVY METL	.00132	.00127	.00040	.00014	.00028	.00017	.00064	.00019	.00027	.00121
34	LIGHT METL	.00252	.00167	.00057	.00013	.00553	.01539	.00024	.00022	.00157	.00116
35	NONELC EQP	.00004	.00002	.00002	.00000	.00001	.00000	.00000	.00001	.00001	.00001
36	MACH TOOL	.00090	.00055	.00045	.00016	.00039	.00053	.00006	.00035	.00121	.01414
37	INDUS EQP	.00121	.00286	.00109	.00016	.00141	.00008	.00054	.00010	.00070	.00005
38	ELEC MACH	.00016	.00011	.00009	.00008	.00140	.00011	.00003	.00004	.00008	.00006
39	AEROSPACE	.00005	.00005	.00005	.00003	.00005	.00002	.00001	.00003	.00008	.00002
40	MOTOR VEH	.00001	.00001	.00001	.00000	.00000	.00000	.00000	.00000	.00001	.00000
41	SHIP BLDG	.00007	.00006	.00006	.00003	.00002	.00002	.00001	.00003	.00008	.00003
42	OTHER MFG	.00047	.00035	.00059	.00029	.00225	.00350	.00027	.00037	.00045	.00131
43	TRANS SERV	.04309	.03943	.03913	.02077	.01833	.01815	.00876	.02244	.06361	.01889
44	ELEC CO	.02372	.01641	.02532	.00467	.02544	.01017	.00687	.02078	.02689	.03277
45	GAS CO	.06189	.03301	.02315	.00192	.04851	.01555	.02540	.04189	.03487	.02241
46	OTH UTILS	.01206	.00212	.00438	.00068	.00218	.00027	.00155	.00053	.00185	.00122
47	COMMUNICAT	.00458	.00547	.00623	.01442	.00652	.01190	.00173	.00188	.00852	.00618
48	CONSTRUCTN	.00520	.00723	.00595	.00249	.00763	.00377	.00318	.00540	.00761	.00250
49	TRADE	.02726	.02663	.03595	.01824	.01687	.02380	.00383	.01740	.02779	.04765
50	FIN.INS.RE	.00838	.00862	.00743	.00670	.00588	.00840	.00900	.00688	.01046	.00696
51	SERVICES	.03573	.02899	.03478	.04244	.06032	.05281	.00685	.02017	.01286	.03063
52	VAL ADDED	.70842	.65568	.71875	.78397	.78705	.61183	.24182	.84381	.74398	.77173

1972 WASHINGTON INVERSE COEFFICIENTS TABLE

		31 NONFER MET	32 ALUMINUM	33 HEAVY METL	34 LIGHT METL	35 NONELC EQP	36 MACH TOOL	37 INDUS EQP	38 ELEC MACH	39 AEROSPACE	40 MOTOR VEH
1	FIELD CROP	.00002	.00002	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00000
2	VEGETABLES	.00003	.00004	.00002	.00002	.00002	.00002	.00002	.00002	.00003	.00001
3	LIVESTOCK	.00005	.00007	.00003	.00002	.00002	.00002	.00002	.00002	.00004	.00001
4	OTHER AGRI	.00001	.00001	.00000	.00000	.00001	.00000	.00000	.00000	.00000	.00000
5	FISHING	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00008	.00011	.00004	.00003	.00003	.00003	.00003	.00004	.00007	.00002
7	DAIRY PROD	.00004	.00007	.00003	.00002	.00002	.00002	.00002	.00002	.00002	.00001
8	CANNING	.00003	.00002	.00002	.00002	.00002	.00002	.00001	.00001	.00002	.00001
9	GRAIN MILL	.00002	.00002	.00001	.00001	.00001	.00001	.00001	.00001	.00002	.00001
10	BEVERAGES	.00003	.00002	.00002	.00002	.00003	.00002	.00002	.00002	.00008	.00001
11	OTHER FOOD	.00009	.00014	.00005	.00005	.00005	.00004	.00003	.00004	.00008	.00003
12	TEXTILES	.00001	.00001	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
13	APPAREL	.00651	.00003	.00004	.00005	.00003	.00002	.00002	.00002	.00002	.00002
14	MINING	.01181	.00222	.00046	.00066	.00059	.00062	.00033	.00025	.00036	.00028
15	FORESTRY	.00086	.00007	.00006	.00012	.00032	.00003	.00019	.00014	.00008	.00074
16	LOGGING	.00256	.00011	.00010	.00029	.00056	.00005	.00034	.00034	.00017	.00148
17	SAWMILLS	.00045	.00025	.00027	.00040	.00184	.00013	.00107	.00045	.00034	.00326
18	PLYWOOD	.00011	.00005	.00005	.00009	.00022	.00002	.00009	.00011	.00003	.00297
19	OTHER WOOD	.00225	.00047	.00017	.00156	.00150	.00007	.00155	.00191	.00020	.00073
20	FURNITURE	.00000	.00000	.00001	.00000	.00001	.00001	.00001	.00001	.00011	.00000
21	PULPMILLS	.00004	.00004	.00002	.00002	.00004	.00003	.00003	.00026	.00012	.00008
22	PAPER MILL	.00025	.00014	.00023	.00039	.00033	.00021	.00026	.00054	.00028	.00052
23	PAPBD MILL	.00026	.00055	.00020	.00321	.00024	.00017	.00018	.00393	.00179	.00077
24	PRINTING	.00083	.00076	.00119	.00084	.00362	.00099	.00177	.00174	.00081	.00119
25	INDUS CHEM	.00245	.00036	.00038	.00327	.00161	.00151	.00093	.00110	.00014	.00146
26	OTHER CHEM	.00237	.00064	.00224	.00318	.00276	.00016	.00091	.00211	.00064	.00078
27	PETROLEUM	.01027	.00498	.00222	.00138	.00194	.00178	.00120	.00041	.00114	.00124
28	GLASS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00292	.00070	.00048	.00285	.00242	.00474	.00118	.00028	.00021	.00015
30	FERR METAL	.00675	.00093	.07325	.02381	.05332	.03616	.02407	.00356	.00066	.02849
31	NONFER MET	1.00224	.00251	.00283	.00444	.00012	.00008	.00081	.00007	.00002	.00131
32	ALUMINUM	.02823	1.18695	.04964	.01837	.00040	.00203	.01328	.00667	.00037	.00392
33	HEAVY METL	.00007	.00039	1.03732	.00253	.00192	.00946	.00776	.00119	.00119	.00236
34	LIGHT METL	.00240	.00078	.01071	1.01038	.00768	.00154	.00389	.00839	.00146	.00327
35	NONELC EQP	.00000	.00001	.00000	.00000	1.01094	.00000	.00000	.00000	.00000	.00000
36	MACH TOOL	.00042	.00290	.01316	.02267	.02681	1.05508	.02708	.01279	.00362	.00385
37	INDUS EQP	.00229	.00120	.00275	.00097	.00256	.00005	1.02868	.00465	.00092	.00036
38	ELEC MACH	.00007	.00076	.00014	.00008	.00503	.00008	.00588	1.01348	.00114	.00006
39	AEROSPACE	.00005	.00004	.00002	.00001	.00012	.00001	.00014	.02246	1.00869	.00001
40	MOTOR VEH	.00001	.00000	.00000	.00000	.00489	.00000	.00000	.00000	.00000	1.00622
41	SHIP BLDG	.00005	.00003	.00002	.00001	.00001	.00001	.00001	.00001	.00006	.00000
42	OTHER MFG	.00244	.00015	.00038	.00182	.00304	.00551	.00336	.01396	.00218	.00143
43	TRANS SERV	.03894	.01958	.01291	.00902	.00765	.00726	.00485	.00417	.00087	.00343
44	ELEC CO	.02027	.06739	.01141	.01154	.00945	.00738	.00644	.00629	.00352	.00788
45	GAS CO	.05382	.00896	.00452	.01145	.00547	.00325	.00216	.00062	.00179	.00291
46	OTH UTILS	.00020	.00070	.00095	.00172	.00153	.00017	.00094	.00112	.00078	.00079
47	COMMUNICAT	.00392	.00248	.01716	.00978	.01223	.01336	.01344	.00965	.00557	.00971
48	CONSTRUCTN	.00061	.00175	.00262	.00119	.01030	.00048	.00190	.00217	.00067	.00062
49	TRADE	.01751	.00909	.02418	.01314	.02091	.02237	.02603	.02074	.00331	.01231
50	FIN,INS,RE	.00191	.00583	.00816	.00520	.00696	.00545	.00599	.00493	.00280	.00317
51	SERVICES	.02026	.01028	.02663	.02454	.03249	.02431	.02331	.01917	.03306	.01178
52	VAL ADDED	.69498	.44992	.62694	.54964	.62177	.68319	.63119	.60229	.51562	.33964

1972 WASHINGTON INVERSE COEFFICIENTS TABLE

		41 SHIP BLDG	42 OTHER MFG	43 TRANS SERV	44 ELEC CO	45 GAS CO	46 OTH UTILS	47 COMMUNICAT	48 CONSTRUCTN	49 TRADE	50 FIN.INS.RE
1	FIELD CROP	.00006	.00017	.00021	.00032	.00000	.00001	.00001	.00003	.00002	.00002
2	VEGETABLES	.00001	.00010	.00040	.00047	.00001	.00002	.00002	.00003	.00005	.00005
3	LIVESTOCK	.00002	.00072	.00066	.00117	.00001	.00003	.00002	.00004	.00004	.00005
4	OTHER AGRI	.00001	.00001	.00001	.00025	.00000	.00001	.00000	.00080	.00001	.00002
5	FISHING	.00000	.00000	.00003	.00002	.00000	.00000	.00000	.00000	.00000	.00000
6	MEAT PROD	.00003	.00193	.00123	.00166	.00001	.00003	.00003	.00005	.00004	.00006
7	DAIRY PROD	.00001	.00003	.00042	.00111	.00001	.00003	.00002	.00003	.00004	.00006
8	CANNING	.00001	.00002	.00036	.00027	.00001	.00002	.00002	.00003	.00003	.00005
9	GRAIN MILL	.00031	.00011	.00029	.00024	.00001	.00001	.00002	.00003	.00003	.00004
10	BEVERAGES	.00001	.00002	.00046	.00005	.00001	.00002	.00003	.00004	.00004	.00007
11	OTHER FOOD	.00003	.00053	.00085	.00242	.00002	.00005	.00004	.00006	.00016	.00009
12	TEXTILES	.00030	.00000	.00009	.00023	.00000	.00000	.00000	.00001	.00000	.00000
13	APPAREL	.00061	.00002	.00011	.00004	.00001	.00002	.00003	.00009	.00016	.00014
14	MINING	.00021	.00033	.00054	.04148	.00017	.00079	.00025	.01522	.00055	.00076
15	FORESTRY	.00112	.00028	.00008	.00071	.00002	.00008	.00010	.00464	.00021	.00020
16	LOGGING	.00207	.00057	.00016	.00086	.00006	.00016	.00025	.00886	.00050	.00047
17	SAWMILLS	.00582	.00134	.00038	.00272	.00006	.00032	.00024	.02274	.00064	.00059
18	PLYWOOD	.00281	.00011	.00010	.00006	.00002	.00016	.00008	.01401	.00029	.00025
19	OTHER WOOD	.00048	.00151	.00026	.00009	.00002	.00016	.00008	.01369	.00018	.00023
20	FURNITURE	.00262	.00001	.00001	.00000	.00000	.00001	.00019	.00100	.00010	.00010
21	PULPMILLS	.00006	.00023	.00005	.00025	.00006	.00007	.00018	.00010	.00030	.00037
22	PAPER MILL	.00056	.00220	.00048	.00077	.00022	.00027	.00333	.00050	.00491	.00240
23	PAPBD MILL	.00048	.00222	.00042	.00368	.00080	.00085	.00059	.00115	.00142	.00453
24	PRINTING	.00109	.00135	.00174	.00379	.00253	.00276	.00576	.00207	.01884	.02374
25	INDUS CHEM	.00193	.00084	.00034	.00034	.00003	.00143	.00014	.00047	.00048	.00020
26	OTHER CHEM	.00166	.00934	.00007	.00057	.00003	.00007	.00027	.00196	.00073	.00034
27	PETROLEUM	.00337	.00162	.03253	.00216	.00156	.00707	.00158	.01837	.00332	.00248
28	GLASS	.00000	.00000	.00003	.00001	.00000	.00000	.00000	.00000	.00000	.00000
29	CEMENT	.00055	.00183	.00051	.00138	.00007	.00077	.00052	.06782	.00038	.00108
30	FERR METAL	.00261	.00047	.00022	.00053	.00004	.00018	.00030	.01542	.00011	.00027
31	NONFER MET	.00206	.00052	.00002	.00025	.00001	.00003	.00020	.00176	.00002	.00004
32	ALUMINUM	.00066	.00244	.00004	.00011	.00002	.00006	.00007	.00507	.00004	.00009
33	HEAVY METL	.00312	.00014	.00020	.00032	.00003	.00034	.00033	.03005	.00032	.00048
34	LIGHT METL	.00396	.01049	.00023	.00334	.00073	.00010	.00010	.00258	.00034	.00014
35	NONELC EQP	.00234	.00000	.00001	.00023	.00000	.00000	.00000	.00005	.00000	.00000
36	MACH TOOL	.00186	.00475	.00055	.00068	.00006	.00009	.00020	.00145	.00043	.00030
37	INDUS EQP	.00035	.00099	.00004	.00096	.00001	.00003	.00024	.00042	.00005	.00006
38	ELEC MACH	.00151	.00099	.00008	.00075	.00003	.00008	.00488	.00222	.00011	.00018
39	AEROSPACE	.00004	.00004	.00126	.00003	.00000	.00001	.00012	.00008	.00001	.00002
40	MOTOR VEH	.00001	.00000	.00017	.00000	.00000	.00000	.00000	.00013	.00000	.00000
41	SHIP BLDG	1.01013	.00002	.00143	.00001	.00000	.00001	.00001	.00004	.00001	.00001
42	OTHER MFG	.00175	1.02292	.00033	.00066	.00080	.00021	.00090	.00402	.00139	.00220
43	TRANS SERV	.00718	.01373	1.08117	.00902	.00261	.00376	.00683	.02623	.00906	.00978
44	ELEC CO	.00377	.00494	.00849	1.31436	.00497	.01982	.00508	.00601	.01505	.01652
45	GAS CO	.00107	.00142	.00162	.00206	1.53006	.00247	.00069	.00358	.00275	.00244
46	OTH UTILS	.00075	.00064	.00054	.00076	.00081	1.08190	.00111	.00083	.00194	.00280
47	COMMUNICAT	.00415	.00757	.01110	.00902	.00419	.00862	1.00538	.00853	.01360	.02641
48	CONSTRUCTN	.00240	.00182	.00555	.00182	.00090	.01092	.00425	1.00165	.00427	.01541
49	TRADE	.02427	.01841	.01404	.00668	.00400	.00607	.00648	.05803	1.01148	.01331
50	FIN.INS.RE	.00379	.00560	.01538	.00823	.00640	.01012	.00759	.01055	.01412	1.08158
51	SERVICES	.01641	.02183	.02885	.04609	.01227	.02366	.04085	.04293	.05422	.09238
52	VAL ADDED	.72311	.65501	.84532	.89866	.56154	.95749	.90554	.66866	.92575	.91863

1972 WASHINGTON INVERSE COEFFICIENTS TABLE

		51 SERVICES
1	FIELD CROP	.00015
2	VEGETABLES	.00052
3	LIVESTOCK	.00034
4	OTHER AGRI	.00001
5	FISHING	.00004
6	MEAT PROD	.00029
7	DAIRY PROD	.00047
8	CANNING	.00051
9	GRAIN MILL	.00035
10	BEVERAGES	.00073
11	OTHER FOOD	.00055
12	TEXTILES	.00000
13	APPAREL	.00070
14	MINING	.00060
15	FORESTRY	.00008
16	LOGGING	.00018
17	SAWMILLS	.00022
18	PLYWOOD	.00008
19	OTHER WOOD	.00016
20	FURNITURE	.00001
21	PULPMILLS	.00014
22	PAPER MILL	.00131
23	PAPBD MILL	.00130
24	PRINTING	.01649
25	INDUS CHEM	.00099
26	OTHER CHEM	.00100
27	PETROLEUM	.00251
28	GLASS	.00004
29	CEMENT	.00047
30	FERR METAL	.00020
31	NONFER MET	.00002
32	ALUMINUM	.00005
33	HEAVY METL	.00021
34	LIGHT METL	.00034
35	NONELC EQP	.00000
36	MACH TOOL	.00290
37	INDUS EQP	.00027
38	ELEC MACH	.00024
39	AEROSPACE	.00002
40	MOTOR VEH	.00000
41	SHIP BLDG	.00001
42	OTHER MFG	.00581
43	TRANS SERV	.00865
44	ELEC CO	.01509
45	GAS CO	.00470
46	OTH UTILS	.00145
47	COMMUNICAT	.03691
48	CONSTRUCTN	.00418
49	TRADE	.01907
50	FIN.INS.RE	.01816
51	SERVICES	1.05513
52	VAL ADDED	.90452

1972 WASHINGTON INDUCED INVERSE COEFFICIENTS TABLE

		1 FIELD CROP	2 VEGETABLES	3 LIVESTOCK	4 OTHER AGRI	5 FISHING	6 MEAT PROD	7 DAIRY PROD	8 CANNING	9 GRAIN MILL	10 BEVERAGES
1	FIELD CROP	1.04532	.01617	.25668	.02217	.00605	.08784	.13370	.00940	.18834	.02390
2	VEGETABLES	.00526	1.01423	.01450	.00503	.00667	.00722	.01278	.21710	.00704	.01839
3	LIVESTOCK	.01898	.02102	1.12298	.01816	.02223	.38245	.58284	.02139	.02286	.01688
4	OTHER AGRI	.00169	.00476	.00342	1.00619	.00167	.00165	.00245	.00222	.00110	.00151
5	FISHING	.00071	.00079	.00065	.00068	1.00342	.00043	.00098	.07383	.00099	.00062
6	MEAT PROD	.01941	.02150	.01915	.01858	.02439	1.03693	.01781	.02047	.04154	.01694
7	DAIRY PROD	.01308	.01448	.01084	.01251	.01592	.00864	1.17863	.01695	.00848	.01154
8	CANNING	.00792	.00877	.00734	.00758	.01039	.00484	.01185	1.01328	.01239	.00696
9	GRAIN MILL	.00361	.00399	.11746	.00345	.00419	.04135	.06199	.01203	1.04938	.00416
10	BEVERAGES	.00621	.00685	.00514	.00593	.01143	.00358	.00572	.00637	.00400	1.05252
11	OTHER FOOD	.00732	.00806	.01910	.00699	.01264	.01345	.02030	.02196	.01757	.02938
12	TEXTILES	.00042	.00044	.00019	.00015	.01280	.00011	.00017	.00113	.00015	.00014
13	APPAREL	.00732	.00226	.00313	.00201	.00204	.00165	.00244	.00195	.00405	.00258
14	MINING	.00248	.00219	.00172	.00146	.00139	.00117	.00171	.00223	.00132	.00437
15	FORESTRY	.00038	.00052	.00036	.00033	.00037	.00045	.00102	.00077	.00045	.00083
16	LOGGING	.00072	.00103	.00072	.00061	.00070	.00104	.00251	.00180	.00105	.00201
17	SAWMILLS	.00128	.00169	.00115	.00109	.00129	.00113	.00219	.00191	.00108	.00191
18	PLYWOOD	.00047	.00053	.00040	.00037	.00044	.00029	.00047	.00044	.00026	.00039
19	OTHER WOOD	.00063	.00336	.00057	.00054	.00050	.00100	.00057	.00223	.00039	.00168
20	FURNITURE	.00214	.00237	.00175	.00205	.00225	.00122	.00177	.00204	.00135	.00184
21	PULPMILLS	.00055	.00073	.00053	.00046	.00038	.00107	.00296	.00187	.00114	.00224
22	PAPER MILL	.00284	.00401	.00347	.00264	.00294	.00304	.00619	.00478	.00295	.00490
23	PAPBD MILL	.00431	.00713	.00500	.00355	.00405	.01534	.04470	.02745	.01646	.03410
24	PRINTING	.01272	.01334	.01073	.01209	.01315	.00840	.01135	.01339	.00840	.01253
25	INDUS CHEM	.03768	.03043	.01840	.03050	.00403	.00763	.01134	.00825	.00759	.00313
26	OTHER CHEM	.00089	.00092	.00335	.00276	.00090	.00207	.00273	.00097	.00064	.00121
27	PETROLEUM	.02310	.01920	.02034	.03421	.08094	.01258	.01995	.02069	.01191	.01348
28	GLASS	.00044	.00048	.00039	.00042	.00072	.00120	.00046	.01085	.00040	.05265
29	CEMENT	.00230	.00237	.00227	.00155	.00114	.00151	.00170	.00145	.00239	.00146
30	FERR METAL	.00158	.00046	.00104	.00228	.00057	.00054	.00069	.00124	.00062	.00369
31	NONFER MET	.00007	.00007	.00007	.00006	.00270	.00005	.00007	.00040	.00007	.00067
32	ALUMINUM	.00051	.00018	.00026	.00015	.00025	.00016	.00019	.00079	.00029	.00271
33	HEAVY METL	.00075	.00062	.00064	.00057	.00059	.00036	.00052	.00053	.00032	.00069
34	LIGHT METL	.00280	.00266	.00357	.00165	.00261	.00298	.00279	.03717	.00951	.14483
35	NONELC EQP	.00002	.00002	.00002	.00002	.00015	.00001	.00002	.00003	.00002	.00002
36	MACH TOOL	.00098	.00094	.00082	.00089	.00366	.00193	.00088	.00299	.00086	.00435
37	INDUS EQP	.00019	.00019	.00015	.00018	.00019	.00075	.00019	.00145	.00014	.00015
38	ELEC MACH	.00034	.00034	.00028	.00034	.00035	.00082	.00027	.00028	.00021	.00023
39	AEROSPACE	.00005	.00005	.00006	.00005	.00008	.00007	.00006	.00008	.00005	.00005
40	MOTOR VEH	.00102	.00113	.00084	.00098	.00101	.00059	.00085	.00098	.00065	.00126
41	SHIP BLDG	.00059	.00065	.00052	.00057	.05675	.00037	.00053	.00470	.00043	.00053
42	OTHER MFG	.00237	.00264	.00193	.00219	.00487	.00166	.00352	.00329	.00156	.00323
43	TRANS SERV	.03477	.03421	.04842	.03236	.05931	.04585	.04229	.06024	.04065	.03952
44	ELEC CO	.03515	.03457	.03171	.03198	.03163	.02293	.03644	.03494	.02444	.03010
45	GAS CO	.01082	.01115	.00885	.01038	.01121	.00856	.01688	.02343	.00702	.01719
46	OTH UTILS	.01712	.01490	.01509	.02960	.01000	.00874	.01255	.01138	.00775	.00991
47	COMMUNICAT	.03306	.03639	.02979	.03888	.03175	.02170	.03160	.03213	.02184	.02744
48	CONSTRUCTN	.02069	.01620	.01737	.01482	.00772	.00877	.01324	.00938	.00729	.00738
49	TRADE	.23814	.26194	.21505	.23309	.27868	.14742	.22214	.24293	.15981	.20668
50	FIN,INS,RE	.07844	.08033	.06488	.07143	.08725	.04460	.07062	.04833	.06513	
51	SERVICE	.19394	.16341	.18965	.18072	.11466	.18447	.18246	.14209	.15643	
52	VAL ADDED	1.17614	1.12613	1.12614	1.31746	1.35779	.78350	1.13975	1.31061	.87126	1.19200

1972 WASHINGTON INDUCED INVERSE COEFFICIENTS TABLE

		11 OTHER FOOD	12 TEXTILES	13 APPAREL	14 MINING	15 FORESTRY	16 LOGGING	17 SAWMILLS	18 PLYWOOD	19 OTHER WOOD	20 FURNITURE
1	FIELD CROP	.02604	.00583	.00325	.00455	.00608	.00559	.00535	.00483	.00373	.00425
2	VEGETABLES	.17380	.00436	.00314	.00466	.00615	.00570	.00547	.00478	.00382	.00434
3	LIVESTOCK	.03600	.02275	.01218	.01688	.02236	.02068	.01981	.01732	.01381	.01576
4	OTHER AGRI	.00239	.00140	.00101	.00150	.00539	.00300	.00228	.00181	.00132	.00142
5	FISHING	.00095	.00059	.00043	.00063	.00084	.00078	.00074	.00065	.00052	.00059
6	MEAT PROD	.02153	.01599	.01164	.01728	.02288	.02116	.02029	.01775	.01415	.01614
7	DAIRY PROD	.02085	.01075	.00784	.01104	.01540	.01425	.01365	.01192	.00952	.01083
8	CANNING	.01145	.00651	.00474	.00704	.00932	.00863	.00827	.00723	.00576	.00656
9	GRAIN MILL	.04989	.00369	.00224	.00320	.00423	.00393	.00377	.00421	.00266	.00299
10	BEVERAGES	.00985	.00508	.00371	.00550	.00728	.00675	.00647	.00565	.00451	.00513
11	OTHER FOOD	1.04624	.00602	.00433	.00645	.00848	.00786	.00755	.00662	.00527	.00600
12	TEXTILES	.00018	1.00013	.00081	.00014	.00058	.00030	.00022	.00017	.00012	.00352
13	APPAREL	.00186	.00164	1.00480	.00177	.00233	.00217	.00208	.00182	.00146	.00166
14	MINING	.00378	.00145	.00076	1.01692	.00163	.00145	.00152	.00134	.00109	.00120
15	FORESTRY	.00071	.00024	.00045	.00098	1.03881	.35689	.15989	.08552	.02866	.00770
16	LOGGING	.00168	.00043	.00107	.00172	.00341	1.09959	.26469	.21760	.05895	.01379
17	SAWMILLS	.00167	.00076	.00098	.00523	.00166	.01273	1.04921	.04031	.12923	.04446
18	PLYWOOD	.00038	.00021	.00025	.00035	.00043	.00756	.00914	1.03607	.03610	.00477
19	OTHER WOOD	.00138	.00034	.00027	.00055	.00060	.00089	.01506	.00193	1.01785	.01485
20	FURNITURE	.00176	.00175	.00128	.00190	.00251	.00232	.00222	.00194	.00155	1.00685
21	PULPMILLS	.00180	.00026	.00081	.00049	.00038	.00037	.00046	.00110	.00042	.00160
22	PAPER MILL	.00606	.00209	.01461	.00250	.00295	.00284	.00291	.00332	.00260	.02483
23	PAPBD MILL	.02513	.00278	.00307	.00604	.00393	.00395	.00540	.00610	.00473	.00886
24	PRINTING	.01276	.00939	.00702	.01058	.01399	.01350	.01287	.01204	.00970	.01030
25	INDUS CHEM	.01065	.00089	.00091	.00507	.00412	.00253	.00164	.00212	.00092	.00155
26	OTHER CHEM	.00082	.00058	.00044	.00073	.00125	.00143	.00196	.01042	.00181	.00459
27	PETROLEUM	.01425	.01128	.00909	.01925	.01753	.01982	.01839	.01551	.01226	.01391
28	GLASS	.00245	.00035	.00025	.00038	.00050	.00046	.00044	.00039	.00031	.00035
29	CEMENT	.00132	.00085	.00066	.02490	.00361	.00214	.00169	.00125	.00096	.00119
30	FERR METAL	.00041	.00022	.00019	.00320	.00051	.00104	.00081	.00080	.00084	.00044
31	NONFER MET	.00007	.00004	.00004	.00006	.00006	.00007	.00006	.00005	.00006	.00009
32	ALUMINUM	.00019	.00008	.00007	.00016	.00021	.00021	.00026	.00016	.00232	.00226
33	HEAVY METL	.00038	.00026	.00023	.00051	.00185	.00100	.00177	.00084	.00089	.00049
34	LIGHT METL	.00543	.00126	.00091	.00280	.00178	.00418	.00277	.00237	.00354	.00343
35	NONELC EQP	.00002	.00002	.00001	.00002	.00003	.00041	.00012	.00010	.00004	.00002
36	MACH TOOL	.00086	.00064	.00051	.00506	.00094	.00606	.00327	.00281	.00162	.00282
37	INDUS EQP	.00016	.00011	.00085	.00015	.00014	.00016	.00137	.00108	.00322	.00030
38	ELEC MACH	.00025	.00026	.00016	.00025	.00030	.00029	.00055	.00055	.00099	.00028
39	AEROSPACE	.00004	.00003	.00002	.00004	.00005	.00005	.00009	.00009	.00008	.00004
40	MOTOR VEH	.00085	.00084	.00061	.00091	.00120	.00111	.00107	.00094	.00075	.00085
41	SHIP BLDG	.00052	.00048	.00035	.00053	.00070	.00065	.00079	.00060	.00049	.00050
42	OTHER MFG	.00286	.00162	.00122	.00462	.00271	.00286	.00241	.00239	.00347	.00134
43	TRANS SERV	.03206	.02503	.01517	.02855	.03826	.03662	.06788	.06972	.05375	.02970
44	ELEC CO	.02940	.03834	.01782	.04521	.03212	.03162	.03513	.03220	.02641	.02783
45	GAS CO	.03827	.02675	.00561	.01092	.01024	.00974	.01049	.01423	.00692	.00838
46	OTH UTILS	.01068	.00807	.00668	.01165	.01154	.01073	.01153	.00938	.00776	.00829
47	COMMUNICAT	.02888	.03518	.02084	.02775	.03440	.03328	.03168	.02853	.02507	.02924
48	CONSTRUCTN	.00885	.00560	.00490	.01171	.01589	.01264	.01192	.00843	.00709	.00964
49	TRADE	.20029	.17481	.13065	.18972	.24615	.24050	.24284	.22332	.18863	.19431
50	FIN,INS,RE	.06469	.05499	.04406	.07002	.08065	.08337	.07953	.06970	.05618	.06226
51	SERVICES	.16283	.13410	.10431	.16136	.18647	.20073	.19034	.16527	.13667	.16227
52	VAL ADDED	1.13842	1.13237	.82634	1.22442	1.62407	1.50123	1.43647	1.25443	1.00074	1.14044

1972 WASHINGTON INDUCED INVERSE COEFFICIENTS TABLE

		21 PULPMILLS	22 PAPER MILL	23 PAPBD MILL	24 PRINTING	25 INDUS CHEM	26 OTHER CHEM	27 PETROLEUM	28 GLASS	29 CEMENT	30 FERR METAL
1	FIELD CROP	.00442	.00408	.00447	.00467	.00495	.00381	.00150	.00524	.00463	.00480
2	VEGETABLES	.00454	.00419	.00459	.00479	.00546	.00391	.00154	.00536	.00474	.00491
3	LIVESTOCK	.01635	.01513	.01659	.01806	.01821	.01411	.00557	.01944	.01717	.01780
4	OTHER AGRI	.00159	.00141	.00153	.00160	.00162	.00125	.00050	.00173	.00153	.00158
5	FISHING	.00061	.00057	.00062	.00068	.00068	.00053	.00021	.00073	.00064	.00067
6	MEAT PROD	.01675	.01550	.01699	.01848	.01860	.01444	.00571	.01990	.01761	.01822
7	DAIRY PROD	.01127	.01043	.01143	.01245	.01255	.00973	.00384	.01340	.01184	.01227
8	CANNING	.00682	.00631	.00692	.00754	.00759	.00590	.00232	.00811	.00716	.00742
9	GRAIN MILL	.00315	.00288	.00316	.00343	.00357	.00269	.00106	.00369	.00326	.00338
10	BEVERAGES	.00534	.00494	.00542	.00590	.00595	.00462	.00182	.00634	.00560	.00580
11	OTHER FOOD	.00638	.00585	.00637	.00687	.00966	.00544	.00213	.00741	.00658	.00682
12	TEXTILES	.00015	.00013	.00014	.00014	.00015	.00011	.00005	.00016	.00014	.00015
13	APPAREL	.00173	.00160	.00175	.00191	.00193	.00150	.00059	.00203	.00180	.00188
14	MINING	.00229	.00186	.00238	.00124	.00289	.00122	.00078	.05951	.09623	.00229
15	FORESTRY	.04354	.02061	.01817	.00129	.00068	.00044	.00012	.00150	.00054	.00063
16	LOGGING	.10635	.05627	.04910	.00327	.00150	.00094	.00022	.00366	.00111	.00110
17	SAWMILLS	.12209	.03234	.03099	.00245	.00195	.00137	.00039	.00356	.00182	.00307
18	PLYWOOD	.03862	.00642	.00357	.00057	.00057	.00038	.00013	.00068	.00041	.00033
19	OTHER WOOD	.00220	.00122	.00167	.00047	.00099	.00346	.00034	.00502	.00180	.00143
20	FURNITURE	.00183	.00170	.00166	.00203	.00204	.00158	.00063	.00218	.00193	.00200
21	PULPMILLS	1.00521	.04470	.06558	.00252	.00564	.00076	.00014	.00404	.00081	.00033
22	PAPER MILL	.00304	1.00664	.08397	.05142	.00355	.00281	.00080	.00722	.00305	.00259
23	PAPBD MILL	.00653	.02676	1.04591	.00526	.01121	.00908	.00160	.06287	.01135	.00333
24	PRINTING	.01075	.01013	.01116	1.02446	.01224	.01558	.00358	.01192	.01146	.01263
25	INDUS CHEM	.04800	.02579	.00958	.00217	1.04235	.02276	.00279	.00172	.00139	.00393
26	OTHER CHEM	.00134	.00150	.00475	.00161	.00400	1.05179	.00041	.00096	.00203	.00172
27	PETROLEUM	.05155	.03020	.01808	.01474	.01649	.01380	1.01098	.01956	.02442	.01430
28	GLASS	.00038	.00035	.00037	.00040	.00085	.00032	.00012	1.00043	.00038	.00040
29	CEMENT	.00134	.00135	.00134	.00112	.00153	.00105	.00072	.00273	1.18620	.00344
30	FERR METAL	.00103	.00116	.00072	.00032	.00054	.00062	.00053	.00053	.00070	1.01505
31	NONFER MET	.00096	.00098	.00018	.00009	.00009	.00011	.00019	.00006	.00006	.00100
32	ALUMINUM	.00026	.00026	.00016	.00011	.00026	.00039	.00029	.00014	.00017	.00023
33	HEAVY METL	.00158	.00151	.00065	.00042	.00056	.00039	.00072	.00050	.00054	.00148
34	LIGHT METL	.00376	.00281	.00183	.00150	.00690	.01646	.00066	.00169	.00287	.00251
35	NONELC EQP	.00006	.00004	.00004	.00002	.00002	.00002	.00001	.00003	.00002	.00003
36	MACH TOOL	.00152	.00113	.00108	.00085	.00109	.00107	.00028	.00110	.00187	.01483
37	INDUS EQP	.00130	.00295	.00118	.00066	.00151	.00015	.00057	.00021	.00080	.00015
38	ELEC MACH	.00034	.00028	.00026	.00029	.00161	.00027	.00009	.00026	.00028	.00027
39	AEROSPACE	.00008	.00007	.00007	.00005	.00008	.00005	.00002	.00006	.00010	.00005
40	MOTOR VEH	.00068	.00082	.00090	.00097	.00098	.00076	.00030	.00105	.00093	.00096
41	SHIP BLDG	.00057	.00051	.00056	.00058	.00057	.00045	.00018	.00062	.00060	.00056
42	OTHER MFG	.00207	.00183	.00221	.00206	.00403	.00488	.00081	.00227	.00213	.00306
43	TRANS SERV	.06133	.05631	.05784	.04095	.03859	.03391	.01499	.04416	.08276	.03876
44	ELEC CO	.04551	.03658	.04743	.02878	.04964	.02899	.01430	.04673	.04977	.05651
45	GAS CO	.06909	.03968	.03046	.00969	.05651	.02176	.02785	.05047	.04243	.03025
46	OTH UTILS	.02037	.00981	.01282	.00988	.01141	.00745	.00439	.01044	.01058	.01028
47	COMMUNICAT	.02706	.02627	.02903	.03930	.03150	.03132	.00941	.02865	.03212	.03067
48	CONSTRUCTN	.01076	.01237	.01158	.00864	.01380	.00857	.00508	.01202	.01344	.00856
49	TRADE	.19556	.18242	.20672	.20451	.20387	.16918	.06129	.21789	.20456	.23102
50	FIN,INS,RE	.06509	.06111	.06497	.06947	.06889	.05739	.02836	.07443	.07002	.06874
51	SERVICES	.16631	.14985	.16726	.18694	.20539	.16558	.05142	.17570	.14999	.17287
52	VAL ADDED	1.18412	1.09597	1.20138	1.31041	1.31555	1.02266	.40419	1.41041	1.24355	1.28993

1972 WASHINGTON INDUCED INVERSE COEFFICIENTS TABLE

		31 NONFER MET	32 ALUMINUM	33 HEAVY METL	34 LIGHT METL	35 NONELC EQP	36 MACH TOOL	37 INDUS EQP	38 ELEC MACH	39 AEROSPACE	40 MOTOR VEH
1	FIELD CROP	.00432	.00281	.00389	.00341	.00386	.00424	.00392	.00374	.00321	.00211
2	VEGETABLES	.00443	.00288	.00399	.00350	.00395	.00434	.00401	.00382	.00329	.00216
3	LIVESTOCK	.01604	.01042	.01444	.01266	.01432	.01573	.01453	.01387	.01189	.00782
4	OTHER AGRI	.00142	.00093	.00128	.00112	.00128	.00139	.00129	.00123	.00105	.00070
5	FISHING	.00060	.00039	.00054	.00048	.00054	.00059	.00055	.00052	.00045	.00029
6	MEAT PROD	.01643	.01069	.01478	.01296	.01466	.01610	.01487	.01421	.01220	.00801
7	DAIRY PROD	.01105	.00719	.00996	.00873	.00987	.01084	.01001	.00955	.00818	.00539
8	CANNING	.00668	.00433	.00603	.00528	.00598	.00656	.00606	.00578	.00496	.00326
9	GRAIN MILL	.00304	.00198	.00274	.00240	.00272	.00298	.00276	.00263	.00226	.00149
10	BEVERAGES	.00523	.00338	.00471	.00413	.00468	.00513	.00474	.00452	.00394	.00255
11	OTHER FOOD	.00613	.00406	.00550	.00483	.00546	.00598	.00553	.00528	.00457	.00298
12	TEXTILES	.00014	.00009	.00012	.00010	.00011	.00013	.00012	.00011	.00009	.00006
13	APPAREL	.00817	.00110	.00154	.00136	.00151	.00165	.00153	.00146	.00125	.00083
14	MINING	.01272	.00282	.00128	.00138	.00141	.00152	.00116	.00104	.00104	.00073
15	FORESTRY	.00109	.00022	.00026	.00031	.00052	.00025	.00039	.00034	.00025	.00086
16	LOGGING	.00297	.00038	.00048	.00062	.00093	.00046	.00071	.00070	.00048	.00168
17	SAWMILLS	.00117	.00072	.00091	.00097	.00249	.00084	.00172	.00108	.00087	.00361
18	PLYWOOD	.00032	.00018	.00024	.00045	.00041	.00022	.00028	.00029	.00018	.00307
19	OTHER WOOD	.00259	.00069	.00047	.00183	.00180	.00040	.00186	.00220	.00045	.00090
20	FURNITURE	.00179	.00116	.00162	.00142	.00162	.00177	.00163	.00156	.00144	.00088
21	PULPMILLS	.00029	.00020	.00025	.00042	.00026	.00027	.00025	.00048	.00030	.00020
22	PAPER MILL	.00225	.00144	.00204	.00197	.00212	.00217	.00207	.00227	.00176	.00149
23	PAPBD MILL	.00300	.00232	.00267	.00538	.00269	.00286	.00267	.00630	.00382	.00211
24	PRINTING	.00992	.00664	.00939	.00803	.01175	.00993	.01002	.00962	.00756	.00563
25	INDUS CHEM	.00322	.00086	.00107	.00387	.00229	.00226	.00163	.00177	.00071	.00183
26	OTHER CHEM	.00292	.00100	.00274	.00362	.00325	.00070	.00141	.00259	.00105	.00105
27	PETROLEUM	.02143	.01220	.01229	.01020	.01193	.01275	.01134	.01009	.00942	.00669
28	GLASS	.00036	.00023	.00032	.00028	.00032	.00035	.00032	.00031	.00027	.00017
29	CEMENT	.00374	.00123	.00122	.00350	.00315	.00555	.00193	.00099	.00082	.00055
30	FERR METAL	.00695	.00106	.07343	.02397	.05350	.03636	.02426	.00374	.00081	.02859
31	NONFER MET	1.00227	.00253	.00286	.00446	.00015	.00011	.00084	.00010	.00004	.00132
32	ALUMINUM	.02831	1.18700	.04971	.01843	.00047	.00211	.01335	.00674	.00043	.00396
33	HEAVY METL	.00032	.00056	1.03755	.00273	.00215	.00971	.00799	.00141	.00138	.00248
34	LIGHT METL	.00362	.00157	.01180	1.01134	.00877	.00274	.00500	.00944	.00236	.00387
35	NONELC EQP	.00002	.00002	.00002	.00002	1.01095	.00002	.00002	.00002	.00001	.00001
36	MACH TOOL	.00104	.00330	.01371	.02316	.02736	1.05569	.02764	.01332	.00408	.00415
37	INDUS EQP	.00238	.00126	.00283	.00014	.00264	.00014	1.02876	.00472	.00098	.00040
38	ELEC MACH	.00025	.00088	.00031	.00022	.00520	.00026	.00605	1.01364	.00127	.00015
39	AEROSPACE	.00007	.00006	.00004	.00003	.00014	.00003	.00016	.02248	1.00871	.00002
40	MOTOR VEH	.00087	.00056	.00078	.00068	.00566	.00085	.00078	.00075	.00064	1.00664
41	SHIP BLDG	.00054	.00034	.00046	.00040	.00045	.00049	.00045	.00043	.00042	.00024
42	OTHER MFG	.00401	.00116	.00180	.00306	.00444	.00706	.00478	.01532	.00334	.00220
43	TRANS SERV	.05683	.03117	.02905	.02317	.02366	.02485	.02110	.01968	.01415	.01218
44	ELEC CO	.04164	.08122	.03069	.02844	.02857	.02839	.02585	.02481	.01937	.01833
45	GAS CO	.06089	.01353	.01089	.01704	.01179	.01019	.00858	.00674	.00703	.00637
46	OTH UTILS	.00836	.00598	.00831	.00817	.00882	.00818	.00835	.00819	.00683	.00477
47	COMMUNICAT	.02597	.01676	.03706	.02722	.03196	.03503	.03347	.02876	.02194	.02048
48	CONSTRUCTN	.00606	.00527	.00754	.00550	.01518	.00584	.00685	.00689	.00471	.00329
49	TRADE	.18264	.11599	.17314	.14374	.16864	.18470	.17600	.16384	.12583	.09301
50	FIN.INS.RE	.05754	.04185	.05835	.04920	.05673	.06015	.05652	.05315	.04408	.03036
51	SERVICES	.14836	.09321	.14218	.12585	.14710	.15024	.13965	.13018	.12810	.07438
52	VAL ADDED	1.16166	.75204	1.04792	.91872	1.03928	1.14194	1.05502	1.00672	.86186	.56770

1972 WASHINGTON INDUCED INVERSE COEFFICIENTS TABLE

		41 SHIP BLDG	42 OTHER MFG	43 TRANS SERV	44 ELEC CO	45 GAS CO	46 OTH UTILS	47 COMMUNICAT	48 CONSTRUCTN	49 TRADE	50 FIN.INS.RE
1	FIELD CROP	.00454	.00423	.00545	.00588	.00348	.00594	.00562	.00417	.00575	.00571
2	VEGETABLES	.00459	.00425	.00574	.00615	.00356	.00607	.00575	.00426	.00590	.00586
3	LIVESTOCK	.01665	.01578	.02010	.02184	.01292	.02205	.02085	.01541	.02133	.02118
4	OTHER AGRI	.00148	.00134	.00173	.00208	.00114	.00196	.00185	.00216	.00189	.00189
5	FISHING	.00062	.00057	.00076	.00080	.00049	.00083	.00078	.00058	.00080	.00080
6	MEAT PROD	.01704	.01734	.02111	.02280	.01362	.02256	.02133	.01578	.02182	.02167
7	DAIRY PROD	.01147	.01040	.01381	.01534	.00890	.01519	.01437	.01062	.01470	.01461
8	CANNING	.00694	.00629	.00846	.00868	.00539	.00919	.00870	.00644	.00890	.00885
9	GRAIN MILL	.00346	.00295	.00397	.00415	.00245	.00418	.00395	.00294	.00405	.00403
10	BEVERAGES	.00542	.00492	.00679	.00677	.00421	.00718	.00681	.00504	.00697	.00694
11	OTHER FOOD	.00632	.00623	.00820	.01024	.00490	.00839	.00792	.00588	.00822	.00808
12	TEXTILES	.00043	.00012	.00024	.00039	.00010	.00018	.00017	.00013	.00017	.00017
13	APPAREL	.00234	.00159	.00213	.00218	.00135	.00231	.00219	.00169	.00237	.00233
14	MINING	.00117	.00119	.00165	.04266	.00091	.00205	.00144	.01610	.00177	.00197
15	FORESTRY	.00135	.00050	.00036	.00100	.00021	.00040	.00040	.00486	.00052	.00050
16	LOGGING	.00251	.00096	.00066	.00140	.00039	.00073	.00079	.00926	.00105	.00102
17	SAWMILLS	.00657	.00202	.00126	.00365	.00064	.00131	.00118	.02343	.00160	.00154
18	PLYWOOD	.00302	.00030	.00035	.00033	.00018	.00044	.00035	.01421	.00057	.00052
19	OTHER WOOD	.00083	.00183	.00068	.00053	.00029	.00062	.00052	.01402	.00063	.00068
20	FURNITURE	.00448	.00169	.00219	.00232	.00145	.00248	.00252	.00273	.00249	.00246
21	PULPMILLS	.00032	.00047	.00035	.00058	.00026	.00041	.00051	.00034	.00063	.00070
22	PAPER MILL	.00265	.00409	.00291	.00336	.00184	.00302	.00594	.00243	.00758	.00505
23	PAPBD MILL	.00333	.00480	.00375	.00722	.00301	.00463	.00416	.00379	.00507	.00816
24	PRINTING	.01055	.00991	.01280	.01554	.00987	.01528	.01760	.01081	.03095	.03575
25	INDUS CHEM	.00273	.00156	.00127	.00134	.00065	.00249	.00115	.00121	.00151	.00122
26	OTHER CHEM	.00223	.00986	.00074	.00129	.00048	.00083	.00099	.00249	.00146	.00107
27	PETROLEUM	.01499	.01214	.04611	.01659	.01058	.02245	.01613	.02911	.01819	.01724
28	GLASS	.00037	.00034	.00046	.00047	.00029	.00049	.00046	.00034	.00047	.00047
29	CEMENT	.00141	.00261	.00150	.00244	.00074	.00190	.00159	.06861	.00147	.00217
30	FERR METAL	.00282	.00066	.00047	.00079	.00020	.00046	.00056	.01562	.00038	.00053
31	NONFER MET	.00210	.00055	.00006	.00029	.00003	.00007	.00024	.00179	.00006	.00008
32	ALUMINUM	.00074	.00252	.00014	.00021	.00008	.00017	.00018	.00514	.00015	.00019
33	HEAVY METL	.00338	.00038	.00051	.00065	.00024	.00068	.00066	.03029	.00065	.00081
34	LIGHT METL	.00523	.01164	.00171	.00491	.00171	.00177	.00168	.00375	.00196	.00174
35	NONELC EQP	.00236	.00002	.00003	.00025	.00002	.00003	.00002	.00006	.00003	.00003
36	MACH TOOL	.00250	.00533	.00130	.00147	.00056	.00094	.00100	.00205	.00125	.00111
37	INDUS EQP	.00044	.00107	.00015	.00108	.00008	.00016	.00036	.00051	.00017	.00018
38	ELEC MACH	.00170	.00117	.00030	.00098	.00017	.00033	.00512	.00239	.00036	.00042
39	AEROSPACE	.00007	.00006	.00129	.00006	.00002	.00004	.00015	.00010	.00005	.00005
40	MOTOR VEH	.00091	.00081	.00121	.00111	.00069	.00119	.00112	.00096	.00115	.00114
41	SHIP BLDG	1.01064	.00048	.00203	.00064	.00040	.00067	.00064	.00051	.00066	.00066
42	OTHER MFG	.00338	1.02440	.00263	.00268	.00207	.00237	.00294	.00553	.00348	.00427
43	TRANS SERV	.02579	.03059	1.10293	.03216	.01706	.02841	.03015	.04345	.03290	.03343
44	ELEC CO	.02601	.02508	.03449	1.34200	.02224	.04926	.03293	.02657	.04352	.04477
45	GAS CO	.00842	.00807	.01021	.01119	1.53576	.01220	.00989	.01037	.01216	.01177
46	OTH UTILS	.00923	.00832	.01046	.01131	.00740	1.09314	.01173	.00868	.01280	.01358
47	COMMUNICAT	.02709	.02835	.03792	.03753	.02201	.03901	1.03411	.02975	.04297	.05556
48	CONSTRUCTN	.00807	.00695	.01218	.00867	.00530	.01843	.01135	1.00689	.01153	.02261
49	TRADE	.19608	.17404	.21489	.22020	.13742	.23357	.22164	.21690	1.23144	.23158
50	FIN.INS.RE	.06168	.05804	.08306	.08017	.05135	.08678	.08008	.06409	.08823	1.15513
51	SERVICES	.14970	.14257	.18465	.21173	.11577	.20015	.20776	.16617	.22485	.26171
52	VAL ADDED	1.20868	1.09484	1.41294	1.50211	.93860	1.60043	1.51361	1.11766	1.54738	1.53548

1972 WASHINGTON INDUCED INVERSE COEFFICIENTS TABLE

		51 SERVICES	52 CONSUMPTN
1	FIELD CROP	.00576	.00620
2	VEGETABLES	.00624	.00632
3	LIVESTOCK	.02114	.02300
4	OTHER AGRI	.00185	.00203
5	FISHING	.00082	.00086
6	MEAT PROD	.02156	.02352
7	DAIRY PROD	.01480	.01584
8	CANNING	.00918	.00958
9	GRAIN MILL	.00428	.00435
10	BEVERAGES	.00750	.00748
11	OTHER FOOD	.00843	.00870
12	TEXTILES	.00017	.00018
13	APPAREL	.00286	.00239
14	MINING	.00179	.00132
15	FORESTRY	.00038	.00033
16	LOGGING	.00072	.00060
17	SAWMILLS	.00116	.00104
18	PLYWOOD	.00035	.00030
19	OTHER WOOD	.00060	.00049
20	FURNITURE	.00234	.00258
21	PULPMILLS	.00046	.00036
22	PAPER MILL	.00391	.00288
23	PAPBD MILL	.00486	.00394
24	PRINTING	.02832	.01308
25	INDUS CHEM	.00199	.00111
26	OTHER CHEM	.00172	.00079
27	PETROLEUM	.01704	.01606
28	GLASS	.00050	.00051
29	CEMENT	.00154	.00118
30	FERR METAL	.00046	.00029
31	NONFER MET	.00006	.00004
32	ALUMINUM	.00016	.00011
33	HEAVY METL	.00054	.00036
34	LIGHT METL	.00193	.00175
35	NONELC EQP	.00003	.00003
36	MACH TOOL	.00370	.00089
37	INDUS EQP	.00039	.00013
38	ELEC MACH	.00048	.00026
39	AEROSPACE	.00005	.00004
40	MOTOR VEH	.00112	.00124
41	SHIP BLDG	.00065	.00070
42	OTHER MFG	.00785	.00226
43	TRANS SERV	.03193	.02575
44	ELEC CO	.04290	.03075
45	GAS CO	.01389	.01016
46	OTH UTILS	.01206	.01174
47	COMMUNICAT	.06561	.03173
48	CONSTRUCTN	.01128	.00784
49	TRADE	.23398	.23760
50	FIN,INS,RE	.09058	.08006
51	SERVICES	1.22185	.18432
52	VAL ADDED	1.51190	1.67149

1972 WASHINGTON TOTAL PURCHASES TABLE

		1 FIELD CROP	2 VEGETABLES	3 LIVESTOCK	4 OTHER AGRI	5 FISHING	6 MEAT PROD	7 DAIRY PROD	8 CANNING	9 GRAIN MILL	10 BEVERAGES
1	FIELD CROP	18.7	5.4	73.9	.9	.0	.1	.0	.0	84.8	16.0
2	VEGETABLES	.6	3.1	3.6	.0	.1	.0	.3	116.1	.0	3.2
3	LIVESTOCK	.0	.0	56.0	.0	.0	185.0	122.2	1.1	.0	.0
4	OTHER AGRI	.0	1.0	.8	4.2	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.1	.0	.0	48.9	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.3	37.5	.0	2.0	4.7	.0
7	DAIRY PROD	.0	.0	.0	.0	.1	.3	35.6	1.8	.0	.0
8	CANNING	.0	.0	.0	.0	.2	.0	1.0	6.0	1.2	.0
9	GRAIN MILL	.0	.0	51.1	.0	.1	.2	.0	3.8	9.3	.0
10	BEVERAGES	.0	.0	.0	.0	.2	.0	.1	.0	.0	17.2
11	OTHER FOOD	.0	.0	3.6	.0	.3	1.5	2.2	8.0	2.2	8.4
12	TEXTILES	2.4	.1	.0	.0	.9	.3	.0	.0	.0	.0
13	APPAREL	2.0	.0	.0	.0	.0	.2	.0	.0	.5	.2
14	MINING	.3	.2	.0	.0	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	OTHER WOOD	.0	2.6	.0	.0	.0	.3	.0	.5	.0	.2
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	.3	.6	.0	.0	.0	.0	.0	.0	.0
23	PAPBD MILL	.2	2.4	.0	.0	.0	4.5	12.4	17.2	2.5	10.2
24	PRINTING	.0	.0	.0	.0	.0	1.2	.0	3.0	.0	.7
25	INDUS CHEM	33.0	13.4	8.1	3.6	.1	2.0	.4	.4	.2	.5
26	OTHER CHEM	.0	.0	2.4	.2	.0	.2	.1	.0	.5	.0
27	PETROLEUM	8.2	3.3	4.5	2.8	2.8	.5	1.0	.4	.1	.2
28	GLASS	.0	.0	.0	.0	.0	.3	.2	8.0	.0	21.0
29	CEMENT	.1	.2	.1	.0	.0	.1	.0	.0	.2	.0
30	FERR METAL	.9	.2	.4	.4	.0	.0	.0	.0	.0	.0
31	NONFER MET	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
32	ALUMINUM	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
33	HEAVY METL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
34	LIGHT METL	3.0	1.2	2.7	1.0	.1	2.0	.3	18.3	1.3	44.2
35	NONELC EQP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.0	.2	.4	.0	.5	.0	.2
37	INDUS EQP	.0	.0	.0	.0	.0	.4	.3	.6	.1	.2
38	ELEC MACH	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.2	.2	.0	.0	.2
41	SHIP BLDG	.0	.0	.0	.0	2.2	.0	.0	.0	.0	.0
42	OTHER MFG	1.2	2.5	2.5	.7	.2	.5	.5	1.0	.1	.7
43	TRANS SERV	5.0	3.8	8.0	.8	1.4	9.0	1.5	16.0	7.5	4.7
44	ELEC CO	2.0	1.2	1.5	.2	.1	.9	1.2	2.3	.6	.7
45	GAS CO	.0	.0	.0	.0	.0	.5	1.0	4.0	.0	.8
46	OTH UTILS	2.5	1.3	1.5	1.0	.0	.2	.1	.4	.0	.2
47	COMMUNICAT	1.4	2.0	1.4	.6	.1	.9	.7	1.3	.3	.4
48	CONSTRUCTN	5.0	3.0	2.5	.4	.0	.2	.2	.2	.0	.1
49	TRADE	19.2	19.8	15.2	3.3	3.5	7.0	7.0	19.8	8.0	8.7
50	FIN,INS,RE	6.2	3.3	2.7	.7	1.1	1.2	3.0	1.9	.6	2.1
51	SERVICES	18.9	6.8	5.1	1.9	.8	4.1	7.6	16.0	5.2	15.8
52	SUBTOTAL	130.3	77.1	248.2	22.9	15.0	261.9	199.1	299.5	129.9	156.8
53	VAL ADDED	252.3	290.9	100.9	33.9	23.2	55.2	45.4	181.3	43.0	125.6
54	IMPORT FOR	10.7	3.2	4.5	.9	1.5	10.5	.0	3.0	.0	.2
55	TOTAL	393.3	371.2	353.6	57.7	39.7	327.6	244.5	483.8	172.9	282.6

1972 WASHINGTON TOTAL PURCHASES TABLE

		11 OTHER FOOD	12 TEXTILES	13 APPAREL	14 MINING	15 FORESTRY	16 LOGGING	17 SAWMILLS	18 PLYWOOD	19 OTHER WOOD	20 FURNITURE
1	FIELD CROP	1.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	44.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	4.2	2.0	.5	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	1.2	.0	.0	.0	.8	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	1.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	2.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	1.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	10.9	.0	.0	.0	.0	.0	.0	.5	.0	.0
10	BEVERAGES	1.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	26.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	TEXTILES	.1	1.0	57.4	.1	.1	.0	.0	.0	.0	7.1
13	APPAREL	.0	.5	3.1	.2	.0	.0	.0	.0	.0	.0
14	MINING	.5	.0	.0	2.7	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	10.0	179.1	56.0	4.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.6	49.2	189.2	66.5	4.9	.0
17	SAWMILLS	.0	.0	.0	.3	.1	5.6	42.8	15.0	65.6	2.4
18	PLYWOOD	.0	.0	.0	.0	.0	3.6	6.0	37.5	13.4	.3
19	OTHER WOOD	.2	.0	.0	.0	.0	.1	12.9	1.0	10.2	.9
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0
22	PAPER MILL	.4	.0	2.6	.0	.0	.0	.0	.2	.1	1.5
23	PAPBD MILL	7.9	.0	.2	.3	.0	.1	1.7	1.2	.6	.3
24	PRINTING	1.2	.0	.0	.0	.2	.3	.0	.2	.1	.0
25	INDUS CHEM	3.6	.0	.0	1.8	1.5	.2	.7	.2	.4	.0
26	OTHER CHEM	.4	.3	.0	.0	.1	.3	1.3	11.2	1.4	.2
27	PETROLEUM	.4	.0	.1	.8	.4	3.3	1.9	.3	.3	.1
28	GLASS	1.2	.0	.0	.0	.0	.0	.0	.7	.8	.0
29	CEMENT	.0	.0	.0	1.9	.4	.0	.0	.0	.8	.0
30	FERR METAL	.0	.0	.0	1.7	.0	.2	.1	.6	.1	1.3
31	NONFER MET	.0	.0	.0	.2	.0	.0	.0	.0	.1	.0
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.0	.0	.8	.1
33	HEAVY METL	.0	.0	.0	.1	.3	.0	3.9	.3	.2	.0
34	LIGHT METL	1.3	.0	.2	.8	.3	7.7	8.4	2.0	9.0	4.6
35	NONELC EQP	.0	.0	.0	2.5	.0	.4	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.6	.0	4.9	.8	.3	.1	.1
37	INDUS EQP	.6	.0	.3	.4	.0	.0	3.4	1.9	1.0	.0
38	ELEC MACH	.0	.2	.2	.3	.0	.3	1.2	1.7	1.7	.0
39	AEROSPACE	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
40	MOTOR VEH	.4	.0	.0	.0	.0	2.1	.2	.0	1.0	.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
42	OTHER MFG	.3	.3	.0	1.0	.6	4.8	.0	.2	.8	2.0
43	TRANS SERV	3.5	.3	1.2	1.1	3.5	3.8	30.6	16.8	10.4	1.2
44	ELEC CO	.8	.2	.2	1.2	.3	.8	3.7	1.7	1.1	.2
45	GAS CO	4.3	.2	.0	.1	.0	.0	.6	1.3	.0	.0
46	OTH UTILS	.3	.0	.1	.2	.0	.0	.9	.1	.1	.0
47	COMMUNICAT	.8	.2	.6	.2	.7	.9	.9	.6	1.0	.3
48	CONSTRUCTN	.2	.0	.1	.4	2.0	1.2	2.1	.2	.3	.2
49	TRADE	7.8	.5	4.0	2.2	4.2	10.9	23.7	14.6	14.2	2.4
50	FIN,INS,RE	2.0	.0	1.5	1.2	.8	8.9	7.0	2.4	1.9	.5
51	SERVICES	6.8	.1	2.1	2.1	1.5	15.3	15.5	5.0	4.9	1.7
52	SUBTOTAL	139.2	5.8	74.4	24.4	28.7	304.0	415.6	188.4	147.3	28.4
53	VAL ADDED	83.3	9.6	62.7	47.6	231.2	253.7	371.6	147.2	101.1	30.8
54	IMPORT FOR	8.2	.1	2.2	4.4	.0	16.5	35.8	16.6	36.8	.1
55	TOTAL	230.7	15.5	139.3	76.4	259.9	574.2	823.0	352.2	285.2	59.3

1972 WASHINGTON TOTAL PURCHASES TABLE

		21 PULPMILLS	22 PAPER MILL	23 PAPBD MILL	24 PRINTING	25 INDUS CHEM	26 OTHER CHEM	27 PETROLEUM	28 GLASS	29 CEMENT	30 FERR METAL
1	FIELD CROP	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.6	1.5	.8	.0	.2	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	.0	.0	.0	.0	.7	.0	.0	.0	.0	.0
12	TEXTILES	.0	2.8	.0	.0	.1	.0	.0	.0	.4	.0
13	APPAREL	.0	.0	.0	.0	.7	.0	.0	.0	.0	.0
14	MINING	.1	.1	.3	.0	5.7	.0	1.9	1.9	15.4	1.4
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	35.2	21.7	16.7	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	30.5	23.6	24.4	.0	.0	.0	.0	.0	.0	.2
18	PLYWOOD	8.0	1.3	.0	.0	.0	.0	.0	.0	.0	.0
19	OTHER WOOD	.0	.1	.4	.0	.1	.1	.1	.1	.2	.1
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	1.0	26.9	28.7	.0	1.1	.0	.0	.0	.0	.0
22	PAPER MILL	.1	10.5	48.6	26.7	.4	.0	.0	.0	.0	.0
23	PAPBD MILL	.6	16.6	23.9	.4	2.3	.2	.5	2.0	1.2	.0
24	PRINTING	.0	.1	.1	6.4	.2	.2	.0	.0	.1	.1
25	INDUS CHEM	13.0	17.5	12.9	.3	22.2	8.8	14.3	.0	1.1	.3
26	OTHER CHEM	.2	2.0	13.9	1.3	1.1	3.8	.1	.0	.4	.2
27	PETROLEUM	9.6	6.6	.5	.1	.9	.1	15.1	.1	1.6	.3
28	GLASS	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
29	CEMENT	.0	1.6	.3	.0	.0	.0	.1	.0	33.3	1.1
30	FERR METAL	.1	.2	.1	.0	.2	.0	.2	.0	.0	2.4
31	NONFER MET	.2	.3	.0	.4	.7	.0	.1	.1	.0	1.1
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0
33	HEAVY METL	.3	.3	.0	.0	.0	.0	.7	.0	.0	.1
34	LIGHT METL	1.2	7.2	.6	.1	3.8	.5	2.2	.1	1.8	.1
35	NONELC EQP	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.0	.0	.0	.0	.1	.1	1.5
37	INDUS EQP	.3	1.4	1.3	.3	2.1	.0	.9	.0	.4	.3
38	ELEC MACH	.1	.0	.0	.0	2.1	.0	.3	.0	.0	2.6
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41	SHIP BLDG	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	.1	.1	1.1	.8	2.8	.4	.8	.2	.1	.1
43	TRANS SERV	8.3	14.2	15.6	6.0	5.8	.8	18.1	.5	10.6	3.8
44	ELEC CO	3.3	3.3	6.8	.5	4.1	.2	2.8	.3	2.8	2.5
45	GAS CO	8.5	6.3	4.5	.0	7.1	.3	9.6	.6	3.5	1.5
46	OTH UTILS	2.4	.4	1.3	.1	.4	.0	.8	.0	.2	.1
47	COMMUNICAT	.3	1.0	1.4	2.9	.8	.3	.6	.0	1.0	.4
48	CONSTRUCTN	.7	2.0	1.8	.4	1.6	.1	1.7	.1	1.0	.2
49	TRADE	4.5	9.2	15.6	6.2	5.2	1.1	5.0	.4	4.7	15.6
50	FIN.INS.RE	1.4	2.9	2.4	1.8	1.3	.3	5.5	.1	1.7	.8
51	SERVICES	5.1	7.2	12.2	10.4	16.1	1.8	5.0	.4	.7	3.0
52	SUBTOTAL	135.8	188.9	236.2	65.1	90.2	19.2	86.6	7.0	82.3	39.8
53	VAL ADDED	82.5	149.0	200.8	169.8	148.3	15.8	116.4	15.7	86.2	67.3
54	IMPORT FOR	7.5	7.8	9.0	10.5	.3	.0	385.0	.2	18.7	.1
55	TOTAL	225.8	345.7	446.0	241.4	238.8	35.0	588.0	22.9	187.2	107.2

1972 WASHINGTON TOTAL PURCHASES TABLE

		31 NONFER MET	32 ALUMINUM	33 HEAVY METL	34 LIGHT METL	35 NONELC EQP	36 MACH TOOL	37 INDUS EQP	38 ELEC MACH	39 AEROSPACE	40 MOTOR VEH
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.0	1.0	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
9	GRAIN MILL	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.9	.0
11	OTHER FOOD	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0
12	TEXTILES	.0	.0	.0	.0	.0	.7	.0	.0	.5	.7
13	APPAREL	.4	.0	.0	.0	.0	.0	.0	.0	.0	.2
14	MINING	2.3	43.5	.0	.1	.0	.0	.0	.0	.4	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.1	.0	.1	.0	.4	2.2
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.1	3.0
19	OTHER WOOD	.2	.6	.0	.2	.5	.0	.2	.2	.3	1.1
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	8.0	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	.0	.0	.0	.0	.0	.0	.0	1.2	.1
23	PAPBD MILL	.0	.5	.0	.7	.0	.0	.0	.5	3.1	.5
24	PRINTING	.0	.1	.0	.1	.2	.0	.1	.1	1.6	.9
25	INDUS CHEM	.7	83.3	.0	.6	.1	.1	.1	.1	1.4	1.8
26	OTHER CHEM	.2	3.3	.5	2.3	.2	7.0	.1	4.5	2.9	1.9
27	PETROLEUM	.8	37.5	.6	.2	.2	.1	.2	.0	2.1	.5
28	GLASS	.0	.0	2.3	.0	.0	.0	.0	.0	1.9	.5
29	CEMENT	.4	1.6	.0	.7	.1	.3	3.0	.0	1.4	.0
30	FERR METAL	.5	1.6	30.5	26.3	12.4	6.7	6.2	1.5	20.3	84.0
31	NONFER MET	2.8	17.3	.4	3.3	.0	3.2	.3	.1	5.8	1.1
32	ALUMINUM	2.2	176.7	7.1	4.1	.1	.1	1.7	1.1	8.5	4.7
33	HEAVY METL	.0	.2	8.8	.3	.1	3.0	11.9	.1	5.2	4.6
34	LIGHT METL	1.1	1.2	2.4	12.4	2.3	1.4	1.2	5.3	13.4	14.8
35	NONELC EQP	.0	.1	.0	.0	6.6	.0	.0	.0	2.8	55.3
36	MACH TOOL	.0	2.0	1.8	2.9	2.2	6.4	3.6	1.3	12.2	4.2
37	INDUS EQP	.1	1.4	1.8	.3	5.7	.0	14.7	1.2	70.2	7.3
38	ELEC MACH	.0	4.3	.0	.0	2.7	.1	8.4	23.7	107.8	4.5
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	4.5	535.9	.0
40	MOTOR VEH	.0	.0	.0	.0	.5	.0	.0	.0	1.7	11.5
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
42	OTHER MFG	.1	.0	3.0	.2	.7	.4	.4	1.5	17.6	5.7
43	TRANS SERV	3.3	27.1	2.2	2.6	.9	.7	1.0	.7	10.0	6.9
44	ELEC CO	.6	36.8	.6	.9	.4	.3	.4	.4	3.9	1.5
45	GAS CO	1.6	4.0	.2	.9	.2	.1	.1	.0	1.8	.4
46	OTH UTILS	.0	.4	.1	.2	.1	.0	.1	.1	1.2	.2
47	COMMUNICAT	.1	.9	2.3	1.1	.8	.9	1.6	.9	7.7	2.8
48	CONSTRUCTN	.0	1.0	.3	.1	.8	.0	.2	.2	.8	.1
49	TRADE	1.5	8.8	5.4	2.7	2.9	2.7	5.3	3.7	45.0	9.2
50	FIN,INS,RE	.1	6.1	1.4	.7	.6	.3	.8	.6	5.6	1.3
51	SERVICES	.8	7.3	4.0	3.0	2.1	1.6	3.2	2.9	66.7	3.0
52	SUBTOTAL	19.9	467.6	75.7	66.9	43.5	36.1	64.9	55.2	972.6	230.5
53	VAL ADDED	26.2	260.5	72.0	61.0	39.3	45.1	72.4	57.0	863.4	86.2
54	IMPORT FOR	.4	132.1	12.1	11.4	.4	.3	6.6	1.6	25.8	.7
55	TOTAL	46.5	860.2	159.8	139.3	83.2	81.5	143.9	113.8	1861.8	323.4

1972 WASHINGTON TOTAL PURCHASES TABLE

		41 SHIP BLDG	42 OTHER MFG	43 TRANS SERV	44 ELEC CO	45 GAS CO	46 OTH UTILS	47 COMMUNICAT	48 CONSTRUCTN	49 TRADE	50 FIN.INS.RE
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.4	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.1	.0	.0	.0	2.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.4	2.8	.7	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.0	.0	.6	.4	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.7	.1	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.1	.0	.2	.0	.0	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	1.1	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	.0	.1	1.2	1.0	.0	.0	.0	.0	.4	.0
12	TEXTILES	1.6	2.7	1.0	.2	.0	.0	.0	6.5	.0	.0
13	APPAREL	1.2	.1	.4	.0	.0	.0	.0	1.4	2.0	.1
14	MINING	.0	.0	.2	18.9	.0	.0	.0	24.0	.0	.0
15	FORESTRY	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
17	SAWMILLS	2.0	.4	.2	1.2	.0	.0	.0	48.0	1.2	.0
18	PLYWOOD	1.2	.0	.0	.0	.0	.0	.0	34.0	2.2	.0
19	OTHER WOOD	.2	.9	.2	.0	.0	.0	.0	50.0	.4	.0
20	FURNITURE	2.7	.0	.0	.0	.0	.0	.2	16.0	4.8	1.3
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.2	.4	.6	.1	.0	.0	1.9	.0	25.0	3.2
23	PAPBD MILL	.1	1.6	.2	1.5	.1	.1	.3	1.5	17.2	7.5
24	PRINTING	.2	.1	1.5	3.1	.4	.3	12.5	.1	93.0	39.8
25	INDUS CHEM	3.8	1.0	.7	.9	.0	.5	.0	1.0	3.8	.0
26	OTHER CHEM	5.6	16.9	.3	.4	.0	.0	.1	19.8	9.0	.5
27	PETROLEUM	1.2	.2	56.9	.8	.4	1.3	.9	50.7	16.4	3.2
28	GLASS	1.7	.2	.1	.3	.0	.0	.0	5.1	2.0	.0
29	CEMENT	.8	.7	.3	.1	.0	.0	.1	160.0	.2	.0
30	FERR METAL	8.4	.4	7.1	.1	.0	.0	.1	50.8	.0	.0
31	NONFER MET	2.1	.1	.4	.2	.0	.0	1.1	34.5	.0	.0
32	ALUMINUM	.9	1.8	.0	.7	.0	.0	.0	25.8	.0	.0
33	HEAVY METL	4.7	.0	.2	.4	.0	.0	.1	150.9	3.0	.0
34	LIGHT METL	13.1	4.2	4.4	10.6	2.8	1.0	1.3	47.5	5.0	.0
35	NONELC EQP	9.9	.0	1.6	.4	.0	.0	.0	10.3	.0	.0
36	MACH TOOL	.6	.9	.7	.1	.0	.0	.0	1.2	1.3	.0
37	INDUS EQP	7.1	.2	.5	.6	.0	.0	.1	33.0	.0	.0
38	ELEC MACH	12.3	8.3	3.1	5.7	.0	.0	17.0	73.7	4.4	.8
39	AEROSPACE	.0	.4	2.2	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.1	.0	3.9	.3	.0	.0	.2	.9	1.5	.0
41	SHIP BLDG	5.0	.0	5.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	1.8	16.9	3.6	2.8	1.6	.0	1.4	20.0	10.0	6.5
43	TRANS SERV	5.0	9.1	129.3	5.0	.5	.7	4.2	59.4	45.0	13.8
44	ELEC CO	.7	.6	6.7	138.0	.5	2.2	1.7	2.0	44.5	14.9
45	GAS CO	.1	.1	.4	.4	76.2	.2	.1	.1	6.0	1.5
46	OTH UTILS	.2	.1	.4	.2	.1	12.4	.5	.8	7.0	3.2
47	COMMUNICAT	1.0	1.3	11.3	3.0	.5	1.1	1.9	11.0	46.5	30.1
48	CONSTRUCTN	.7	.3	6.0	.5	.1	1.6	2.1	.5	15.6	19.8
49	TRADE	12.9	9.1	31.0	3.9	1.0	1.2	4.0	185.4	75.0	17.3
50	FIN.INS.RE	2.4	1.4	33.0	5.0	1.7	2.3	4.8	23.3	70.0	129.8
51	SERVICES	8.7	8.2	36.2	19.6	1.6	3.7	31.9	142.1	255.0	127.2
52	SUBTOTAL	120.3	89.1	356.6	228.0	87.5	28.6	88.5	1293.4	767.4	420.5
53	VAL ADDED	225.8	124.7	922.3	350.9	76.4	135.4	456.2	1022.4	3500.0	1026.4
54	IMPORT FOR	3.2	7.2	16.7	1.0	56.1	.0	.0	8.2	32.6	5.0
55	TOTAL	349.3	221.0	1295.6	579.9	220.0	164.0	544.7	2324.0	4300.0	1451.9

1972 WASHINGTON TOTAL PURCHASES TABLE

		51 SERVICES	52 TOTAL
1	FIELD CROP	.0	201.6
2	VEGETABLES	1.2	172.5
3	LIVESTOCK	.0	371.0
4	OTHER AGRI	.0	10.1
5	FISHING	.0	49.0
6	MEAT PROD	1.0	51.6
7	DAIRY PROD	4.3	45.5
8	CANNING	1.6	12.3
9	GRAIN MILL	1.8	81.3
10	BEVERAGES	3.3	24.0
11	OTHER FOOD	3.1	59.2
12	TEXTILES	1.4	88.1
13	APPAREL	3.4	16.6
14	MINING	.2	120.1
15	FORESTRY	.0	249.2
16	LOGGING	.0	384.2
17	SAWMILLS	.0	266.3
18	PLYWOOD	.0	110.6
19	OTHER WOOD	.4	85.5
20	FURNITURE	.1	34.1
21	PULPMILLS	.0	57.9
22	PAPER MILL	.9	125.6
23	PAPBD MILL	3.5	148.3
24	PRINTING	58.1	226.3
25	INDUS CHEM	9.5	270.1
26	OTHER CHEM	22.2	139.3
27	PETROLEUM	7.5	248.0
28	GLASS	2.7	49.3
29	CEMENT	3.3	213.2
30	FERR METAL	.0	266.0
31	NONFER MET	.0	76.0
32	ALUMINUM	.0	236.7
33	HEAVY METL	9.0	208.7
34	LIGHT METL	.9	272.3
35	NONELC EQP	3.6	93.6
36	MACH TOOL	7.0	58.2
37	INDUS EQP	1.1	161.5
38	ELEC MACH	15.4	303.1
39	AEROSPACE	.0	543.3
40	MOTOR VEH	15.8	40.7
41	SHIP BLDG	.0	12.5
42	OTHER MFG	29.0	149.6
43	TRANS SERV	28.4	569.6
44	ELEC CO	28.0	333.1
45	GAS CO	7.4	156.5
46	OTH UTILS	3.1	45.0
47	COMMUNICAT	93.0	243.8
48	CONSTRUCTN	9.3	87.9
49	TRADE	61.7	753.2
50	FIN,INS,RE	53.2	412.2
51	SERVICES	151.1	1079.0
52	SUBTOTAL	646.5	10013.3
53	VAL ADDED	2093.2	15049.1
54	IMPORT FOR	10.0	931.7
55	TOTAL	2749.7	25994.1

1972 WASHINGTON IMPORTS TABLE

		1 FIELD CROP	2 VEGETABLES	3 LIVESTOCK	4 OTHER AGRI	5 FISHING	6 MEAT PROD	7 DAIRY PROD	8 CANNING	9 GRAIN MILL	10 BEVERAGES
1	FIELD CROP	3.5	1.7	2.6	.0	.0	.1	.0	.0	55.8	11.1
2	VEGETABLES	.0	.0	1.1	.0	.1	.0	.1	16.1	.0	.5
3	LIVESTOCK	.0	.0	22.1	.0	.0	77.9	15.0	1.0	.0	.0
4	OTHER AGRI	.0	.0	.2	.7	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	13.8	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.1	29.6	.0	1.4	.0	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.5	.1	.0	.0
8	CANNING	.0	.0	.0	.0	.1	.0	.0	3.4	.0	.0
9	GRAIN MILL	.0	.0	16.3	.0	.1	.0	.0	.3	1.8	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.0	4.5
11	OTHER FOOD	.0	.0	.0	.0	.1	.0	.7	1.3	.2	2.4
12	TEXTILES	2.3	.0	.0	.0	.4	.3	.0	.0	.0	.0
13	APPAREL	.0	.0	.0	.0	.0	.2	.0	.0	.2	.0
14	MINING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	OTHER WOOD	.0	1.6	.0	.0	.0	.1	.0	.0	.0	.0
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
23	PAPBD MILL	.0	1.3	.0	.0	.0	.7	4.3	7.0	.4	3.2
24	PRINTING	.0	.0	.0	.0	.0	.9	.0	2.4	.0	.2
25	INDUS CHEM	19.7	3.2	5.6	2.3	.0	1.7	.2	.2	.2	.4
26	OTHER CHEM	.0	.0	1.6	.1	.0	.0	.0	.0	.5	.0
27	PETROLEUM	4.9	2.0	2.7	1.7	.2	.2	.3	.1	.0	.1
28	GLASS	.0	.0	.0	.0	.0	.0	.2	3.0	.0	6.9
29	CEMENT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30	FERR METAL	.5	.2	.3	.3	.0	.0	.0	.0	.0	.0
31	NONFER MET	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33	HEAVY METL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
34	LIGHT METL	2.6	.9	2.4	1.6	.1	1.6	.3	1.5	.0	5.9
35	NONELC EQP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.0	.1	.0	.0	.0	.0	.1
37	INDUS EQP	.0	.0	.0	.0	.0	.2	.3	.0	.1	.2
38	ELEC MACH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.2	.2	.0	.0	.1
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	1.2	2.4	2.5	.7	.1	.4	.2	.6	.1	.4
43	TRANS SERV	1.0	.8	1.0	.3	.1	2.4	.3	1.6	4.1	.6
44	ELEC CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
45	GAS CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
46	OTH UTILS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
47	COMMUNICAT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
48	CONSTRUCTN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49	TRADE	4.4	4.3	2.8	1.0	.3	1.9	1.0	2.0	3.9	.5
50	FIN,INS,RE	2.6	1.4	1.0	.4	.4	.5	1.3	.7	.2	.8
51	SERVICES	.6	.1	.3	.0	.0	.4	.9	5.2	.3	12.1
52	SUBTOTAL	43.3	19.9	62.8	8.5	2.2	119.3	25.8	61.7	67.8	50.0
53	IMPORT FOR	10.7	3.2	4.5	.9	1.5	10.5	.0	3.0	.0	.2
54	TOTAL	54.0	23.1	67.3	9.4	3.7	129.8	25.8	64.7	67.8	50.2

1972 WASHINGTON IMPORTS TABLE

		11 OTHER FOOD	12 TEXTILES	13 APPAREL	14 MINING	15 FORESTRY	16 LOGGING	17 SAWMILLS	18 PLYWOOD	19 OTHER WOOD	20 FURNITURE
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	7.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	1.5	1.9	.4	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	1.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	1.4	.0	.0	.0	.0	.0	.0	.2	.0	.0
10	BEVERAGES	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	17.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	TEXTILES	.1	1.0	57.3	.1	.0	.0	.0	.0	.0	6.9
13	APPAREL	.0	.5	2.6	.2	.0	.0	.0	.0	.0	.0
14	MINING	.0	.0	.0	1.7	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	1.4	2.2	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.0	.0	8.7	3.0	31.6	.1
18	PLYWOOD	.0	.0	.0	.0	.0	.0	1.0	25.9	4.0	.1
19	OTHER WOOD	.1	.0	.0	.0	.0	.0	1.7	.7	5.8	.1
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.7
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	.0	.8	.0	.0	.0	.0	.0	.0	.2
23	PAPBD MILL	3.6	.0	.1	.1	.0	.0	.4	.3	.1	.0
24	PRINTING	.7	.0	.0	.0	.0	.2	.0	.0	.0	.0
25	INDUS CHEM	2.8	.0	.0	1.5	.8	.0	.7	.0	.4	.0
26	OTHER CHEM	.4	.3	.0	.0	.0	.1	.6	8.1	1.2	.0
27	PETROLEUM	.1	.0	.0	.3	.1	1.1	.6	.1	.1	.0
28	GLASS	.8	.0	.0	.0	.0	.0	.0	.7	.8	.0
29	CEMENT	.0	.0	.0	.4	.0	.0	.0	.0	.8	.0
30	FERR METAL	.0	.0	.0	1.5	.0	.0	.0	.5	.0	1.3
31	NONFER MET	.0	.0	.0	.2	.0	.0	.0	.0	.1	.0
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0
33	HEAVY METL	.0	.0	.0	.1	.0	.0	3.1	.2	.1	.0
34	LIGHT METL	.7	.0	.2	.7	.3	6.4	8.0	1.9	8.4	4.5
35	NONELC EQP	.0	.0	.0	2.5	.0	.2	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.3	.0	2.4	.0	.0	.0	.0
37	INDUS EQP	.6	.0	.2	.4	.0	.0	2.5	1.6	.2	.0
38	ELEC MACH	.0	.2	.2	.3	.0	.3	1.0	1.6	1.5	.0
39	AEROSPACE	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
40	MOTOR VEH	.4	.0	.0	.0	.0	2.1	.2	.0	1.0	.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	.1	.3	.0	.8	.5	4.6	.0	.1	.3	.3
43	TRANS SERV	1.7	.2	1.0	.6	.6	.2	1.4	2.6	2.6	.8
44	ELEC CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
45	GAS CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
46	OTH UTILS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
47	COMMUNICAT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
48	CONSTRUCTN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49	TRADE	2.2	.3	2.3	1.2	.7	.5	1.2	2.2	3.5	.8
50	FIN.INS.RE	.6	.0	1.0	.5	.3	4.4	2.5	.7	.6	.2
51	SERVICES	1.5	.0	.6	.5	.3	.6	1.5	.4	.4	.0
52	SUBTOTAL	46.2	4.7	66.7	13.9	4.5	23.1	36.5	53.0	63.8	16.0
53	IMPORT FOR	8.2	.1	2.2	4.4	.0	16.5	35.8	16.6	36.8	.1
54	TOTAL	54.4	4.8	68.9	18.3	4.5	39.6	72.3	69.6	100.6	16.1

1972 WASHINGTON IMPORTS TABLE

		21 PULPMILLS	22 PAPER MILL	23 PAPBD MILL	24 PRINTING	25 INDUS CHEM	26 OTHER CHEM	27 PETROLEUM	28 GLASS	29 CEMENT	30 FERR METAL
1	FIELD CROP	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.6	1.5	.8	.0	.2	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
12	TEXTILES	.0	2.8	.0	.0	.1	.0	.0	.0	.4	.0
13	APPAREL	.0	.0	.0	.0	.7	.0	.0	.0	.0	.0
14	MINING	.0	.0	.1	.0	5.5	.0	1.8	.6	.7	1.4
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	21.3	8.2	4.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	5.0	15.4	16.4	.0	.0	.0	.0	.0	.0	.0
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	OTHER WOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	.0	12.2	2.4	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	9.6	13.8	15.1	.3	.0	.0	.0	.0	.0
23	PAPBD MILL	.0	8.8	6.5	.2	.6	.0	.2	.7	.0	.0
24	PRINTING	.0	.0	.0	3.3	.1	.0	.0	.0	.0	.0
25	INDUS CHEM	2.9	10.0	11.4	.3	12.8	8.1	12.9	.0	1.1	.0
26	OTHER CHEM	.2	1.8	12.3	1.1	.4	2.1	.0	.0	.2	.1
27	PETROLEUM	1.2	1.1	.1	.0	.3	.0	11.2	.0	.1	.2
28	GLASS	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0
29	CEMENT	.0	1.6	.3	.0	.0	.0	.0	.0	4.4	.9
30	FERR METAL	.0	.0	.0	.0	.2	.0	.0	.0	.0	.9
31	NONFER MET	.0	.0	.0	.4	.7	.0	.0	.1	.0	1.0
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
33	HEAVY METL	.1	.0	.0	.0	.0	.0	.4	.0	.0	.0
34	LIGHT METL	.8	6.8	.6	.1	2.6	.0	2.1	.1	1.6	.0
35	NONELC EQP	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.0	.0	.0	.0	.1	.0	.1
37	INDUS EQP	.1	.5	1.0	.3	1.8	.0	.6	.0	.3	.3
38	ELEC MACH	.1	.0	.0	.0	1.8	.0	.3	.0	.0	2.6
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41	SHIP BLDG	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	.1	.1	1.0	.8	2.4	.3	.7	.2	.1	.0
43	TRANS SERV	1.4	3.5	3.3	2.0	2.3	.3	13.6	.1	1.6	2.1
44	ELEC CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
45	GAS CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
46	OTH UTILS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
47	COMMUNICAT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
48	CONSTRUCTN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49	TRADE	.7	2.2	3.3	2.5	2.0	.4	3.2	.1	.9	10.8
50	FIN,INS,RE	.6	1.1	.8	.7	.5	.1	.9	.0	.6	.3
51	SERVICES	.4	.9	2.4	1.7	3.9	.3	2.3	.1	.0	.5
52	SUBTOTAL	35.6	88.1	80.5	28.5	39.6	11.8	50.3	2.1	12.0	21.2
53	IMPORT FOR	7.5	7.8	9.0	16.5	.3	.0	385.0	.2	18.7	.1
54	TOTAL	43.1	95.9	89.5	45.0	39.9	11.8	435.3	2.3	30.7	21.3

1972 WASHINGTON IMPORTS TABLE

		31 NONFER MET	32 ALUMINUM	33 HEAVY METL	34 LIGHT METL	35 NONELC EQP	36 MACH TOOL	37 INDUS EQP	38 ELEC MACH	39 AEROSPACE	40 MOTOR VEH
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.0	.9	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
9	GRAIN MILL	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.8	.0
11	OTHER FOOD	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0
12	TEXTILES	.0	.0	.0	.0	.0	.7	.0	.0	.5	.7
13	APPAREL	.1	.0	.0	.0	.0	.0	.0	.0	.0	.2
14	MINING	1.8	43.5	.0	.1	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.3
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.1	2.1
19	OTHER WOOD	.1	.3	.0	.0	.4	.0	.0	.0	.0	.9
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	7.8	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	.0	.0	.0	.0	.0	.0	.0	1.1	.0
23	PAPBD MILL	.0	.3	.0	.3	.0	.0	.0	.1	.1	.3
24	PRINTING	.0	.0	.0	.1	.0	.0	.0	.0	1.3	.7
25	INDUS CHEM	.6	83.1	.0	.2	.0	.0	.0	.0	1.3	1.4
26	OTHER CHEM	.1	2.9	.2	1.9	.0	7.0	.0	4.3	1.9	1.7
27	PETROLEUM	.4	34.5	.4	.1	.1	.0	.1	.0	.3	.2
28	GLASS	.0	.0	2.3	.0	.0	.0	.0	.0	1.9	.5
29	CEMENT	.3	1.3	.0	.4	.0	.0	2.9	.0	1.2	.0
30	FERR METAL	.2	1.1	19.5	23.2	8.2	4.0	3.1	1.2	19.6	75.1
31	NONFER MET	2.7	15.5	.0	2.7	.0	3.2	.2	.1	5.8	.7
32	ALUMINUM	1.1	41.3	.7	2.0	.1	.0	.2	.5	8.1	3.7
33	HEAVY METL	.0	.0	3.1	.0	.0	2.3	10.9	.0	3.2	3.9
34	LIGHT METL	1.0	.8	.8	11.0	1.7	1.3	.7	4.4	10.9	13.8
35	NONELC EQP	.0	.1	.0	.0	5.7	.0	.0	.0	2.8	55.3
36	MACH TOOL	.0	.1	.1	.0	.2	2.2	.1	.0	6.2	3.2
37	INDUS EQP	.0	.6	1.4	.3	5.5	.0	10.7	.7	68.6	7.2
38	ELEC MACH	.0	3.8	.0	.0	2.3	.1	7.6	22.2	105.8	4.5
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	2.0	519.9	.0
40	MOTOR VEH	.0	.0	.0	.0	.1	.0	.0	.0	1.7	9.5
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	.0	.0	3.0	.0	.5	.0	.0	.0	14.1	5.3
43	TRANS SERV	1.7	14.6	.8	1.7	.5	.3	.6	.4	9.5	6.3
44	ELEC CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
45	GAS CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
46	OTH UTILS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
47	COMMUNICAT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
48	CONSTRUCTN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49	TRADE	.8	3.1	2.5	1.3	1.6	1.2	2.1	1.6	40.8	6.0
50	FIN,INS,RE	.1	2.9	.5	.2	.2	.0	.2	.2	2.1	.6
51	SERVICES	.1	3.1	1.0	.3	.0	.1	.7	1.3	10.6	.3
52	SUBTOTAL	11.1	252.9	36.3	45.8	27.1	22.4	40.1	39.0	850.0	205.4
53	IMPORT FOR	.4	132.1	12.1	11.4	.4	.3	6.6	1.6	25.8	.7
54	TOTAL	11.5	385.0	48.4	57.2	27.5	22.7	46.7	40.6	875.8	206.1

1972 WASHINGTON IMPORTS TABLE

		41 SHIP BLDG	42 OTHER MFG	43 TRANS SERV	44 ELEC CO	45 GAS CO	46 OTH UTILS	47 COMMUNICAT	48 CONSTRUCTN	49 TRADE	50 FIN.INS.RE
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.3	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	1.4	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	.6	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
12	TEXTILES	1.5	2.7	.9	.1	.0	.0	.0	6.5	.0	.0
13	APPAREL	1.0	.1	.3	.0	.0	.0	.0	1.3	1.5	.0
14	MINING	.0	.0	.0	.9	.0	.0	.0	2.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.2	.2	.0	.2	.0	.0	.0	3.0	.0	.0
18	PLYWOOD	.3	.0	.0	.0	.0	.0	.0	4.1	1.4	.0
19	OTHER WOOD	.1	.6	.0	.0	.0	.0	.0	19.8	.0	.0
20	FURNITURE	1.8	.0	.0	.0	.0	.0	.1	13.7	4.4	1.2
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.1	.0	.3	.0	.0	.0	.3	.0	8.8	2.2
23	PAPBD MILL	.0	1.2	.0	.1	.0	.0	.1	.8	12.7	2.0
24	PRINTING	.1	.0	.7	1.9	.1	.0	9.9	.0	19.0	10.7
25	INDUS CHEM	3.2	.9	.5	.9	.0	.3	.0	.7	2.7	.0
26	OTHER CHEM	5.1	15.0	.3	.2	.0	.0	.0	16.5	6.5	.3
27	PETROLEUM	.2	.0	18.5	.2	.2	.3	.3	12.8	5.0	1.1
28	GLASS	1.7	.2	.1	.3	.0	.0	.0	5.1	2.0	.0
29	CEMENT	.7	.4	.2	.0	.0	.0	.0	27.8	.0	.0
30	FERR METAL	7.7	.4	7.0	.0	.0	.0	.0	20.8	.0	.0
31	NONFER MET	1.4	.0	.4	.1	.0	.0	1.0	30.7	.0	.0
32	ALUMINUM	.8	1.4	.0	.7	.0	.0	.0	19.0	.0	.0
33	HEAVY METL	3.7	.0	.2	.3	.0	.0	.0	83.9	2.3	.0
34	LIGHT METL	11.8	2.0	4.3	9.2	2.7	1.0	1.3	43.0	4.0	.0
35	NONELC EQP	9.1	.0	1.6	.3	.0	.0	.0	10.2	.0	.0
36	MACH TOOL	.1	.0	.2	.0	.0	.0	.0	.2	.3	.0
37	INDUS EQP	7.0	.0	.5	.2	.0	.0	.0	32.6	.0	.0
38	ELEC MACH	11.8	8.1	3.1	5.4	.0	.0	14.4	68.8	4.3	.8
39	AEROSPACE	.0	.4	.7	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.1	.0	3.7	.3	.0	.0	.2	.6	1.5	.0
41	SHIP BLDG	1.5	.0	3.3	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	1.3	12.0	3.5	2.7	1.5	.0	1.1	12.0	5.7	4.4
43	TRANS SERV	3.1	6.6	33.3	1.9	.2	.3	1.2	19.4	15.0	4.3
44	ELEC CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
45	GAS CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
46	OTH UTILS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
47	COMMUNICAT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
48	CONSTRUCTN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49	TRADE	5.1	5.5	16.0	2.0	.5	.5	1.3	66.7	35.0	4.1
50	FIN.INS.RE	1.5	.5	17.2	2.9	.9	1.0	1.5	7.8	20.0	23.3
51	SERVICES	4.3	4.4	7.1	1.0	.1	.7	11.8	65.4	50.0	14.5
52	SUBTOTAL	86.3	62.6	126.9	32.4	6.2	4.1	44.5	595.5	202.1	68.9
53	IMPORT FOR	3.2	7.2	16.7	1.0	56.1	.0	.0	8.2	32.6	5.0
54	TOTAL	89.5	69.8	143.6	33.4	62.3	4.1	44.5	603.7	234.7	73.9

1972 WASHINGTON INPUTS TABLE

		51 SERVICES	52 TOTAL
1	FIELD CROP	.6	75.0
2	VEGETABLES	.4	25.1
3	LIVESTOCK	.6	119.8
4	OTHER AGRI	.0	2.3
5	FISHING	.0	13.8
6	MEAT PROD	.4	34.1
7	DAIRY PROD	3.3	4.6
8	CANNING	.3	4.6
9	GRAIN MILL	1.1	24.5
10	BEVERAGES	1.5	7.6
11	OTHER FOOD	1.9	24.7
12	TEXTILES	1.4	66.7
13	APPAREL	1.6	10.5
14	MINING	.1	60.2
15	FORESTRY	.0	.5
16	LOGGING	.0	37.1
17	SAWMILLS	.0	65.1
18	PLYWOOD	.0	39.0
19	OTHER WOOD	.2	32.5
20	FURNITURE	.1	29.2
21	PULPMILLS	.0	14.5
22	PAPER MILL	.4	53.3
23	PAPBD MILL	1.0	57.5
24	PRINTING	18.1	70.4
25	INDUS CHEM	7.3	202.3
26	OTHER CHEM	20.0	115.0
27	PETROLEUM	2.4	105.9
28	GLASS	2.7	29.4
29	CEMENT	3.0	46.6
30	FERR METAL	.0	196.8
31	NONFER MET	.0	67.0
32	ALUMINUM	.0	80.0
33	HEAVY METL	8.9	126.7
34	LIGHT METL	.7	168.5
35	NONELC EQP	3.6	91.5
36	MACH TOOL	.0	16.0
37	INDUS EQP	.5	147.0
38	ELEC MACH	15.3	288.2
39	AEROSPACE	.0	523.3
40	MOTOR VEH	15.6	37.7
41	SHIP BLDG	.0	4.9
42	OTHER MFG	14.5	102.9
43	TRANS SERV	10.7	186.5
44	ELEC CO	.0	.0
45	GAS CO	.0	.0
46	OTH UTILS	.0	.0
47	COMMUNICAT	.0	.0
48	CONSTRUCTN	.0	.0
49	TRADE	16.2	277.0
50	FIN.INS.RE	11.6	120.9
51	SERVICES	22.0	237.6
52	SUBTOTAL	187.0	4106.0
53	IMPORT FOR	10.0	931.7
54	TOTAL	197.0	5037.7

1972 WASHINGTON TOTAL SALES TABLE

		1 FIELD CROP	2 VEGETABLES	3 LIVESTOCK	4 OTHER AGRI	5 FISHING	6 MEAT PROD	7 DAIRY PROD	8 CANNING	9 GRAIN MILL	10 BEVERAGES
1	FIELD CROP	32.2	3.7	74.8	.9	.0	.0	.0	.0	60.3	5.0
2	VEGETABLES	.0	3.1	2.5	.0	.0	.0	.2	172.3	.0	12.7
3	LIVESTOCK	.0	.0	38.8	.0	.0	122.0	114.3	.1	.0	.0
4	OTHER AGRI	.0	1.2	.6	3.9	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.1	.0	.0	37.6	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.2	7.9	.0	.7	5.0	.0
7	DAIRY PROD	.0	.0	.0	.0	.1	.3	40.3	1.9	.0	.0
8	CANNING	.0	.0	.0	.0	.1	.0	1.0	6.7	1.2	.0
9	GRAIN MILL	.0	.0	42.0	.0	.0	.2	.0	3.5	8.0	.0
10	BEVERAGES	.0	.0	.0	.0	.2	.0	.2	.0	.0	16.8
11	OTHER FOOD	.0	.0	3.6	.0	.2	1.7	4.0	10.0	2.0	9.0
12	TEXTILES	.2	.2	.0	.0	.7	.0	.0	.0	.0	.0
13	APPAREL	3.0	.0	.0	.0	.0	.0	.0	.0	1.1	.5
14	MINING	.4	.2	.0	.0	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	OTHER WOOD	.2	1.6	.1	.1	2.0	.3	.0	1.5	.0	.9
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	1.7	.3	.0	.0	.0	.0	.0	.0	.0
23	PAPBD MILL	1.2	10.9	.0	.0	.0	12.0	10.1	21.4	9.4	10.7
24	PRINTING	.0	.0	.0	.0	.0	.3	.0	.6	.0	.5
25	INDUS CHEM	15.7	11.9	2.6	2.1	.1	.6	.3	1.1	.0	.5
26	OTHER CHEM	.0	.0	.8	.2	.0	.2	.1	.0	.0	.0
27	PETROLEUM	3.3	1.3	1.8	1.1	2.6	.3	.7	.3	.1	.1
28	GLASS	.0	.0	.0	.0	.0	.3	.0	5.7	.0	15.3
29	CEMENT	.1	.2	.1	.0	.0	.1	.0	.0	.2	.0
30	FERR METAL	.4	.0	.1	.1	.0	.0	.0	.0	.0	.0
31	NONFER MET	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
32	ALUMINUM	1.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
33	HEAVY METL	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0
34	LIGHT METL	2.1	1.4	1.3	.0	.0	2.9	.0	16.8	1.3	38.3
35	NONELC EQP	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.0	.1	.5	.0	.6	.0	.1
37	INDUS EQP	.0	.0	.0	.0	.0	.2	.0	1.8	.0	.0
38	ELEC MACH	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3
41	SHIP BLDG	.0	.0	.0	.0	4.1	.0	.0	.1	.0	.0
42	OTHER MFG	.0	.4	.1	.0	.1	.2	.4	2.0	.1	1.2
43	TRANS SERV	4.0	3.0	7.0	.5	1.3	6.6	1.2	14.4	3.4	4.1
44	ELEC CO	2.0	1.2	1.5	.2	.1	.9	1.2	2.3	.6	.7
45	GAS CO	.0	.0	.0	.0	.0	.5	1.0	4.0	.0	.8
46	OTH UTILS	2.5	1.3	1.5	1.0	.0	.2	.1	.4	.0	.2
47	COMMUNICAT	1.4	2.0	1.4	.0	.1	.9	.7	1.3	.3	.4
48	CONSTRUCTN	5.0	3.0	2.5	.4	.0	.2	.2	.2	.0	.1
49	TRADE	14.8	15.5	12.4	2.3	3.2	5.1	6.0	17.8	4.1	8.2
50	FIN,INS,RE	3.6	1.9	1.7	.3	.7	.7	1.7	1.2	.4	1.3
51	SERVICES	18.3	6.7	4.8	1.9	.8	3.7	6.7	10.8	4.9	3.7
52	TOTAL	111.7	72.4	202.3	15.8	17.1	169.0	190.4	337.3	102.4	131.4

1972 WASHINGTON TOTAL SALES TABLE

		11 OTHER FOOD	12 TEXTILES	13 APPAREL	14 MINING	15 FORESTRY	16 LOGGING	17 SAWMILLS	18 PLYWOOD	19 OTHER WOOD	20 FURNITURE
1	FIELD CROP	1.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	37.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	2.7	.1	.1	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.1	.0	.6	.0	.8	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	2.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	3.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	57.6	.0	.0	.0	.0	.0	.0	.3	.0	.0
10	BEVERAGES	1.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	14.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	TEXTILES	.0	.7	8.4	.0	.2	.0	.0	.0	.0	.2
13	APPAREL	.0	.0	.6	.0	.0	.0	.0	.0	.0	.0
14	MINING	.6	.0	.0	2.3	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	10.4	179.1	56.0	4.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.6	49.2	192.4	66.0	4.9	.0
17	SAWMILLS	.0	.0	.0	.3	.1	5.6	37.0	14.0	90.1	28.7
18	PLYWOOD	.0	.0	.0	.0	.0	5.2	6.3	13.6	48.1	13.5
19	OTHER WOOD	1.2	.0	.0	.4	.0	.1	12.5	.5	16.2	2.9
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0
22	PAPER MILL	.4	.0	1.8	.0	.0	.0	.0	.2	.1	1.3
23	PAPBD MILL	20.0	.0	.3	.2	.0	.1	1.4	.9	.5	.3
24	PRINTING	.5	.0	.0	.0	.2	.2	.0	.2	.1	.0
25	INDUS CHEM	1.8	.0	.0	.3	2.9	1.0	.0	.3	.0	.0
26	OTHER CHEM	.0	.0	.0	.0	.1	.3	.7	3.5	.2	.3
27	PETROLEUM	.3	.0	.1	.5	.3	2.2	1.3	.2	.2	.1
28	GLASS	.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	CEMENT	.0	.0	.0	1.5	.4	.0	.0	.0	.0	.0
30	FERR METAL	.0	.0	.0	.3	.1	.5	.2	.1	.2	.0
31	NONFER MET	.0	.0	.0	18.1	.0	.0	.0	.0	.0	.0
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.0	.0	.5	.1
33	HEAVY METL	.0	.0	.0	2.0	.3	.0	.8	.1	.1	.0
34	LIGHT METL	.6	.0	.0	3.6	.0	2.9	1.1	.4	4.3	.1
35	NONELC EQP	.0	.0	.0	.3	.0	.3	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.4	.0	3.4	1.1	.6	.1	.1
37	INDUS EQP	1.5	.1	.1	.0	.0	.0	.9	2.1	1.2	.0
38	ELEC MACH	.0	.0	.0	.0	.0	.0	.2	.1	.2	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
42	OTHER MFG	2.0	.0	.0	.2	.1	.2	.1	.2	.6	4.5
43	TRANS SERV	1.8	.1	.2	.5	2.9	3.6	29.2	14.2	7.8	.4
44	ELEC CO	.8	.2	.2	1.2	.3	.8	3.7	1.7	1.1	.2
45	GAS CO	4.3	.2	.0	.1	.0	.0	.6	1.3	.0	.0
46	OTH UTILS	.3	.0	.1	.2	.0	.0	.9	.1	.1	.0
47	COMMUNICAT	.8	.2	.6	.2	.7	.9	.9	.6	1.0	.3
48	CONSTRUCTN	.2	.0	.1	.4	2.0	1.2	2.1	.2	.3	.2
49	TRADE	5.6	.2	1.7	1.0	3.5	10.4	22.5	12.4	10.7	1.6
50	FIN.INS.RE	1.4	.0	.5	.7	.5	4.5	4.5	1.7	1.3	.3
51	SERVICES	5.3	.1	1.5	1.6	1.2	14.7	14.0	4.6	4.5	1.7
52	TOTAL	170.1	1.9	16.9	36.3	27.6	286.4	390.5	144.3	194.4	57.1

1972 WASHINGTON TOTAL SALES TABLE

		21 PULPMILLS	22 PAPER MILL	23 PAPBD MILL	24 PRINTING	25 INDUS CHEM	26 OTHER CHEM	27 PETROLEUM	28 GLASS	29 CEMENT	30 FERR METAL
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0
12	TEXTILES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	APPAREL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	MINING	.1	.1	.2	.0	.3	.0	1.5	1.3	15.1	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	15.1	14.5	13.6	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	46.5	14.9	14.3	.0	.0	.0	.0	18.5	.0	.2
18	PLYWOOD	8.0	1.4	.0	.0	.0	.0	.0	.0	.0	.0
19	OTHER WOOD	.0	.5	.4	.0	.1	.5	.1	.5	.6	.1
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	1.0	34.1	50.1	.0	1.2	18.3	.0	.0	.0	.0
22	PAPER MILL	.9	61.1	69.8	43.9	.1	.4	.0	.0	.0	.0
23	PAPBD MILL	1.1	56.8	122.6	1.9	9.0	2.5	.3	1.3	11.7	.0
24	PRINTING	.0	.1	.1	3.4	.1	.4	.0	.0	.1	.1
25	INDUS CHEM	12.7	9.3	1.5	.0	12.1	8.2	1.6	.0	.0	1.0
26	OTHER CHEM	.0	.2	1.6	.2	.9	3.2	.2	.0	.2	.1
27	PETROLEUM	8.4	5.5	.4	.1	.6	.1	242.1	.1	1.5	.1
28	GLASS	.0	.0	.0	.0	.8	.0	.0	.0	.0	.0
29	CEMENT	.0	.0	.0	.0	.0	.1	.1	1.1	29.9	.6
30	FERR METAL	.2	.4	.2	.0	.1	.0	.2	.0	.0	7.4
31	NONFER MET	.2	.3	.0	.0	2.3	.0	.1	.0	.0	.2
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
33	HEAVY METL	.2	.3	.0	.0	.0	.0	.3	.0	.0	.4
34	LIGHT METL	1.4	.8	.0	.0	1.2	.5	.1	.0	.2	4.1
35	NONELC EQP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.0	.0	.0	.0	.0	.1	1.8
37	INDUS EQP	1.4	3.8	2.5	.0	.3	.0	.3	.1	.1	.0
38	ELEC MACH	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	.0	.0	.4	.0	.4	3.3	.1	.0	.1	.1
43	TRANS SERV	6.9	10.7	12.3	4.0	3.5	.5	4.5	.4	9.0	1.7
44	ELEC CO	3.3	3.3	6.8	.5	4.1	.2	2.8	.3	2.8	2.5
45	GAS CO	8.5	6.3	4.5	.0	7.1	.3	9.6	.6	3.5	1.5
46	OTH UTILS	2.4	.4	1.3	.1	.4	.0	.8	.0	.2	.1
47	COMMUNICAT	.3	1.0	1.4	2.9	.8	.3	.6	.0	1.0	.4
48	CONSTRUCTN	.7	2.0	1.8	.4	1.6	.1	1.7	.1	1.0	.2
49	TRADE	3.8	7.0	12.3	3.7	3.2	.7	1.8	.3	3.8	4.8
50	FIN.INS.RE	.8	1.8	1.6	1.1	.8	.2	4.6	.1	1.1	.5
51	SERVICES	4.7	6.3	9.8	8.7	12.2	1.5	2.7	.3	.7	2.5
52	TOTAL	128.6	242.9	329.5	70.9	64.1	41.3	276.2	25.0	82.7	30.4

1972 WASHINGTON TOTAL SALES TABLE

		31 NONFER MET	32 ALUMINUM	33 HEAVY METL	34 LIGHT METL	35 NONELC EQP	36 MACH TOOL	37 INDUS EQP	38 ELEC MACH	39 AEROSPACE	40 MOTOR VEH
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
11	OTHER FOOD	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
12	TEXTILES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	APPAREL	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	MINING	5.4	.0	.0	.0	.0	.0	.0	.0	.4	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.1	.0	.1	.0	.4	4.0
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	6.3
19	OTHER WOOD	.1	.5	.6	.6	.1	.0	.5	.7	.5	.2
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1
23	PAPBD MILL	.0	.2	.0	.4	.0	.0	.0	.4	4.5	.8
24	PRINTING	.0	.1	.0	.0	.4	.0	.2	.1	.3	.2
25	INDUS CHEM	1.4	.2	.0	.4	.1	.2	.1	.1	.7	2.5
26	OTHER CHEM	.1	.4	.3	.5	.2	.0	.1	.2	1.0	.2
27	PETROLEUM	.4	3.0	.2	.1	.1	.1	.1	.0	1.8	.3
28	GLASS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	CEMENT	.2	.3	.0	.5	.1	1.2	.4	.1	.2	.0
30	FERR METAL	.3	2.3	14.6	3.1	7.8	2.7	3.1	.3	2.2	10.8
31	NONFER MET	.1	7.8	3.3	.6	.0	.0	.1	.0	.0	.4
32	ALUMINUM	1.1	699.6	25.9	44.2	.0	.4	5.0	5.4	7.3	15.7
33	HEAVY METL	.0	.4	17.1	.3	1.1	.8	1.0	.2	2.0	.7
34	LIGHT METL	.1	.4	1.6	1.4	1.5	.5	2.2	1.8	2.5	2.5
35	NONELC EQP	.0	.0	.0	.0	1.1	.0	5.5	.0	.0	.0
36	MACH TOOL	.0	2.6	2.4	5.8	3.5	5.0	5.0	3.5	8.5	1.2
37	INDUS EQP	.1	2.7	.4	.1	.2	.0	12.0	.7	1.6	.1
38	ELEC MACH	.0	.5	.0	.0	.4	.0	.8	4.7	9.7	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	2.5	102.1	.0
40	MOTOR VEH	.0	.0	.0	.0	.4	.0	.0	.0	.0	5.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
42	OTHER MFG	.2	.0	.0	.8	.5	.5	2.8	4.1	7.3	1.6
43	TRANS SERV	1.6	12.5	1.4	.9	.4	.4	.4	.3	.5	.6
44	ELEC CO	.6	36.8	.6	.9	.4	.3	.4	.4	3.9	1.5
45	GAS CO	1.6	4.0	.2	.9	.2	.1	.1	.0	1.8	.4
46	OTH UTILS	.0	.4	.1	.2	.1	.0	.1	.1	1.2	.2
47	COMMUNICAT	.1	.9	2.3	1.1	.8	.9	1.6	.9	7.7	2.8
48	CONSTRUCTN	.0	1.0	.3	.1	.8	.0	.2	.2	.8	.1
49	TRADE	.7	5.7	2.9	1.4	1.3	1.5	3.2	2.1	4.2	3.2
50	FIN,INS,RE	.0	3.2	.9	.5	.4	.3	.6	.4	3.5	.7
51	SERVICES	.7	4.2	3.0	2.7	2.1	1.5	2.5	1.6	56.1	2.7
52	TOTAL	15.2	789.7	77.5	67.5	24.1	16.4	48.1	30.8	233.4	64.8

1972 WASHINGTON TOTAL SALES TABLE

		41 SHIP BLDG	42 OTHER MFG	43 TRANS SERV	44 UTILITIES	45 COMMUNICAT	46 CONSTRUCTN	47 TRADE	48 FIN,INS,RE	49 SERVICES	50 SUBTOTAL
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	178.5
2	VEGETABLES	.0	.0	.3	.0	.0	.0	.0	.0	.8	228.9
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	278.1
4	OTHER AGRI	.0	.0	.0	.1	.0	1.9	.0	.0	.0	9.2
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	37.7
6	MEAT PROD	.0	.4	1.8	.7	.0	.0	.0	.0	.6	18.4
7	DAIRY PROD	.0	.0	.6	.4	.0	.0	.0	.0	1.4	47.1
8	CANNING	.0	.0	.6	.1	.0	.0	.0	.0	8.0	20.7
9	GRAIN MILL	.1	.0	.3	.0	.0	.0	.0	.0	.7	112.7
10	BEVERAGES	.0	.0	.7	.0	.0	.0	.0	.0	1.8	21.0
11	OTHER FOOD	.0	.1	1.4	1.0	.0	.0	.4	.0	1.4	49.5
12	TEXTILES	.1	.0	.1	.1	.0	.0	.0	.0	.0	10.9
13	APPAREL	.2	.0	.1	.0	.0	.1	1.5	.3	2.0	9.7
14	MINING	.0	.0	.2	20.5	.0	22.8	.0	.0	.1	71.5
15	FORESTRY	.0	.0	.0	.1	.0	.0	.0	.0	.1	249.7
16	LOGGING	.0	.0	.0	.0	.0	.1	.0	.0	.0	356.5
17	SAWMILLS	1.8	.2	.2	1.0	.0	508.7	1.2	.0	.0	787.9
18	PLYWOOD	11.2	.0	.0	.0	.0	223.9	.9	.0	.0	338.4
19	OTHER WOOD	.2	.3	.2	.0	.1	163.7	.5	.0	.2	211.7
20	FURNITURE	1.7	.0	.0	.0	.1	2.3	.4	.9	.2	6.1
21	PULPMILLS	.0	19.1	.0	.0	.0	.0	.0	.0	.0	124.0
22	PAPER MILL	.1	.4	.3	.1	1.6	.3	16.2	1.0	1.2	203.4
23	PAPBD MILL	.1	.4	.9	1.8	.2	6.7	7.7	7.6	2.9	341.2
24	PRINTING	.1	.1	2.1	3.0	2.8	.1	75.2	57.5	40.9	190.0
25	INDUS CHEM	1.0	.3	.4	.2	.0	2.2	1.5	.0	2.2	101.1
26	OTHER CHEM	.8	2.6	.0	.2	.1	4.2	3.2	.2	2.4	29.7
27	PETROLEUM	1.0	.2	38.4	1.8	.6	37.9	11.4	2.1	5.1	380.3
28	GLASS	.0	.0	.0	.0	.0	.0	.0	.0	.0	22.5
29	CEMENT	.1	.4	.1	.1	.1	134.4	.2	.0	.3	173.1
30	FERR METAL	.7	.0	.1	.1	.1	45.4	.9	.0	.0	105.0
31	NONFER MET	.7	.1	.0	.1	.1	3.8	.0	.0	.0	38.4
32	ALUMINUM	1.1	.4	.0	.0	.0	21.9	.0	.0	.0	830.0
33	HEAVY METL	1.0	.0	.0	.1	.3	88.6	.7	.2	.1	119.3
34	LIGHT METL	2.6	2.2	.1	1.5	.0	4.5	1.0	.0	.2	112.0
35	NONELC EQP	15.8	.0	6.6	.1	.0	.1	.0	.0	.0	30.0
36	MACH TOOL	.5	1.2	.7	.1	.5	1.2	3.0	.0	8.0	61.6
37	INDUS EQP	.1	.5	.0	3.0	.1	2.0	.0	.0	1.8	41.8
38	ELEC MACH	.5	.2	.0	.3	20.1	19.8	.1	.0	.1	58.2
39	AEROSPACE	.0	.0	93.5	.0	.0	.0	.0	.0	.0	198.1
40	MOTOR VEH	.0	.0	70.0	.0	.0	2.0	.0	.0	.0	77.7
41	SHIP BLDG	3.5	.0	1.7	.0	.0	.0	.0	.0	.0	9.6
42	OTHER MFG	2.0	16.4	.1	.2	.3	15.0	5.0	2.3	29.5	105.4
43	TRANS SERV	1.9	2.5	568.5	3.8	3.0	40.0	30.0	9.5	17.7	855.6
44	ELEC CO	.7	.6	6.7	179.2	1.7	2.0	44.5	14.9	28.0	371.6
45	GAS CO	.1	.1	.4	76.8	.1	.1	6.0	1.5	7.4	156.5
46	OTH UTILS	.2	.1	.4	12.7	.5	.8	7.0	3.2	3.1	45.0
47	COMMUNICAT	1.0	1.3	11.3	4.6	7.0	11.0	46.5	30.1	118.9	274.8
48	CONSTRUCTN	.7	.3	6.0	2.2	2.1	.5	15.6	19.8	9.3	87.9
49	TRADE	7.8	3.6	15.0	3.1	2.7	118.7	914.0	13.2	45.5	1350.2
50	FIN,INS,RE	.9	.9	15.8	4.8	3.3	15.5	50.0	473.5	41.6	658.3
51	SERVICES	4.4	3.8	29.1	22.5	20.1	76.7	205.0	112.7	177.4	889.7
52	TOTAL	64.7	58.7	874.7	346.4	67.6	1578.9	1449.6	750.5	560.9	11086.2

1972 WASHINGTON TOTAL SALES TABLE

		51 CONSUMPTN	52 INVESTMENT	53 INVEN CHNG	54 S L GOVT	55 FED GOVT	56 EXPORT FOR	57 TOTAL
1	FIELD CROP	4.1	.0	3.0	1.0	.0	206.7	393.3
2	VEGETABLES	93.6	.0	.0	1.5	1.1	46.1	371.2
3	LIVESTOCK	70.2	.0	.8	.6	.0	3.9	353.6
4	OTHER AGRI	46.2	.0	.0	.2	.0	2.1	57.7
5	FISHING	1.9	.0	.0	.0	.0	.1	39.7
6	MEAT PROD	299.6	.0	6.9	1.1	1.6	.0	327.6
7	DAIRY PROD	174.2	.0	.3	4.3	5.4	13.2	244.5
8	CANNING	438.6	.0	-3.1	2.2	5.6	19.8	483.8
9	GRAIN MILL	23.6	.0	2.3	1.0	3.3	30.0	172.9
10	BEVERAGES	254.8	.0	.3	.1	6.4	.0	282.6
11	OTHER FOOD	164.5	.0	3.7	1.5	2.2	9.3	230.7
12	TEXTILES	4.3	.0	.1	.0	.0	.2	15.5
13	APPAREL	124.2	.0	5.2	.1	.1	.0	139.3
14	MINING	1.3	.0	.0	1.3	1.5	.8	76.4
15	FORESTRY	9.9	.0	.0	.0	.0	.3	259.9
16	LOGGING	.0	1.0	5.9	.0	.0	210.8	574.2
17	SAWMILLS	7.6	3.0	-3.6	5.3	.0	22.8	823.0
18	PLYWOOD	4.5	.0	.2	.8	2.0	6.3	352.2
19	OTHER WOOD	53.3	18.0	.9	.6	.4	.3	285.2
20	FURNITURE	35.7	1.0	.1	16.3	.1	.0	59.3
21	PULPMILLS	.0	.0	21.8	.0	.0	80.0	225.8
22	PAPER MILL	116.3	.0	-3.0	1.0	2.0	26.0	345.7
23	PAPBD MILL	85.5	.0	-2.0	2.3	6.4	12.6	446.0
24	PRINTING	48.1	.0	1.2	1.8	.3	.0	241.4
25	INDUS CHEM	.0	.0	2.6	2.1	113.0	20.0	238.8
26	OTHER CHEM	3.6	.0	-.9	1.9	.5	.2	35.0
27	PETROLEUM	153.0	.0	15.5	11.9	16.8	10.5	588.0
28	GLASS	.0	.0	-.1	.1	.2	.2	22.9
29	CEMENT	5.1	.0	1.2	2.1	4.7	1.0	187.2
30	FERR METAL	.1	.0	1.2	.2	.5	.2	107.2
31	NONFER MET	.0	.0	-.5	.0	.0	8.6	46.5
32	ALUMINUM	.1	25.3	-18.8	.3	.6	22.7	860.2
33	HEAVY METL	.4	32.3	-.1	2.7	.8	4.4	159.8
34	LIGHT METL	9.2	15.6	-.2	.3	.5	1.9	139.3
35	NONELC EQP	.2	33.8	.1	2.6	7.8	8.7	83.2
36	MACH TOOL	2.0	13.2	1.3	1.3	.5	1.6	81.5
37	INDUS EQP	.0	79.6	.1	.8	.6	21.0	143.9
38	ELEC MACH	1.0	23.3	4.6	.1	16.3	10.3	113.8
39	AEROSPACE	.0	475.0	-211.3	.0	660.0	740.0	1861.8
40	MOTOR VEH	26.7	189.0	20.0	.0	4.0	6.0	323.4
41	SHIP BLDG	21.4	43.3	.4	12.5	258.2	3.9	349.3
42	OTHER MFG	54.6	42.5	3.4	3.2	2.0	9.9	221.0
43	TRANS SERV	200.0	10.0	.0	20.0	70.0	140.0	1295.6
44	ELEC CO	196.3	.0	.0	10.0	2.0	.0	579.9
45	GAS CO	55.6	.0	1.0	5.7	1.2	.0	220.0
46	OTH UTILS	111.5	.0	.0	5.5	2.0	.0	164.0
47	COMMUNICAT	229.1	.0	.0	33.0	2.8	5.0	544.7
48	CONSTRUCTN	50.2	1333.0	.0	622.0	230.9	.0	2324.0
49	TRADE	2600.0	81.8	.0	8.0	20.0	240.0	4300.0
50	FIN,INS,RE	768.3	.0	.0	24.1	1.2	.0	1451.9
51	SERVICES	1739.3	.0	.0	40.9	74.5	5.3	2749.7
52	TOTAL	8289.7	2420.7	-139.5	854.3	1530.0	1952.7	25994.1

1972 WASHINGTON EXPORTS TABLE

		1 FIELD CROP	2 VEGETABLES	3 LIVESTOCK	4 OTHER AGRI	5 FISHING	6 MEAT PROD	7 DAIRY PROD	8 CANNING	9 GRAIN MILL	10 BEVERAGES
1	FIELD CROP	17.0	.0	3.5	.0	.0	.0	.0	.0	31.3	.1
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	72.3	.0	10.0
3	LIVESTOCK	.0	.0	4.9	.0	.0	14.9	7.1	.0	.0	.0
4	OTHER AGRI	.0	.2	.0	.4	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	2.5	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.1	.3	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	5.2	.2	.0	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	4.1	.0	.0
9	GRAIN MILL	.0	.0	7.2	.0	.0	.0	.0	.0	.5	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.1	.0	.0	4.1
11	OTHER FOOD	.0	.0	.0	.0	.0	.2	2.5	3.3	.0	3.0
12	TEXTILES	.1	.1	.0	.0	.2	.0	.0	.0	.0	.0
13	APPAREL	1.0	.0	.0	.0	.0	.0	.0	.0	.8	.3
14	MINING	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	OTHER WOOD	.2	.6	.1	.1	2.0	.1	.0	1.0	.0	.7
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	1.4	.0	.0	.0	.0	.0	.0	.0	.0
23	PAPBD MILL	1.0	9.8	.0	.0	.0	8.2	2.0	11.2	7.3	3.7
24	PRINTING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
25	INDUS CHEM	2.4	1.7	.1	.6	.0	.3	.1	.9	.0	.4
26	OTHER CHEM	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
27	PETROLEUM	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28	GLASS	.0	.0	.0	.0	.0	.0	.0	.7	.0	1.2
29	CEMENT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30	FERR METAL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
31	NONFER MET	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
32	ALUMINUM	1.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
33	HEAVY METL	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0
34	LIGHT METL	1.7	1.1	1.0	.0	.0	2.5	.0	.0	.0	.0
35	NONELC EQP	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.0	.0	.1	.0	.1	.0	.0
37	INDUS EQP	.0	.0	.0	.0	.0	.0	.0	1.2	.0	.0
38	ELEC MACH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2
41	SHIP BLDG	.0	.0	.0	.0	1.9	.0	.0	.1	.0	.0
42	OTHER MFG	.0	.3	.1	.0	.0	.1	.1	1.6	.1	.9
43	TRANS SERV	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
44	ELEC CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
45	GAS CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
46	OTH UTILS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
47	COMMUNICAT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
48	CONSTRUCTN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49	TRADE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
50	FIN,INS,RE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
51	SERVICES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
52	TOTAL	24.7	15.2	16.9	1.2	4.3	26.4	17.1	99.5	40.3	24.6

1972 WASHINGTON EXPORTS TABLE

		11 OTHER FOOD	12 TEXTILES	13 APPAREL	14 MINING	15 FORESTRY	16 LOGGING	17 SAWMILLS	18 PLYWOOD	19 OTHER WOOD	20 FURNITURE
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.6	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	2.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	48.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	BEVERAGES	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	5.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	TEXTILES	.0	.7	8.3	.0	.1	.0	.0	.0	.0	.0
13	APPAREL	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
14	MINING	.1	.0	.0	1.3	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	1.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	4.6	1.7	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.0	.0	2.9	2.0	56.1	26.4
18	PLYWOOD	.0	.0	.0	.0	.0	1.6	1.3	2.0	38.7	13.3
19	OTHER WOOD	1.1	.0	.0	.4	.0	.0	1.3	.2	11.8	2.1
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23	PAPBD MILL	15.7	.0	.2	.0	.0	.0	.1	.0	.0	.0
24	PRINTING	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0
25	INDUS CHEM	1.0	.0	.0	.0	2.2	.8	.0	.1	.0	.0
26	OTHER CHEM	.0	.0	.0	.0	.0	.1	.0	.4	.0	.1
27	PETROLEUM	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28	GLASS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	CEMENT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30	FERR METAL	.0	.0	.0	.1	.1	.3	.1	.0	.1	.0
31	NONFER MET	.0	.0	.0	18.1	.0	.0	.0	.0	.0	.0
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33	HEAVY METL	.0	.0	.0	2.0	.0	.0	.0	.0	.0	.0
34	LIGHT METL	.0	.0	.0	3.5	.0	1.6	.7	.3	3.7	.0
35	NONELC EQP	.0	.0	.0	.3	.0	.1	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.1	.0	.9	.3	.3	.0	.0
37	INDUS EQP	1.5	.1	.0	.0	.0	.0	.0	1.8	.4	.0
38	ELEC MACH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	1.8	.0	.0	.0	.0	.0	.1	.1	.1	2.8
43	TRANS SERV	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
44	ELEC CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
45	GAS CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
46	OTH UTILS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
47	COMMUNICAT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
48	CONSTRUCTN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49	TRADE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
50	FIN,INS,RE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
51	SERVICES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
52	TOTAL	77.1	.8	9.2	25.8	3.4	5.5	11.4	8.9	110.9	44.7

1972 WASHINGTON EXPORTS TABLE

		21 PULPMILLS	22 PAPER MILL	23 PAPBD MILL	24 PRINTING	25 INDUS CHEM	26 OTHER CHEM	27 PETROLEUM	28 GLASS	29 CEMENT	30 FERR METAL
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	TEXTILES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	APPAREL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	MINING	.0	.0	.0	.0	.1	.0	1.4	.0	.4	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	1.2	1.0	.9	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	21.0	6.7	6.3	.0	.0	.0	.0	18.5	.0	.0
18	PLYWOOD	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
19	OTHER WOOD	.0	.4	.0	.0	.0	.4	.0	.4	.4	.0
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	.0	19.4	23.8	.0	.1	18.3	.0	.0	.0	.0
22	PAPER MILL	.8	60.2	35.0	32.3	.0	.4	.0	.0	.0	.0
23	PAPBD MILL	.5	49.0	105.2	1.7	7.3	2.3	.0	.0	10.5	.0
24	PRINTING	.0	.0	.0	.3	.0	.2	.0	.0	.0	.0
25	INDUS CHEM	2.6	1.8	.0	.0	2.7	7.5	.2	.0	.0	.7
26	OTHER CHEM	.0	.0	.0	.0	.2	1.5	.1	.0	.0	.0
27	PETROLEUM	.0	.0	.0	.0	.0	.0	238.2	.0	.0	.0
28	GLASS	.0	.0	.0	.0	.7	.0	.0	.0	.0	.0
29	CEMENT	.0	.0	.0	.0	.0	.1	.0	1.1	1.0	.4
30	FERR METAL	.1	.2	.1	.0	.1	.0	.0	.0	.0	5.9
31	NONFER MET	.0	.0	.0	.0	2.3	.0	.0	.0	.0	.1
32	ALUMINUM	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33	HEAVY METL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3
34	LIGHT METL	1.0	.4	.0	.0	.0	.0	.0	.0	.0	4.0
35	NONELC EQP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
36	MACH TOOL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.4
37	INDUS EQP	1.2	2.9	2.2	.0	.0	.0	.0	.1	.0	.0
38	ELEC MACH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	.0	.0	.3	.0	.0	3.2	.0	.0	.1	.0
43	TRANS SERV	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
44	ELEC CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
45	GAS CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
46	OTH UTILS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
47	COMMUNICAT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
48	CONSTRUCTN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49	TRADE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
50	FIN,INS,RE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
51	SERVICES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
52	TOTAL	28.4	142.1	173.8	34.3	13.5	33.9	239.9	20.1	12.4	11.8

1972 WASHINGTON EXPORTS TABLE

		31 NONFER MET	32 ALUMINUM	33 HEAVY METL	34 LIGHT METL	35 NONELC EQP	36 MACH TOOL	37 INDUS EQP	38 ELEC MACH	39 AEROSPACE	40 MOTOR VEH
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	VEGETABLES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	MEAT PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	DAIRY PROD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	CANNING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	GRAIN MILL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	BEVERAGES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	OTHER FOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	TEXTILES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	APPAREL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	MINING	4.9	.0	.0	.0	.0	.0	.0	.0	.0	.0
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	SAWMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	3.1
18	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	.0	5.4
19	OTHER WOOD	.0	.2	.0	.4	.0	.0	.3	.5	.2	.0
20	FURNITURE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	PULPMILLS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	PAPER MILL	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23	PAPBD MILL	.0	.0	.0	.0	.0	.0	.0	.0	1.5	.6
24	PRINTING	.0	.0	.0	.0	.2	.0	.1	.0	.0	.0
25	INDUS CHEM	1.3	.0	.0	.0	.0	.1	.0	.0	.6	2.1
26	OTHER CHEM	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
27	PETROLEUM	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28	GLASS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	CEMENT	.1	.0	.0	.2	.0	.9	.3	.1	.0	.0
30	FERR METAL	.0	1.8	3.6	.0	3.6	.0	.0	.0	1.5	1.9
31	NONFER MET	.0	6.0	2.9	.0	.0	.0	.0	.0	.0	.0
32	ALUMINUM	.0	564.2	19.5	42.1	.0	.3	3.5	4.8	6.9	14.7
33	HEAVY METL	.0	.2	11.4	.0	1.0	.1	.0	.1	.0	.0
34	LIGHT METL	.0	.0	.0	.0	.9	.4	1.7	.9	.0	1.5
35	NONELC EQP	.0	.0	.0	.0	.2	.0	5.5	.0	.0	.0
36	MACH TOOL	.0	.7	.7	2.9	1.5	.8	1.5	2.2	2.5	.2
37	INDUS EQP	.0	1.9	.0	.1	.0	.0	8.0	.2	.0	.0
38	ELEC MACH	.0	.0	.0	.0	.0	.0	.0	3.2	7.7	.0
39	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	86.1	.0
40	MOTOR VEH	.0	.0	.0	.0	.0	.0	.0	.0	.0	3.0
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
42	OTHER MFG	.1	.0	.0	.6	.3	.1	2.4	2.6	3.8	1.2
43	TRANS SERV	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
44	ELEC CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
45	GAS CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
46	OTH UTILS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
47	COMMUNICAT	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
48	CONSTRUCTN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49	TRADE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
50	FIN,INS,RE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
51	SERVICES	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
52	TOTAL	6.4	575.0	38.1	46.4	7.7	2.7	23.3	14.6	110.8	33.7

1972 WASHINGTON EXPORTS TABLE

		41 SHIP BLDG	42 OTHER MFG	43 TRANS SERV	44 UTILITIES	45 COMMUNICAT	46 CONSTRUCTN	47 TRADE	48 FIN.INS.RE	49 SERVICES	50 SUBTOTAL
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	51.9
2	VEGETABLES	.0	.0	.1	.0	.0	.0	.0	.0	.0	82.4
3	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	26.9
4	OTHER AGRI	.0	.0	.0	.0	.0	.2	.0	.0	.0	1.4
5	FISHING	.0	.0	.0	.0	.0	.0	.0	.0	.0	2.5
6	MEAT PROD	.0	.0	.4	.0	.0	.0	.0	.0	.0	.9
7	DAIRY PROD	.0	.0	.2	.0	.0	.0	.0	.0	.4	6.2
8	CANNING	.0	.0	.2	.0	.0	.0	.0	.0	6.7	13.0
9	GRAIN MILL	.0	.0	.1	.0	.0	.0	.0	.0	.0	55.9
10	BEVERAGES	.0	.0	.2	.0	.0	.0	.0	.0	.0	4.6
11	OTHER FOOD	.0	.0	.5	.0	.0	.0	.0	.0	.2	15.0
12	TEXTILES	.0	.0	.0	.0	.0	.0	.0	.0	.0	9.5
13	APPAREL	.0	.0	.0	.0	.0	.0	1.0	.2	.2	3.6
14	MINING	.0	.0	.0	2.5	.0	.8	.0	.0	.0	11.6
15	FORESTRY	.0	.0	.0	.0	.0	.0	.0	.0	.1	1.1
16	LOGGING	.0	.0	.0	.0	.0	.0	.0	.0	.0	9.4
17	SAWMILLS	.0	.0	.0	.0	.0	463.7	.0	.0	.0	606.7
18	PLYWOOD	10.3	.0	.0	.0	.0	194.0	.1	.0	.0	266.8
19	OTHER WOOD	.1	.0	.0	.0	.1	133.5	.1	.0	.0	158.7
20	FURNITURE	.8	.0	.0	.0	.0	.0	.0	.8	.2	1.8
21	PULPMILLS	.0	19.1	.0	.0	.0	.0	.0	.0	.0	80.7
22	PAPER MILL	.0	.0	.0	.0	.0	.3	.0	.0	.7	131.1
23	PAPBD MILL	.0	.0	.7	.2	.0	6.0	3.2	2.1	.4	250.4
24	PRINTING	.0	.0	1.3	1.2	.2	.0	1.2	28.4	.9	34.1
25	INDUS CHEM	.4	.2	.2	.0	.0	1.9	.4	.0	.0	33.3
26	OTHER CHEM	.3	.7	.0	.0	.0	.9	.7	.0	.2	5.4
27	PETROLEUM	.0	.0	.0	.0	.0	.0	.0	.0	.0	238.2
28	GLASS	.0	.0	.0	.0	.0	.0	.0	.0	.0	2.6
29	CEMENT	.0	.1	.0	.0	.0	2.2	.0	.0	.0	6.5
30	FERR METAL	.0	.0	.0	.0	.0	15.4	.9	.0	.0	35.8
31	NONFER MET	.0	.0	.0	.0	.0	.0	.0	.0	.0	29.4
32	ALUMINUM	1.0	.0	.0	.0	.0	15.1	.0	.0	.0	673.3
33	HEAVY METL	.0	.0	.0	.0	.2	21.6	.0	.2	.0	37.3
34	LIGHT METL	1.3	.0	.0	.0	.0	.0	.0	.0	.0	28.2
35	NONELC EQP	15.0	.0	6.6	.0	.0	.0	.0	.0	.0	27.9
36	MACH TOOL	.0	.3	.2	.0	.5	.2	2.0	.0	1.0	19.4
37	INDUS EQP	.0	.3	.0	2.6	.0	1.6	.0	.0	1.2	27.3
38	ELEC MACH	.0	.0	.0	.0	17.5	14.9	.0	.0	.0	43.3
39	AEROSPACE	.0	.0	92.0	.0	.0	.0	.0	.0	.0	178.1
40	MOTOR VEH	.0	.0	69.8	.0	.0	1.7	.0	.0	.0	74.7
41	SHIP BLDG	.0	.0	.0	.0	.0	.0	.0	.0	.0	2.0
42	OTHER MFG	1.5	11.5	.0	.0	.0	7.0	.7	.2	15.0	58.7
43	TRANS SERV	.0	.0	472.5	.0	.0	.0	.0	.0	.0	472.5
44	ELEC CO	.0	.0	.0	38.5	.0	.0	.0	.0	.0	38.5
45	GAS CO	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
46	OTH UTILS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
47	COMMUNICAT	.0	.0	.0	.0	5.1	.0	.0	.0	25.9	31.0
48	CONSTRUCTN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49	TRADE	.0	.0	.0	.0	.0	.0	874.0	.0	.0	874.0
50	FIN.INS.RE	.0	.0	.0	.0	.0	.0	.0	367.0	.0	367.0
51	SERVICES	.0	.0	.0	.0	.0	.0	.0	.0	48.3	48.3
52	TOTAL	30.7	32.2	645.0	45.0	23.6	881.0	884.3	398.9	101.4	5178.9

1972 WASHINGTON EXPORTS TABLE

		51 CONSUMPTN	52 INVESTMENT	53 S L GOVT	54 FED GOVT	55 EXPORT FOR	56 TOTAL
1	FIELD CROP	.6	.0	.0	.0	206.7	259.2
2	VEGETABLES	63.9	.0	.0	1.1	46.1	193.5
3	LIVESTOCK	.8	.0	.0	.0	3.9	31.6
4	OTHER AGRI	25.1	.0	.0	.0	2.1	28.6
5	FISHING	.0	.0	.0	.0	.1	2.6
6	MEAT PROD	39.5	.0	.0	1.6	.0	42.0
7	DAIRY PROD	21.2	.0	.0	5.4	13.2	46.0
8	CANNING	332.0	.0	1.0	5.6	19.8	371.4
9	GRAIN MILL	7.5	.0	.0	3.3	30.0	96.7
10	BEVERAGES	174.9	.0	.0	6.4	.0	185.9
11	OTHER FOOD	79.5	.0	.3	2.2	9.3	106.3
12	TEXTILES	2.6	.0	.0	.0	.2	12.3
13	APPAREL	99.2	.0	.0	.1	.0	102.9
14	MINING	.1	.0	.0	1.5	.8	14.0
15	FORESTRY	9.3	.0	.0	.0	.3	10.7
16	LOGGING	.0	.0	.0	.0	210.8	220.2
17	SAWMILLS	3.6	.0	4.4	.0	22.8	637.5
18	PLYWOOD	3.6	.0	.0	2.0	6.3	278.7
19	OTHER WOOD	50.8	11.8	.0	.4	.3	222.0
20	FURNITURE	6.8	.0	14.4	.1	.0	23.1
21	PULPMILLS	.0	.0	.0	.0	80.0	160.7
22	PAPER MILL	108.1	.0	.0	2.0	26.0	267.2
23	PAPBD MILL	69.7	.0	.4	6.4	12.6	339.5
24	PRINTING	.0	.0	.0	.3	.0	34.4
25	INDUS CHEM	.0	.0	.0	113.0	20.0	166.3
26	OTHER CHEM	.4	.0	.8	.5	.2	7.3
27	PETROLEUM	.0	.0	.0	16.8	10.5	265.5
28	GLASS	.0	.0	.0	.2	.2	3.0
29	CEMENT	.0	.0	.1	4.7	1.0	12.3
30	FERR METAL	.0	.0	.0	.5	.2	36.5
31	NONFER MET	.0	.0	.0	.0	8.6	38.0
32	ALUMINUM	.0	22.9	.2	.6	22.7	719.7
33	HEAVY METL	.0	9.6	.6	.8	4.4	52.7
34	LIGHT METL	8.8	6.9	.1	.5	1.9	46.4
35	NONELC EQP	.0	27.6	.9	7.8	8.7	72.9
36	MACH TOOL	.0	12.0	.0	.5	1.6	33.5
37	INDUS EQP	.0	67.1	.0	.6	21.0	116.0
38	ELEC MACH	.5	20.8	.0	16.3	10.3	91.2
39	AEROSPACE	.0	475.0	.0	660.0	740.0	2053.1
40	MOTOR VEH	12.7	175.5	.0	4.0	6.0	272.9
41	SHIP BLDG	14.4	42.8	.0	258.2	3.9	321.3
42	OTHER MFG	46.9	37.6	.0	2.0	9.9	155.1
43	TRANS SERV	.0	.0	.0	70.0	140.0	682.5
44	ELEC CO	.0	.0	.0	2.0	.0	40.5
45	GAS CO	.0	.0	.0	1.2	.0	1.2
46	OTH UTILS	.0	.0	.0	2.0	.0	2.0
47	COMMUNICAT	.0	.0	.0	2.8	5.0	38.8
48	CONSTRUCTN	.0	.0	.0	230.9	.0	230.9
49	TRADE	.0	.0	.0	20.0	240.0	1134.0
50	FIN,INS,RE	.0	.0	.0	1.2	.0	368.2
51	SERVICES	.0	.0	.0	74.5	5.3	128.1
52	TOTAL	1182.5	909.6	23.2	1530.0	1952.7	10776.9

1972 WASHINGTON TRANSACTIONS TABLE

		1 FIELD CROP	2 LIVESTOCK	3 OTHER AGRI	4 FOR,FIS,MI	5 MEAT,DAIRY	6 CANN,BEV	7 OTHER FOOD	8 TEXT,APPAR	9 LUMB,WOOD	10 PLYWOOD
1	FIELD CROP	15.2	71.3	4.6	.0	.0	4.9	30.6	.0	.0	.0
2	LIVESTOCK	.0	33.9	.0	.0	214.3	.1	2.7	.2	.0	.0
3	OTHER AGRI	.0	3.1	7.6	.8	.2	102.7	37.1	.0	.0	.0
4	FOR,FIS,MI	.3	.0	.2	10.5	.0	35.1	.5	.0	235.1	4.0
5	MEAT,DAIRY	.0	.0	.0	.3	43.3	2.3	7.5	.0	.0	.0
6	CANN,BEV	.0	.0	.0	.3	1.1	15.3	3.2	.0	.0	.0
7	OTHER FOOD	.0	38.4	.0	.2	3.2	16.2	27.7	.0	.0	.3
8	TEXT,APPAR	2.1	.0	.1	.6	.0	.2	.3	.6	.0	.0
9	LUMB,WOOD	.0	.0	1.0	1.0	.2	.7	.1	.0	331.3	76.6
10	PLYWOOD	.0	.0	.0	.0	.0	.0	.0	.0	18.0	11.6
11	PAPER PROD	.2	.3	1.4	.2	11.9	17.2	6.8	1.9	2.0	1.3
12	PRINTING	.0	.0	.0	.2	.3	1.1	.5	.0	.2	.2
13	CHEM,PETRO	16.6	5.1	14.2	4.6	1.8	.7	1.2	.1	5.0	3.5
14	GLASS,CEM	.1	.1	.2	1.9	.4	19.1	.6	.0	.0	.0
15	FERR METAL	.4	.1	.1	.2	.0	.0	.0	.0	.4	.1
16	NONFER MET	.1	.0	.0	.1	.0	.0	.0	.0	.5	.0
17	FABR METAL	.4	.3	.3	.4	.4	55.1	1.9	.0	3.2	.2
18	MACHINERY	.0	.0	.0	.4	.8	1.2	.0	.1	5.7	.7
19	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20	OT TRAN EQ	.0	.0	.0	2.2	.0	.1	.0	.0	.1	.0
21	OTHER MFG	.0	.0	.1	.4	.4	.7	.2	.0	.7	.1
22	CONSTRUCTN	5.0	2.5	3.4	2.4	.4	.3	.2	.1	3.6	.2
23	TRANS SERV	4.0	7.0	3.5	4.7	7.8	18.5	5.2	.3	40.6	14.2
24	COMM,UTILS	5.9	4.4	6.3	2.9	5.5	10.1	7.1	1.5	10.0	3.7
25	TRADE	14.8	12.4	17.8	7.7	11.1	26.0	9.7	1.9	43.6	12.4
26	FIN,INS,RE	3.6	1.7	2.2	1.9	2.4	2.5	1.8	.5	10.3	1.7
27	SERVICES	18.3	4.8	8.6	3.6	10.4	14.5	10.2	1.6	33.2	4.6
28	SUBTOTAL	87.0	185.4	71.6	47.5	315.9	344.6	155.1	8.8	743.5	135.4
29	VAL ADDED	252.3	100.9	324.8	302.0	100.6	306.9	126.3	72.3	726.4	147.2
30	IMPORT US	43.3	62.8	28.4	20.6	145.1	111.7	114.0	71.4	123.4	53.0
31	IMPORT FOR	10.7	4.5	4.1	5.9	10.5	3.2	8.2	2.3	89.1	16.6
32	TOTAL	393.3	353.6	428.9	376.0	572.1	766.4	403.6	154.8	1682.4	352.2

1972 WASHINGTON TRANSACTIONS TABLE

		11 PAPER PROD	12 PRINTING	13 CHEM,PETRO	14 GLASS,CEM	15 FERR METAL	16 NONFER MET	17 FABR METAL	18 MACHINERY	19 AEROSPACE	20 OT TRAN EQ
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	OTHER AGRI	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	FOR,FIS,MI	.4	.0	.3	16.0	.0	.5	.0	.0	.4	.0
5	MEAT,DAIRY	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
6	CANN,BEV	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
7	OTHER FOOD	.0	.0	.6	.0	.0	.0	.0	.0	.1	.1
8	TEXT,APPAR	.0	.0	.0	.0	.0	.3	.0	.0	.0	.3
9	LUMB,WOOD	82.3	.0	.3	.3	.3	.5	.2	.7	.7	3.0
10	PLYWOOD	9.3	.0	.0	.0	.0	.0	.0	.0	.0	1.8
11	PAPER PROD	103.6	11.8	3.4	2.5	.0	.2	.4	.4	3.1	.5
12	PRINTING	.2	3.1	.3	.1	.1	.1	.0	.4	.3	.3
13	CHEM,PETRO	35.2	.3	18.6	1.8	.5	4.2	1.4	1.2	2.9	3.0
14	GLASS,CEM	.0	.0	.2	28.9	.2	.4	.3	.5	.2	.1
15	FERR METAL	.4	.0	.2	.0	1.5	.8	14.1	10.3	.7	9.6
16	NONFER MET	.5	.0	.2	.0	.1	138.4	9.5	2.3	.4	2.2
17	FABR METAL	1.3	.0	2.1	.2	.2	.7	9.0	4.0	4.5	4.0
18	MACHINERY	1.4	.0	.9	.2	1.4	3.3	5.0	19.3	9.6	3.0
19	AEROSPACE	.0	.0	.0	.0	.0	.0	.0	2.5	16.0	.0
20	OT TRAN EQ	.0	.0	.0	.0	.0	.0	.0	.4	.1	5.5
21	OTHER MFG	.1	.0	.6	.0	.1	.1	.2	2.5	3.7	1.8
22	CONSTRUCTN	4.5	.4	3.4	1.1	.2	1.0	.4	1.2	.8	.8
23	TRANS SERV	29.9	4.0	8.5	9.4	1.7	14.1	2.3	1.5	.5	2.5
24	COMM,UTILS	39.5	3.5	27.0	8.4	4.5	44.4	6.3	6.4	14.6	6.9
25	TRADE	23.1	3.7	5.7	4.1	4.8	6.4	4.3	8.1	4.2	11.0
26	FIN,INS,RE	4.2	1.1	5.6	1.2	.5	3.2	1.4	1.7	3.5	1.6
27	SERVICES	20.8	8.7	16.4	1.0	2.5	4.9	5.7	7.7	56.1	7.1
28	SUBTOTAL	356.7	36.6	94.3	75.2	18.6	223.5	60.5	71.1	122.6	65.1
29	VAL ADDED	432.3	159.8	280.5	101.9	67.3	286.7	133.0	213.8	863.4	312.0
30	IMPORT US	204.2	28.5	101.7	14.1	21.2	264.0	82.1	128.6	850.0	291.7
31	IMPORT FOR	24.3	16.5	385.3	18.9	.1	132.5	23.5	8.9	25.8	3.9
32	TOTAL	1017.5	241.4	861.8	210.1	107.2	906.7	299.1	422.4	1861.8	672.7

1972 WASHINGTON TRANSACTIONS TABLE

		21 OTHER MFG	22 CONSTRUCTN	23 TRANS SERV	24 COMM•UTILS	25 TRADE	26 FIN•INS•RE	27 SERVICES	28 SUBTOTAL	29 CONSUMPTN	30 INVESTMENT
1	FIELD CROP	.0	.0	.0	.0	.0	.0	.0	126.6	3.5	.0
2	LIVESTOCK	.0	.0	.0	.0	.0	.0	.0	251.2	69.4	.0
3	OTHER AGRI	.0	1.7	.2	.1	.0	.0	.8	154.3	50.8	.0
4	FOR•FIS•MI	.0	22.0	.2	18.1	.0	.0	.1	343.7	3.7	.0
5	MEAT•DAIRY	.4	.0	1.8	1.1	.0	.0	1.6	58.4	413.1	.0
6	CANN•BEV	.0	.0	.9	.1	.0	.0	3.1	24.1	186.5	.0
7	OTHER FOOD	.1	.0	1.1	1.0	.4	.0	1.9	91.3	101.1	.0
8	TEXT•APPAR	.2	.1	.2	.1	.5	.1	1.8	7.5	26.7	.0
9	LUMB•WOOD	3.6	75.3	.4	1.0	1.6	.0	.2	581.3	6.5	10.2
10	PLYWOOD	.2	29.9	.0	.0	.8	.0	.0	71.6	.9	.0
11	PAPER PROD	2.4	.7	.5	3.5	20.7	6.5	3.0	206.4	24.0	.0
12	PRINTING	.1	.1	.8	4.4	74.0	29.1	40.0	155.9	48.1	.0
13	CHEM•PETRO	2.5	41.5	38.6	2.9	15.0	2.3	9.5	234.2	156.2	.0
14	GLASS•CEM	.3	132.2	.1	.2	.2	.0	.3	186.5	5.1	.0
15	FERR METAL	.0	30.0	.1	.2	.0	.0	.0	69.2	.1	.0
16	NONFER MET	.6	10.6	.0	.2	.0	.0	.0	165.7	.1	2.4
17	FABR METAL	2.3	71.5	.1	1.7	1.7	.0	.3	165.8	.8	31.4
18	MACHINERY	1.4	6.4	.5	3.6	1.1	.0	7.7	73.7	2.7	22.4
19	AEROSPACE	.0	.0	1.5	.0	.0	.0	.0	20.0	.0	.0
20	OT TRAN EQ	.0	.3	1.9	.0	.0	.0	.0	10.6	21.0	14.0
21	OTHER MFG	6.9	10.3	.1	.6	4.7	2.2	14.5	51.0	36.6	5.9
22	CONSTRUCTN	.5	.5	6.0	4.3	15.6	19.8	9.3	87.9	50.2	1333.0
23	TRANS SERV	2.9	40.0	96.0	6.8	30.0	9.5	17.7	383.1	200.0	10.0
24	COMM•UTILS	2.6	13.9	18.8	239.0	104.0	49.7	131.5	778.4	592.5	.0
25	TRADE	5.2	118.7	15.0	5.8	40.0	13.2	45.5	476.2	2600.0	81.8
26	FIN•INS•RE	1.2	15.5	15.8	8.1	50.0	106.5	41.6	291.3	768.3	.0
27	SERVICES	5.5	76.7	29.1	42.6	205.0	112.7	129.1	841.4	1739.3	.0
28	SUBTOTAL	38.9	697.9	229.7	345.4	565.3	351.6	459.5	5907.3	7107.2	1511.1
29	VAL ADDED	155.5	1022.4	922.3	1018.9	3500.0	1026.4	2093.2	15049.1	1608.4	.0
30	IMPORT US	78.6	595.5	126.9	87.2	202.1	68.9	187.0	4106.0	3044.4	933.9
31	IMPORT FOR	7.3	8.2	16.7	57.1	32.6	5.0	10.0	931.7	240.0	30.0
32	TOTAL	280.3	2324.0	1295.6	1508.6	4300.0	1451.9	2749.7	25994.1	12000.0	2475.0

1972 WASHINGTON TRANSACTIONS TABLE

		31 INVEN CHNG	32 S L GOVT	33 FED GOVT	34 EXPORT US	35 EXPORT FOR	36 TOTAL
1	FIELD CROP	3.0	1.0	.0	52.5	206.7	393.3
2	LIVESTOCK	.8	.6	.0	27.7	3.9	353.6
3	OTHER AGRI	.0	1.7	1.1	172.8	48.2	428.9
4	FOR,FIS,MI	.0	1.3	1.5	24.6	1.2	376.0
5	MEAT,DAIRY	7.2	5.4	7.0	67.8	13.2	572.1
6	CANN,BEV	-2.8	1.3	12.0	525.5	19.8	766.4
7	OTHER FOOD	6.0	2.2	5.5	158.2	39.3	403.6
8	TEXT,APPAR	5.3	.1	.1	114.9	.2	154.8
9	LUMB,WOOD	3.2	1.5	.4	845.4	233.9	1682.4
10	PLYWOOD	.2	.8	2.0	270.4	6.3	352.2
11	PAPER PROD	16.8	2.9	8.4	640.4	118.6	1017.5
12	PRINTING	1.2	1.8	.3	34.1	.0	241.4
13	CHEM,PETRO	17.2	15.1	130.3	278.1	30.7	861.8
14	GLASS,CEM	1.1	2.1	4.9	9.2	1.2	210.1
15	FERR METAL	1.2	.2	.5	35.8	.2	107.2
16	NONFER MET	-19.3	.1	.6	725.8	31.3	906.7
17	FABR METAL	-.3	2.3	1.3	91.5	6.3	299.1
18	MACHINERY	6.1	3.9	25.2	246.8	41.6	422.4
19	AEROSPACE	-211.3	.0	660.0	653.1	740.0	1861.8
20	OT TRAN EQ	20.4	12.5	262.2	322.1	9.9	672.7
21	OTHER MFG	3.5	5.1	2.1	166.2	9.9	280.3
22	CONSTRUCTN	.0	622.0	230.9	.0	.0	2324.0
23	TRANS SERV	.0	20.0	70.0	472.5	140.0	1295.6
24	COMM,UTILS	1.0	54.2	8.0	69.5	5.0	1508.6
25	TRADE	.0	8.0	20.0	874.0	240.0	4300.0
26	FIN,INS,RE	.0	24.1	1.2	367.0	.0	1451.9
27	SERVICES	.0	40.9	74.5	48.3	5.3	2749.7
28	SUBTOTAL	-139.5	831.1	1530.0	7294.2	1952.7	25994.1
29	VAL ADDED	.0	1659.2	854.4	.0	.0	19171.1
30	IMPORT US	.0	478.8	.0	.0	.0	8563.1
31	IMPORT FOR	.0	10.0	.0	.0	.0	1211.7
32	TOTAL	-139.5	2979.1	2384.4	7294.2	1952.7	54940.0

1972 WASHINGTON DIRECT REGIONAL COEFFICIENTS TABLE

		1 FIELD CROP	2 LIVESTOCK	3 OTHER AGRI	4 FOR,FIS,MI	5 MEAT,DAIRY	6 CANN,BEV	7 OTHER FOOD	8 TEXT,APPAR	9 LUMB,WOOD	10 PLYWOOD
1	FIELD CROP	.03865	.20164	.01073	.00000	.00000	.00639	.07582	.00000	.00000	.00000
2	LIVESTOCK	.00000	.09587	.00000	.00000	.37458	.00013	.00669	.00129	.00000	.00000
3	OTHER AGRI	.00000	.00877	.01772	.00213	.00035	.13400	.09192	.00000	.00000	.00000
4	FOR,FIS,MI	.00076	.00000	.00047	.02793	.00000	.04580	.00124	.00000	.13974	.01136
5	MEAT,DAIRY	.00000	.00000	.00000	.00080	.07569	.00300	.01858	.00000	.00000	.00000
6	CANN,BEV	.00000	.00000	.00000	.00080	.00192	.01996	.00793	.00000	.00000	.00000
7	OTHER FOOD	.00000	.10860	.00000	.00053	.00559	.02114	.06863	.00000	.00000	.00085
8	TEXT,APPAR	.00534	.00000	.00023	.00160	.00000	.00026	.00074	.00388	.00000	.00000
9	LUMB,WOOD	.00000	.00000	.00233	.00266	.00035	.00091	.00025	.00000	.19692	.21749
10	PLYWOOD	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.01070	.03294
11	PAPER PROD	.00051	.00085	.00326	.00053	.02080	.02244	.01685	.01227	.00119	.00369
12	PRINTING	.00000	.00000	.00000	.00053	.00052	.00144	.00124	.00000	.00012	.00057
13	CHEM,PETRO	.04221	.01442	.03311	.01263	.00315	.00091	.00297	.00065	.00297	.00994
14	GLASS,CEM	.00025	.00028	.00047	.00505	.00070	.02492	.00149	.00000	.00000	.00000
15	FERR METAL	.00102	.00028	.00023	.00053	.00000	.00000	.00000	.00000	.00024	.00028
16	NONFER MET	.00025	.00000	.00000	.00027	.00000	.00000	.00000	.00000	.00030	.00000
17	FABR METAL	.00102	.00085	.00070	.00106	.00070	.07189	.00471	.00000	.00190	.00057
18	MACHINERY	.00000	.00000	.00000	.00106	.00140	.00157	.00000	.00065	.00339	.00199
19	AEROSPACE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
20	OT TRAN EQ	.00000	.00000	.00000	.00585	.00000	.00013	.00000	.00000	.00006	.00000
21	OTHER MFG	.00000	.00000	.00023	.00106	.00070	.00091	.00050	.00000	.00042	.00028
22	CONSTRUCTN	.01271	.00707	.00793	.00638	.00070	.00039	.00050	.00065	.00214	.00057
23	TRANS SERV	.01017	.01980	.00816	.01250	.01363	.02414	.01288	.00194	.02413	.04032
24	COMM,UTILS	.01500	.01244	.01469	.00771	.00961	.01318	.01759	.00969	.00594	.01051
25	TRADE	.03763	.03507	.04150	.02048	.01940	.03392	.02403	.01227	.02592	.03521
26	FIN,INS,RE	.00915	.00481	.00513	.00505	.00420	.00326	.00446	.00323	.00612	.00483
27	SERVICES	.04653	.01357	.02005	.00957	.01818	.01892	.02527	.01034	.01973	.01306
28	SUBTOTAL	.22121	.52432	.16694	.12633	.55218	.44963	.38429	.05685	.44193	.38444
29	VAL ADDED	.64150	.28535	.75729	.80319	.17584	.40044	.31293	.46705	.43176	.41794
30	IMPORT US	.11009	.17760	.06622	.05479	.25363	.14575	.28246	.46124	.07335	.15048
31	IMPORT FOR	.02721	.01273	.00956	.01569	.01835	.00418	.02032	.01486	.05296	.04713
32	TOTAL	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

1972 WASHINGTON DIRECT REGIONAL COEFFICIENTS TABLE

		11 PAPER PROD	12 PRINTING	13 CHEM,PETRO	14 GLASS,CEM	15 FERR METAL	16 NONFER MET	17 FABR METAL	18 MACHINERY	19 AEROSPACE	20 OT TRAN EQ
1	FIELD CROP	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
2	LIVESTOCK	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
3	OTHER AGRI	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
4	FOR,FIS,MI	.00039	.00000	.00035	.07615	.00000	.00055	.00000	.00000	.00021	.00000
5	MEAT,DAIRY	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00005	.00000
6	CANN,BEV	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00005	.00000
7	OTHER FOOD	.00000	.00000	.00070	.00000	.00000	.00000	.00000	.00000	.00005	.00015
8	TEXT,APPAR	.00000	.00000	.00000	.00000	.00000	.00033	.00000	.00000	.00000	.00045
9	LUMB,WOOD	.08088	.00000	.00035	.00143	.00280	.00055	.00067	.00166	.00038	.00446
10	PLYWOOD	.00914	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00268
11	PAPER PROD	.10182	.04888	.00395	.01190	.00000	.00022	.00134	.00095	.00167	.00074
12	PRINTING	.00020	.01284	.00035	.00048	.00093	.00011	.00000	.00095	.00016	.00045
13	CHEM,PETRO	.03459	.00124	.02158	.00857	.00466	.00463	.00468	.00284	.00156	.00446
14	GLASS,CEM	.00000	.00000	.00023	.13755	.00187	.00044	.00100	.00118	.00011	.00015
15	FERR METAL	.00039	.00000	.00023	.00000	.01399	.00088	.04714	.02438	.00038	.01427
16	NONFER MET	.00049	.00000	.00023	.00000	.00093	.15264	.03176	.00545	.00021	.00327
17	FABR METAL	.00128	.00000	.00244	.00095	.00187	.00077	.03009	.00947	.00242	.00595
18	MACHINERY	.00138	.00000	.00104	.00095	.01306	.00364	.01672	.04569	.00516	.00446
19	AEROSPACE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00592	.00859	.00000
20	OT TRAN EQ	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00095	.00005	.00818
21	OTHER MFG	.00010	.00000	.00070	.00000	.00093	.00011	.00067	.00592	.00199	.00268
22	CONSTRUCTN	.00442	.00166	.00395	.00524	.00187	.00110	.00134	.00284	.00043	.00119
23	TRANS SERV	.02939	.01657	.00986	.04474	.01586	.01555	.00769	.00355	.00027	.00372
24	COMM,UTILS	.03882	.01450	.03133	.03998	.04198	.04897	.02106	.01515	.00784	.01026
25	TRADE	.02270	.01533	.00661	.01951	.04478	.00706	.01438	.01918	.00226	.01635
26	FIN,INS,RE	.00413	.00456	.00650	.00571	.00466	.00353	.00468	.00402	.00188	.00238
27	SERVICES	.02044	.03604	.01903	.00476	.02332	.00540	.01906	.01823	.03013	.01055
28	SUBTOTAL	.35057	.15162	.10942	.35792	.17351	.24650	.20227	.16832	.06585	.09677
29	VAL ADDED	.42486	.66197	.32548	.48501	.62780	.31620	.44467	.50616	.46374	.46380
30	IMPORT US	.20069	.11806	.11801	.06711	.19776	.29117	.27449	.30445	.45655	.43363
31	IMPORT FOR	.02388	.06835	.44709	.08996	.00093	.14613	.07857	.02107	.01386	.00580
32	TOTAL	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

1972 WASHINGTON DIRECT REGIONAL COEFFICIENTS TABLE

		21 OTHER MFG	22 CONSTRUCTN	23 TRANS SERV	24 COMM•UTILS	25 TRADE	26 FIN•INS•RE	27 SERVICES
1	FIELD CROP	.00000	.00000	.00000	.00000	.00000	.00000	.00000
2	LIVESTOCK	.00000	.00000	.00000	.00000	.00000	.00000	.00000
3	OTHER AGRI	.00000	.00073	.00015	.00007	.00000	.00000	.00029
4	FOR•FIS•MI	.00000	.00947	.00015	.01200	.00000	.00000	.00004
5	MEAT•DAIRY	.00143	.00000	.00139	.00073	.00000	.00000	.00058
6	CANN•BEV	.00000	.00000	.00069	.00007	.00000	.00000	.00113
7	OTHER FOOD	.00036	.00000	.00085	.00066	.00009	.00000	.00069
8	TEXT•APPAR	.00071	.00004	.00015	.00007	.00012	.00007	.00065.
9	LUMB•WOOD	.01284	.03240	.00031	.00066	.00037	.00000	.00007
10	PLYWOOD	.00071	.01287	.00000	.00000	.00019	.00000	.00000
11	PAPER PROD	.00856	.00030	.00039	.00232	.00481	.00448	.00109
12	PRINTING	.00036	.00004	.00062	.00292	.01721	.02004	.01455
13	CHEM•PETRO	.00892	.01786	.02979	.00192	.00349	.00158	.00345
14	GLASS•CEM	.00107	.05688	.00008	.00013	.00005	.00000	.00011
15	FERR METAL	.00000	.01291	.00008	.00013	.00000	.00000	.00000
16	NONFER MET	.00214	.00456	.00000	.00013	.00000	.00000	.00000
17	FABR METAL	.00821	.03077	.00008	.00113	.00040	.00000	.00011
18	MACHINERY	.00499	.00275	.00039	.00239	.00026	.00000	.00280
19	AEROSPACE	.00000	.00000	.00116	.00000	.00000	.00000	.00000
20	OT TRAN EQ	.00000	.00013	.00147	.00000	.00000	.00000	.00000
21	OTHER MFG	.02462	.00443	.00008	.00040	.00109	.00152	.00527
22	CONSTRUCTN	.00178	.00022	.00463	.00285	.00363	.01364	.00338
23	TRANS SERV	.01035	.01721	.07410	.00451	.00698	.00654	.00644
24	COMM•UTILS	.00928	.00598	.01451	.15843	.02419	.03423	.04782
25	TRADE	.01855	.05108	.01158	.00384	.00930	.00909	.01655
26	FIN•INS•RE	.00428	.00667	.01220	.00537	.01163	.07335	.01513
27	SERVICES	.01962	.03300	.02246	.02824	.04767	.07762	.04695
28	SUBTOTAL	.13878	.30030	.17729	.22895	.13147	.24217	.16711
29	VAL ADDED	.55476	.43993	.71187	.67539	.81395	.70694	.76125
30	IMPORT US	.28041	.25624	.09795	.05780	.04700	.04746	.06801
31	IMPORT FOR	.02604	.00353	.01289	.03785	.00758	.00344	.00364
32	TOTAL	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

1972 WASHINGTON INVERSE COEFFICIENTS TABLE

		1 FIELD CROP	2 LIVESTOCK	3 OTHER AGRI	4 FOR,FIS,MI	5 MEAT,DAIRY	6 CANN,BEV	7 OTHER FOOD	8 TEXT,APPAR	9 LUMB,WOOD	10 PLYWOOD
1	FIELD CROP	1.04022	.24288	.01137	.00017	.09901	.01063	.08962	.00032	.00005	.00011
2	LIVESTOCK	.00004	1.10811	.00002	.00040	.44920	.00195	.01698	.00145	.00011	.00008
3	OTHER AGRI	.00006	.02218	1.01807	.00243	.01031	.14159	.10209	.00004	.00046	.00025
4	FOR,FIS,MI	.00153	.00123	.00154	1.03009	.00140	.05170	.00302	.00041	.18024	.05297
5	MEAT,DAIRY	.00008	.00270	.00006	.00095	1.08318	.00393	.02175	.00003	.00025	.00018
6	CANN,BEV	.00008	.00112	.00004	.00087	.00267	1.02067	.00881	.00002	.00021	.00012
7	OTHER FOOD	.00012	.12935	.00008	.00071	.05904	.02353	1.07609	.00019	.00021	.00109
8	TEXT,APPAR	.00563	.00145	.00033	.00167	.00062	.00049	.00135	1.00391	.00032	.00012
9	LUMB,WOOD	.00087	.00121	.00389	.00398	.00375	.00501	.00318	.00151	1.25009	.28181
10	PLYWOOD	.00022	.00023	.00021	.00017	.00039	.00037	.00030	.00016	.01392	1.03727
11	PAPER PROD	.00144	.00457	.00436	.00116	.02747	.02777	.02203	.01391	.00237	.00531
12	PRINTING	.00193	.00204	.00142	.00136	.00237	.00314	.00293	.00055	.00172	.00217
13	CHEM,PETRO	.04608	.02974	.03596	.01391	.01736	.01008	.01284	.00144	.00787	.01431
14	GLASS,CEM	.00128	.00154	.00117	.00655	.00168	.03025	.00248	.00007	.00139	.00050
15	FERR METAL	.00137	.00088	.00045	.00085	.00049	.00388	.00050	.00005	.00075	.00060
16	NONFER MET	.00048	.00025	.00012	.00046	.00019	.00295	.00031	.00003	.00068	.00022
17	FABR METAL	.00173	.00249	.00120	.00157	.00215	.07626	.00633	.00009	.00295	.00145
18	MACHINERY	.00041	.00036	.00027	.00137	.00195	.00345	.00047	.00079	.00493	.00346
19	AEROSPACE	.00002	.00004	.00001	.00003	.00005	.00006	.00003	.00001	.00007	.00008
20	OT TRAN EQ	.00003	.00005	.00003	.00610	.00006	.00049	.00005	.00001	.00120	.00041
21	OTHER MFG	.00049	.00046	.00053	.00131	.00117	.00142	.00093	.00011	.00104	.00075
22	CONSTRUCTN	.01410	.01204	.00888	.00705	.00620	.00310	.00341	.00094	.00453	.00234
23	TRANS SERV	.01337	.03023	.01072	.01542	.02994	.03337	.01985	.00297	.03674	.05444
24	COMM,UTILS	.02594	.03027	.02309	.01274	.02903	.02935	.03260	.01368	.01553	.02065
25	TRADE	.04220	.05498	.04486	.02298	.04546	.04725	.03742	.01331	.03872	.04715
26	FIN,INS,RE	.01256	.01117	.00743	.00671	.01072	.00753	.00877	.00411	.01108	.00961
27	SERVICES	.05672	.03822	.02710	.01381	.03991	.03267	.04117	.01285	.03273	.02636
28	VAL ADDED	.81120	.67743	.88739	.90398	.55405	.76096	.61464	.51326	.80503	.72955

1972 WASHINGTON INVERSE COEFFICIENTS TABLE

		11 PAPER PROD	12 PRINTING	13 CHEM,PETRO	14 GLASS,CEM	15 FERR METAL	16 NONFER MET	17 FABR METAL	18 MACHINERY	19 AEROSPACE	20 OT TRAN EQ
1	FIELD CROP	.00003	.00001	.00008	.00004	.00002	.00002	.00001	.00001	.00002	.00002
2	LIVESTOCK	.00006	.00003	.00004	.00010	.00004	.00004	.00003	.00002	.00004	.00002
3	OTHER AGRI	.00009	.00004	.00010	.00026	.00004	.00003	.00003	.00002	.00004	.00003
4	FOR,FIS,MI	.01810	.00122	.00114	.09242	.00147	.00178	.00080	.00087	.00051	.00124
5	MEAT,DAIRY	.00015	.00008	.00008	.00023	.00010	.00010	.00006	.00005	.00010	.00004
6	CANN,BEV	.00009	.00007	.00005	.00014	.00005	.00003	.00004	.00003	.00010	.00002
7	OTHER FOOD	.00017	.00008	.00083	.00019	.00010	.00009	.00006	.00005	.00010	.00020
8	TEXT,APPAR	.00007	.00004	.00003	.00018	.00004	.00041	.00004	.00003	.00003	.00047
9	LUMB,WOOD	.11588	.00591	.00121	.00448	.00388	.00107	.00146	.00276	.00079	.00672
10	PLYWOOD	.01190	.00063	.00012	.00031	.00009	.00004	.00007	.00010	.00004	.00290
11	PAPER PROD	1.11429	.05549	.00483	.01601	.00072	.00068	.00194	.00160	.00207	.00118
12	PRINTING	.00167	1.01419	.00115	.00170	.00258	.00080	.00103	.00199	.00081	.00113
13	CHEM,PETRO	.04185	.00425	1.02294	.01415	.00601	.00656	.00613	.00389	.00195	.00522
14	GLASS,CEM	.00055	.00018	.00060	1.16056	.00242	.00076	.00151	.00177	.00020	.00034
15	FERR METAL	.00075	.00008	.00048	.00030	1.01470	.00127	.04986	.02651	.00066	.01506
16	NONFER MET	.00085	.00006	.00043	.00017	.00133	1.18024	.03886	.00721	.00041	.00420
17	FABR METAL	.00215	.00023	.00281	.00167	.00231	.00116	1.03149	.01055	.00265	.00640
18	MACHINERY	.00245	.00032	.00139	.00160	.01422	.00478	.01910	1.04870	.00566	.00519
19	AEROSPACE	.00006	.00003	.00002	.00008	.00011	.00005	.00013	.00627	1.00870	.00004
20	OT TRAN EQ	.00018	.00004	.00003	.00064	.00005	.00005	.00004	.00102	.00006	1.00826
21	OTHER MFG	.00051	.00030	.00093	.00031	.00133	.00029	.00108	.00661	.00229	.00294
22	CONSTRUCTN	.00617	.00243	.00448	.00754	.00262	.00181	.00202	.00345	.00068	.00155
23	TRANS SERV	.04064	.02082	.01179	.05899	.01881	.02064	.01100	.00563	.00087	.00530
24	COMM,UTILS	.05819	.02389	.04069	.06043	.05522	.07069	.03383	.02379	.01197	.01554
25	TRADE	.03147	.01846	.00816	.02713	.04764	.00959	.01894	.02288	.00331	.01848
26	FIN,INS,RE	.00808	.00668	.00816	.00963	.00699	.00560	.00679	.00581	.00281	.00350
27	SERVICES	.03282	.04255	.02347	.01321	.03066	.01066	.02554	.02415	.03306	.01407
28	VAL ADDED	.68880	.78504	.40903	.77955	.77355	.46577	.58946	.63030	.51559	.53728

1972 WASHINGTON INVERSE COEFFICIENTS TABLE

		21 OTHER MFG	22 CONSTRUCTN	23 TRANS SERV	24 COMM•UTILS	25 TRADE	26 FIN•INS•RE	27 SERVICES
1	FIELD CROP	.00019	.00003	.00025	.00017	.00002	.00002	.00015
2	LIVESTOCK	.00069	.00005	.00071	.00042	.00004	.00005	.00032
3	OTHER AGRI	.00008	.00084	.00041	.00024	.00005	.00007	.00058
4	FOR•FIS•MI	.00293	.02181	.00073	.01504	.00072	.00110	.00106
5	MEAT•DAIRY	.00164	.00011	.00169	.00101	.00008	.00012	.00076
6	CANN•BEV	.00005	.00009	.00082	.00015	.00007	.00012	.00123
7	OTHER FOOD	.00054	.00013	.00116	.00095	.00018	.00013	.00091
8	TEXT•APPAR	.00076	.00013	.00020	.00013	.00016	.00015	.00071
9	LUMB•WOOD	.01789	.04481	.00084	.00161	.00148	.00152	.00074
10	PLYWOOD	.00109	.01386	.00010	.00010	.00033	.00029	.00010
11	PAPER PROD	.01025	.00214	.00106	.00353	.00673	.00707	.00270
12	PRINTING	.00130	.00206	.00175	.00436	.01883	.02371	.01645
13	CHEM•PETRO	.01058	.02104	.03337	.00317	.00455	.00315	.00453
14	GLASS•CEM	.00148	.06630	.00052	.00055	.00036	.00105	.00048
15	FERR METAL	.00062	.01481	.00023	.00038	.00011	.00026	.00018
16	NONFER MET	.00299	.00669	.00007	.00030	.00007	.00013	.00009
17	FABR METAL	.00893	.03219	.00048	.00160	.00064	.00062	.00053
18	MACHINERY	.00577	.00422	.00068	.00318	.00057	.00050	.00333
19	AEROSPACE	.00005	.00006	.00127	.00003	.00001	.00001	.00003
20	OT TRAN EQ	.00004	.00030	.00160	.00010	.00002	.00002	.00002
21	OTHER MFG	1.02549	.00500	.00036	.00077	.00149	.00229	.00583
22	CONSTRUCTN	.00238	1.00168	.00560	.00385	.00428	.01541	.00420
23	TRANS SERV	.01325	.02584	1.08125	.00683	.00906	.00977	.00864
24	COMM•UTILS	.01553	.01895	.02290	1.19174	.03381	.05090	.06226
25	TRADE	.02132	.05789	.01418	.00634	1.01150	.01331	.01907
26	FIN•INS•RE	.00607	.01046	.01536	.00791	.01411	1.08158	.01817
27	SERVICES	.02483	.04308	.02930	.03725	.05417	.09228	1.05499
28	VAL ADDED	.65982	.67472	.85007	.87320	.92578	.91799	.90366

1972 WASHINGTON INDUCED INVERSE COEFFICIENTS TABLE

		1 FIELD CROP	2 LIVESTOCK	3 OTHER AGRI	4 FOR,FIS,MI	5 MEAT,DAIRY	6 CANN,BEV	7 OTHER FOOD	8 TEXT,APPAR	9 LUMB,WOOD	10 PLYWOOD
1	FIELD CROP	1.04543	.24723	.01707	.00598	.10257	.01552	.09357	.00362	.00522	.00479
2	LIVESTOCK	.01887	1.12384	.02062	.02139	.46206	.01961	.03124	.01336	.01879	.01702
3	OTHER AGRI	.00684	.02785	1.02550	.01000	.01495	.14796	.10723	.00433	.00719	.00636
4	FOR,FIS,MI	.00377	.00310	.00400	1.03260	.00294	.05381	.00472	.00183	.18247	.05499
5	MEAT,DAIRY	.03220	.02952	.03519	.03674	1.10511	.03406	.04608	.02035	.03213	.02907
6	CANN,BEV	.01391	.01267	.01517	.01628	.01212	1.03365	.01929	.00877	.01394	.01256
7	OTHER FOOD	.01073	.13821	.01169	.01253	.06629	.03349	1.08413	.00691	.01074	.01063
8	TEXT,APPAR	.00771	.00318	.00261	.00399	.00204	.00245	.00293	1.00522	.00239	.00199
9	LUMB,WOOD	.00266	.00271	.00585	.00597	.00497	.00669	.00454	.00264	1.25187	.28342
10	PLYWOOD	.00049	.00045	.00051	.00047	.00058	.00062	.00050	.00033	.01419	1.03751
11	PAPER PROD	.00714	.00932	.01059	.00751	.03136	.03312	.02635	.01752	.00802	.01043
12	PRINTING	.01257	.01092	.01306	.01321	.00963	.01312	.01099	.00728	.01227	.01173
13	CHEM,PETRO	.06081	.04204	.05207	.03033	.02742	.02390	.02400	.01076	.02248	.02756
14	GLASS,CEM	.00265	.00267	.00266	.00807	.00261	.03153	.00352	.00094	.00274	.00172
15	FERR METAL	.00162	.00109	.00072	.00113	.00066	.00411	.00069	.00020	.00100	.00082
16	NONFER MET	.00063	.00038	.00028	.00063	.00029	.00309	.00043	.00012	.00082	.00035
17	FABR METAL	.00340	.00389	.00302	.00343	.00329	.07783	.00760	.00115	.00461	.00295
18	MACHINERY	.00147	.00125	.00143	.00255	.00268	.00445	.00127	.00146	.00598	.00441
19	AEROSPACE	.00005	.00006	.00005	.00006	.00007	.00009	.00005	.00003	.00010	.00011
20	OT TRAN EQ	.00158	.00135	.00172	.00783	.00111	.00195	.00122	.00099	.00273	.00181
21	OTHER MFG	.00441	.00373	.00482	.00508	.00384	.00510	.00389	.00259	.00493	.00427
22	CONSTRUCTN	.02048	.01737	.01586	.01416	.01056	.00908	.00824	.00498	.01086	.00808
23	TRANS SERV	.03436	.04776	.03368	.03860	.04427	.05306	.03575	.01625	.05756	.07331
24	COMM,UTILS	.09552	.08837	.09921	.09028	.07655	.09462	.08532	.05770	.08458	.08323
25	TRADE	.23535	.21628	.25615	.23842	.17737	.22844	.18376	.13552	.23039	.22085
26	FIN,INS,RE	.07761	.06549	.07858	.07919	.05515	.06855	.05805	.04526	.07563	.06811
27	SERVICES	.20669	.16346	.19116	.18094	.14234	.17335	.15480	.10774	.18156	.16124
28	VAL ADDED	1.35861	1.13457	1.48621	1.51400	.92793	1.27447	1.02941	.85961	1.34827	1.22186

1972 WASHINGTON INDUCED INVERSE COEFFICIENTS TABLE

		11 PAPER PROD	12 PRINTING	13 CHEM,PETRO	14 GLASS,CEM	15 FERR METAL	16 NONFER MET	17 FABR METAL	18 MACHINERY	19 AEROSPACE	20 OT TRAN EQ
1	FIELD CROP	.00445	.00506	.00270	.00505	.00499	.00301	.00380	.00406	.00333	.00347
2	LIVESTOCK	.01605	.01826	.00954	.01819	.01800	.01085	.01371	.01465	.01201	.01249
3	OTHER AGRI	.00585	.00661	.00352	.00678	.00651	.00393	.00496	.00530	.00435	.00453
4	FOR,FIS,MI	.02001	.00340	.00228	.09458	.00361	.00307	.00243	.00262	.00194	.00273
5	MEAT,DAIRY	.02742	.03116	.01628	.03110	.03073	.01854	.02340	.02501	.02051	.02131
6	CANN,BEV	.01183	.01345	.00702	.01343	.01324	.00797	.01009	.01078	.00889	.00918
7	OTHER FOOD	.00918	.01035	.00618	.01038	.01021	.00618	.00777	.00830	.00685	.00723
8	TEXT,APPAR	.00183	.00205	.00107	.00218	.00202	.00161	.00155	.00165	.00135	.00185
9	LUMB,WOOD	.11740	.00764	.00212	.00620	.00559	.00209	.00276	.00415	.00193	.00790
10	PLYWOOD	.01213	.00089	.00026	.00057	.00035	.00020	.00026	.00031	.00021	.00308
11	PAPER PROD	1.11913	.06101	.00770	.02148	.00615	.00395	.00608	.00603	.00569	.00495
12	PRINTING	.01069	1.02448	.00651	.01192	.01272	.00691	.00875	.01025	.00757	.00817
13	CHEM,PETRO	.05436	.01851	1.03037	.02830	.02006	.01502	.01683	.01533	.01131	.01497
14	GLASS,CEM	.00171	.00150	.00129	1.16187	.00372	.00155	.00250	.00282	.00107	.00125
15	FERR METAL	.00097	.00032	.00060	.00054	1.01494	.00141	.05004	.02671	.00082	.01522
16	NONFER MET	.00097	.00021	.00051	.00031	.00147	1.18032	.03897	.00733	.00050	.00430
17	FABR METAL	.00357	.00185	.00365	.00327	.00390	.00212	1.03270	.01184	.00371	.00751
18	MACHINERY	.00335	.00135	.00192	.00262	.01523	.00539	.01987	1.04952	.00633	.00590
19	AEROSPACE	.00009	.00006	.00004	.00011	.00014	.00007	.00015	.00629	1.00872	.00006
20	OT TRAN EQ	.00149	.00154	.00081	.00212	.00153	.00094	.00116	.00222	.00105	1.00929
21	OTHER MFG	.00384	.00409	.00291	.00407	.00507	.00254	.00392	.00965	.00478	.00554
22	CONSTRUCTN	.01159	.00861	.00769	.01367	.00870	.00548	.00665	.00841	.00474	.00577
23	TRANS SERV	.05846	.04113	.02237	.07916	.03882	.03269	.02625	.02194	.01421	.01920
24	COMM,UTILS	.11727	.09122	.07577	.12729	.12157	.11064	.08439	.07785	.05619	.06162
25	TRADE	.19547	.20538	.10556	.21274	.23182	.12049	.15929	.17295	.12607	.14640
26	FIN,INS,RE	.06331	.06962	.04096	.07214	.06901	.04294	.05405	.05635	.04415	.04658
27	SERVICES	.16016	.18768	.09909	.15753	.17367	.09677	.13452	.14068	.12838	.11341
28	VAL ADDED	1.15361	1.31479	.68506	1.30560	1.29556	.78008	.98723	1.05564	.86351	.89985

1972 WASHINGTON INDUCED INVERSE COEFFICIENTS TABLE

		21 OTHER MFG	22 CONSTRUCTN	23 TRANS SERV	24 COMM•UTILS	25 TRADE	26 FIN•INS•RE	27 SERVICES	28 CONSUMPTN
1	FIELD CROP	.00443	.00436	.00571	.00578	.00597	.00592	.00596	.00642
2	LIVESTOCK	.01600	.01571	.02044	.02069	.02153	.02136	.02130	.02321
3	OTHER AGRI	.00560	.00648	.00752	.00755	.00780	.00775	.00814	.00837
4	FOR•FIS•MI	.00476	.02368	.00308	.01745	.00328	.00364	.00356	.00277
5	MEAT•DAIRY	.02777	.02683	.03535	.03558	.03674	.03647	.03654	.03960
6	CANN•BEV	.01130	.01159	.01531	.01504	.01586	.01577	.01664	.01705
7	OTHER FOOD	.00917	.00895	.01228	.01237	.01229	.01213	.01273	.01308
8	TEXT•APPAR	.00246	.00186	.00238	.00237	.00254	.00250	.00303	.00257
9	LUMB•WOOD	.01935	.04630	.00272	.00354	.00352	.00355	.00273	.00221
10	PLYWOOD	.00131	.01408	.00038	.00039	.00064	.00060	.00040	.00033
11	PAPER PROD	.01488	.00688	.00703	.00966	.01323	.01352	.00905	.00702
12	PRINTING	.00995	.01090	.01290	.01581	.03096	.03575	.02829	.01311
13	CHEM•PETRO	.02256	.03329	.04881	.01903	.02136	.01982	.02094	.01816
14	GLASS•CEM	.00259	.06744	.00195	.00201	.00192	.00260	.00200	.00168
15	FERR METAL	.00082	.01501	.00050	.00065	.00040	.00054	.00045	.00031
16	NONFER MET	.00312	.00681	.00023	.00046	.00024	.00030	.00026	.00018
17	FABR METAL	.01029	.03358	.00223	.00340	.00255	.00251	.00239	.00206
18	MACHINERY	.00664	.00510	.00179	.00432	.00178	.00170	.00451	.00131
19	AEROSPACE	.00008	.00008	.00130	.00006	.00005	.00005	.00006	.00004
20	OT TRAN EQ	.00130	.00159	.00323	.00177	.00179	.00178	.00175	.00191
21	OTHER MFG	1.02867	.00826	.00446	.00498	.00596	.00673	.01019	.00483
22	CONSTRUCTN	.00756	1.00699	.01229	.01071	.01156	.02263	.01131	.00786
23	TRANS SERV	.03032	.04330	1.10324	.02942	.03301	.03352	.03201	.02587
24	COMM•UTILS	.07213	.07682	.09581	1.26664	.11322	.12964	.13977	.08577
25	TRADE	.17842	.21854	.21658	.21424	1.23192	.23188	.23423	.23810
26	FIN•INS•RE	.05898	.06457	.08352	.07793	.08834	1.15519	.09063	.08018
27	SERVICES	.14682	.16782	.18646	.19868	.22533	.26200	1.22205	.18488
28	VAL ADDED	1.10507	1.13004	1.42371	1.46244	1.55050	1.53746	1.51347	1.67481