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Publication Date

1998-02-01

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FISHER CENTER FOR REAL ESTATE AND URBAN ECONOMICS

WORKING PAPER SERIES

WORKING PAPER NO. 98-258

INTERNATIONAL TRADE AND CALIFORNIA'S ECONOMY:
SUMMARY OF THE DATA

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By PROFESSOR DWIGHT M. JAFFEE

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International Trade and California's Economy:

Summary of the Data

by

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(Second in a series of working papers on the general topics of Foreign Trade and California's Growth, by Dwight M. Jaffee, Cynthia A. Kroll, Ashok Deo Bardhan, Josh Kirschenbaum, and David Howe)

Working Paper: 98-258

February 1998

Foreign Trade and California's Growth A Series of Working Papers

This working paper is part of a series of papers that report on the results of a 15-month research project funded by the California Policy Seminar under its Policy Research Program. The full series of working papers is listed here.

Kroll, Cynthia A. Foreign Trade and California's Economic Growth: Issues and Research Approach, Working Paper 98-257. Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, 1998.

Jaffee, Dwight M. International Trade and California's Economy: Summary of the Data, Working Paper 98-258. Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, 1998.

Jaffee, Dwight M. International Trade and California Employment: Some Statistical Tests, Working Paper 98-259. Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, 1998.

Kroll, Cynthia A., and Josh Kirschenbaum. *The Integration of Trade into California Industry:*Case Studies of the Computer Cluster and the Food Processing Industry, Working Paper 98-260.
Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, 1998.

Bardhan, Ashok Deo, and David K. Howe. *Globalization and Labor: The Effect of Imported Inputs on Blue Collar Workers*, Working Paper 98-261. Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, 1998.

Bardhan, Ashok Deo, and David K. Howe. *Transnational Social Networks, Transportation Costs, and the Geographic Distribution of California's Exports*, Working Paper 98-262. Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, 1998.

Kroll, Cynthia A. Foreign Trade and California's Economic Growth: A Summary of Findings and Directions for Policy, Working Paper 98-263. Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, 1998.

The work is also reported in two publications of the California Policy Seminar:

The research is summarized in depth in Cynthia A. Kroll, Dwight M. Jaffee, Ashok Deo Bardhan, Josh Kirschenbaum and David K. Howe, Foreign Trade and California's Economic Growth, California Policy Seminar, Berkeley, 1998. A much briefer summary is available in a California Policy Seminar Policy Brief of the same title.

Acknowledgment

I want to express thanks to my colleagues on this project, Cynthia A. Kroll, Ashok Deo Bardhan, Josh Kirschenbaum, and David Howe, for their willingness to share with me their detailed knowledge of the trade, employment, and related data for the United States and the state of California.

International Trade and California's Economy: Summary of the Data

Abstract

This paper presents most of the primary data sets that have been assembled for use in the project, *Foreign Trade and California's Growth*. The data cover the employment, sales, and international trade (imports and exports) activities of all industries for both California and the US as a whole. The data are available primarily at the 3-digit SIC code level, although some 4-digit SIC code data are also used. Historical data are available for at least five previous years.

The discussion summarizes the key features of the California economy that are illustrated by the data and describes the statistical algorithms that were developed and applied in order to create a complete and consistent data set. These data are used to carry out statistical tests of various hypotheses in other papers of the project.

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1 Introduction

A large data set is needed to determine the effects of international trade on the California economy. The data should cover at least the employment, sales, and international trade (imports and exports) of all industries for both California and the US as a whole. The data should be available at a detailed industry level, preferably to the level of 4-digit SIC codes. The industry definitions should be consistent across the employment, sales, and trade data. Historical data should be available for five years or more.

This paper presents most of the main data sets we have assembled for this purpose. The discussion summarizes the key features of the California economy that are illustrated by the data and describes the statistical algorithms that were developed and applied in order to create a complete and consistent data set. These data are used in other papers associated with this project to carry out statistical tests of various hypotheses.

2 Employment Data for California and the US

To understand the links between international trade and the state economy, we first need accurate data on employment, sales, and trade flows. This is not as simple as it might first appear. There are issues regarding the timeliness, consistency, and completeness of the data even at the US level and especially for California (or other states). In the following discussion, we use the computer industry as an example to illustrate some of these issues.

The employment data we have assembled cover California and the US as a whole, for manufacturing and service industries (to 3-digit, and in some cases to 4-digit, SIC codes), going back annually to at least 1987. We have used three primary sources of employment data, each with its own advantages and disadvantages.

The Annual Survey of Manufacturers (ASM) (from the Bureau of the Census)

This source covers only the manufacturing sector (SIC codes 20 to 39, to the 3-digit level), but is also the only source to provide consistent data on sales for the same SIC codes. In addition, every 5 years, a complete *Census of Manufacturers* is taken of all manufacturing firms, the most recent year being 1992. The *Census* is a primary source of 4-digit SIC code data for employment and sales. Although the annual survey uses only a partial sample, the data are calibrated with the most recent census data in order to provide estimates for the universe of all manufacturing firms. In particular, data for California and the US from 1987 to 1994 are now available on a data CD, and new and revised data for 1994 and 1995 have just been released by the Department of Commerce.

Some ASM data are not released at the California state level, in order to protect the confidentiality of individual firms. However, we have developed a statistical methodology to fill in the gaps (see Appendix 1).

We use the ASM data to analyze employment in California's manufacturing sector. The California ASM data are shown in Tables 1A and 1.B for 2-digit and 3-digit SIC codes respectively. The cells shown in bold represent the cases where our algorithm has been used to compute missing values, as described in Appendix 1. The line labeled "auxiliaries," near the bottom of each table, refers to manufacturing employment in auxiliary service centers (such as research labs or garages) that cannot be identified with a single SIC code.

Country Business Patterns (CBP) (from the Bureau of the Census)

This source provides the most complete set of employment data for both the manufacturing and service sectors, often to the level of 4-digit SIC codes, for the US and California. The data are similar to the Annual Survey of Manufacturers for the manufacturing

sector and to the Current Establishment Survey (see below) for the service sectors. The major drawback is that data are currently available only to 1994. Table 2 shows the US and California CBP employment data to the 4-digit level for computer manufacturing (SIC code 357) and computer services (SIC code 737). It is noteworthy that employment in the computer services industry exceeds employment in the computer manufacturing industry by a ratio of more than 4 to 1 at the US level and almost 3 to 1 at the California level.

<u>The Current Establishment Survey (CES)</u> (from the Bureau of Labor Statistics and California's Economic Development Department)

For the US, this source covers both the manufacturing sector and service sector (SIC codes 70 to 89, to at least the 3-digit level). However, at the California state level, only a few series are available at the 3-digit level. Annual data are currently available through 1996.

Table 3 provides a comparison of the CES, CBP, and ASM data for the manufacturing and service industries, including computer manufacturing (SIC code 357) and computer services (SIC code 737). In most cases (total US manufacturing is an example), the values from the 3 sources are very similar. The differences that do exist are due to alternative definitions, collection methods, and revisions. A very large difference occurs, however, in the computer manufacturing sector (SIC code 357), where the CES data are substantially higher for both the US and California. This is due to different SIC code definitions, and to the fact that the CES data include auxiliary employment in the SIC code. For the computer service industry (SIC code 737), there are no data from the Annual Survey of Manufacturers by definition; and no California data are available from the CES.

Location Quotients for California Employment

The employment structure of California and the US can be compared with location quotients for each industry (SIC code). The location quotient is the ratio between the proportion of California's employment in SIC code i and the proportion of US employment in the same SIC code. The location quotient for industry i is thus defined as:

(1)
$$LQ_{i} = \frac{E_{i}^{CA}/E_{r}^{CA}}{E_{i}^{US}/E_{r}^{US}}$$

where:

E = employment,

CA = California,

US = United States

i = SIC code i

T = total for all SIC codes.

The location quotients for California's manufacturing employment (based on the ASM data) are shown in Tables 4.A and 4.B for 2-digit and 3-digit SIC codes respectively. Starting with the 2-digit data in Table 4.A, most of the values are relatively stable over the years, although some trends are evident (such as the growth of Apparel (code 23) and the decline in Transportation equipment, (code 37)). The rank order based on the 1995 value is shown in column 2. Scientific instruments (code 38), Apparel (code 23), and Electronics (code 36) are the most important industries, each with an employment share more than 50% above the US share. Tobacco (code 21), Textile mills (code 22), and Primary metals (code 33) are the least important industries, each with an employment share less than 50% of the US share. In particular, there appears to be no tobacco manufacturing (code 21) activity in California.

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The 3-digit location quotients, in Table 4.B, follow the same pattern as the 2-digit aggregates, although there can be substantial variation within each group of 3-digit codes. For example, the 2-digit location quotient for food products (code 20) in 1995 is just slightly above 1.0, while the 3-digit location quotient for Meat products (code 201) is only 0.40 and the location quotient for Canned food products (code 203) is 2.14. Similarly, the 2-digit location quotient for transportation equipment (code 37) is about 1.0, but the quotient for Missiles and space vehicles (code 376) is over 4.7, while the quotient for motor vehicles (code 371) is 0.37.

Table 4.C provides a separate listing of the 3-digit location quotient data based on the 1995 rank. This shows, for example, that Missiles and space vehicles (code 376) has the highest location quotient. It is instructive and perhaps surprising that Luggage (code 316) and Women's outerwear (code 233) also have very high location quotients. At the other end, several Tobacco and Fabric mill codes show little or no California manufacturing employment.

The location quotients for California's computer manufacturing employment and service employment at the 4-digit level (based on the CBP data) are shown in Table 5. The overall location quotient in 1994 for California's computer manufacturing (SIC 357) is 2.63, and California is most intensive in computers, storage devices, and terminals. For computer services (SIC code 737), the overall location quotient in 1994 for California is 1.36, and California is most intensive in prepackaged software.

3 Sales Data

Sales data are available for manufacturing firms from the Annual Survey of

Manufacturers (ASM), the same source just described for employment. We have constructed an
algorithm that allocates values for missing California data, in the same manner described for the

employment data (see Appendix 1). The associated *Census of Manufacturers*, taken every 5 years, is a source of 4-digit SIC code sales data that are otherwise not available.

The California data for sales are shown for Tables 6.A and 6.B for 2-digit and 3-digit SIC codes respectively. These data are formally referred to as the "value of shipments" in the ASM reports and are measured in million of current dollars. These shipments include reshipments of the same goods between different producers, and therefore will exceed, to an unknown amount, the industry-level data for value added that are provided in the state-level national income and product accounts. The cells shown in bold represent the cases where our algorithm has been used to compute missing values, as described in Appendix 1.

Sales data are available for service firms, but only at the US level, from the *Annual Survey of Services* (ASS), a new survey from the Department of Commerce. The data are illustrated in Table 7. This table shows that nationwide sales in 1995 for computer services (SIC code 737) were over \$152 billion. This is almost 5 times as large as the sales in 1995 for computer manufacturing (SIC code 357), shown in Table 5.B.

4 <u>International Trade Data</u>

For the United States, detailed international trade data (imports and exports) are available for manufactured goods, while some aggregated data are available for traded services. For California, only derived data are available for goods exports and no data are available for either imported goods or for traded services. In this section, we first describe the available international trade data and then describe a methodology that could be applied to generate estimates of California's imported goods.

United States International Trade in Manufactured Goods

US international trade data for 2-digit and 3-digit SIC codes are currently being revised by the Department of Commerce, but preliminary estimates are available. Custom's Reports are the basic source of all US trade data for goods. These reports, however, do not classify US international trade data by industry with the same SIC codes that are used for the *Annual Survey of Manufacturers*. Therefore, there is the need to "harmonize" the industry coding. This is being carried out separately by the International Trade Administration and by a project at the National Bureau of Economic Research headed by Professor Rob Feenstra. We focus here on the more recent data, released by the International Trade Administration, which classifies imports and exports by 2-digit and 3-digit SIC codes from 1989 to 1995.

International Trade Shares for the US

The trade share for a SIC code is defined as the amount of international trade (exports, imports, or net exports) relative to the net domestic supply of the same good. In particular, the gross export (GXS), import (GIS), and net export (NXS) shares for industry i are written as:

$$(2a) \quad GXS_i = \frac{X_i}{S_i + I_i - X_i}$$

$$(2b) \quad GISi = \frac{Ii}{Si + Ii - Xi}$$

$$(2c) \quad NXSi = \frac{Xi^{-}Ii}{Si^{+}Ii^{-}Xi}$$

where:

 GXS_i = export share for SIC code i,

 GIS_i = import share for SIC code i,

 NXS_i = net export share for SIC code i,

 I_i = imports for code i,

 X_i = exports for code i,

 S_i = domestic shipments for code i.

In each equation, the denominator is the net domestic supply in industry i, consisting of domestic shipments plus imports minus exports. The export (GXS) and import (GIS) shares represent the "gross" level of trade, whereas the net export share (NXS) shows the net effect of exports minus imports. In many cases, the positive impacts of exports are exactly offset by the negative effects of imports, so that the *net* export share is the best (and simplest) measure to use when evaluating the effects of international trade on the economy. When this is not true, however, it will be preferable to use the *gross* trade shares. Tables 8.A and 8.B show gross export shares at the 2-digit and 3-digit SIC code levels respectively. Tables 9.A and 9.B show gross import shares at the 2-digit and 3-digit SIC code levels respectively. Table 8.A shows that SIC codes 35 to 38 represent 4 of the 5 highest export shares for the US. At the same time, Table 9.A shows that SIC codes 35 to 38 also represent 4 of the 7 highest import shares for the US. This reflects the intensive international trade patterns on both the export and import sides for the "high tech" sectors, which is why the net export shares are often a more useful measure for evaluating the effect of international trade on the economy.

Net export shares for the US from 1989 to 1995 are shown in Tables 10.A and 10.B for 2-digit and 3-digit SIC codes respectively. Starting with the 2-digit codes, the negative values in the last row of Table 10.A show that, for all US manufacturing, there has been a continuing trade deficit (imports exceeding exports). In 1995, the trade deficit for manufactured goods represented about 3.4% of US domestic demand for all manufactured goods. Among the 2-digit industries, only 5 (food, tobacco, printing, chemicals, and instruments) had a positive trade balance in 1995. Not surprisingly, the US had the largest trade deficits for apparel (SIC 23) and leather (SIC 31). Perhaps more surprisingly, the trade deficit in Electronics (SIC 36) represented almost 8% of US demand for these products.

Table 10.C shows the net export shares for 3-digit SIC codes ranked from the highest (net exports) to the lowest (net imports). The top US export industries are Ordnance, Aircraft engines, and Cigarettes. The major US import industries, with imports exceeding 25% of US demand, are apparel, audio and video equipment, footwear, leather, and luggage.

United States International Trade in Services

The US trade statistics for services are much less detailed than for manufacturing. The top half of Table 11 shows the most detailed trade statistics that are available for services. The section with net exports shows that the US maintains a large trade surplus (positive net exports) in all the shown categories of services. This section also shows data for the net income derived on foreign direct investment in the computer manufacturing and computer services industries.

The importance for the California economy of the large trade surplus in travel services has been discussed in an earlier study of the Fisher Center for Real Estate and Urban Economics.¹ The net export section of Table 11 shows that the trade surplus in computer services is likely to be equally important. Furthermore, the large trade surplus in foreign direct investment income, and in that part of royalties that could be attributed to computer software and service firms, are of the same order of magnitude as the direct net exports of computer services.

The bottom part of Table 11 shows the export, import, and net trade shares for business services and the computer services. These shares are based on the same principle used above to compute the trade shares of manufactured goods (see equation 2 above). Although the values for the net export shares are all positive, they represent a relatively small share of total US domestic sales for services in the business and computer fields.

¹ See Ashok Bardhan, Cynthia Kroll and Dwight Jaffee, "The Growing Role of Foreign Trade in California's Economy," Fisher Center for Real Estate and Urban Economics, Working Paper No. 95-239.

California Trade Data

Custom's Reports can be the source for California export data, since the custom's forms require the "point of origin" of US exports. However, the data must be adjusted for various technical problems, including missing entries and trans-shipment. The federal government has not done this, but adjusted values are available from the Miser Project at the University of Massachusetts, although only at the level of 2-digit SIC codes. In contrast, Custom's Reports cannot readily be used to determine California imports because "point of destination" information is not collected on US imports.

Port data provide another possible source for California trade data (both imports and exports).² The state of California has 3 customs districts: Los Angeles-Long Beach, Oakland-San Francisco, and San Diego, which together cover all points of entry and exit to and from the state, connecting it to foreign destinations. Several points in the state of Nevada are also included in these districts. Since foreign trade data are not available by state in any great detail, the port data for a state are often used as a proxy for the state's actual trade figures. However, this approach obviously overestimates both the imports and the exports of a coastal/littoral state such as California. For example, a good part of the trade with Asia of the 18 states with no customs districts is likely to pass through California ports.

For the regression tests in Bardhan and Howe (1998)³, which require only the changes in variables (not the levels), we use the port data as proxy for California's trade data. We intend, however, to use a modified version of California's port data in our future work, based on the following steps:

Ashok Bardhan had the primary responsibility for the port data discussed in this and the following paragraph.
 See Bardhan, Ashok Deo and David K. Howe, "Transnational Social Networks, Transportation Costs, and the Geographic Distribution of California's Exports, Working Paper 98-262. Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, 1998

- We will use the Miser data for California exports (X_m) , and the port data for California exports (X_c) , to create the separating ratio SR, $SR = X_m/X_c$.
- 2) We will then multiply the imports through California customs districts by SR to provide estimates of California imports.

This assumes that the ratio between the Miser and the port export estimates applies as well on the import side. This requires that the geographic pattern of exports and imports be similar, and that the trade of other states not be growing at a rate dramatically differently from that of California. We may also adjust the import figures for changes in the US share of imports from Asia.

A Proposed Method for Directly Estimating International Goods Imports for California

Our project has developed another methodology that could construct California import (and export) data from the highly detailed input/output data that are produced by the *Census of Manufacturers*. We conclude this paper with a summary description of this methodology.

The basic principle of the proposed method is that California's share of total US imports for each commodity should reflect California's share of the activities that create the demand for that commodity. In particular, goods imported to the United States can be separated into two broad classes: goods imported to meet final demand (for consumption, capital investment, or government use) and goods imported as intermediate products in a production process. The following describes some of the details of this proposed estimation process.

A Basic Identity

We start with a basic identity for each industry i (SIC code i) at the national level:

(3)
$$F_i + U_i = P_i + M_i - X_i$$
, $i = 1, 2...I$, where

F_i = Final demand (C+I+G) for good i (from national income accounts),

U_i = Input demand (use of good i as intermediate input in all industries (including i)).

 $P_i = Production of good i,$

 $M_i = Imports of good i,$

 $X_i = Exports of good i.$

The left hand side of equation [3] is the net domestic <u>uses</u> of good i and the right hand side is its net domestic <u>sources</u>. Data for the US are available for all the series in equation [3], although the final demand data available from the National Income Accounts (NIA) are more aggregated than the SIC code data available for the other variables in equation [3].

It is not feasible to apply equation [3] to California, because the trade variables M and X involve trade between California and other states, as well as international trade. We can compute California imports, however, using California data for production and exports, if we assume that the ratio of California imports to US imports for a particular good equals the ratio of California demand to US demand for that good. The steps are described as follows.

Steps to Compute California Imports

First, compute the amount of intermediate inputs used in California by applying an input/output (I/O) table to California's production levels.⁴ Let u_{ij} be the amount of input i used in the production of \$1 of good j, based on the I/O table. The total amount of input i required for California production is then:

(4)
$$U_i^{CA} = \sum_j u_{ij} P_j^{CA}, i=1,2,...I.$$

Next, compute the amount of final demand in California by using the National Income Accounts (NIA) final demand data for California and the US to allocate California's share of US final demand across SIC codes. Specifically, let $N_j^{CA/US}$ be California's share of US final demand for group j based on the NIA data for California and the United States:

(5)
$$N_j^{CA/US} = \frac{N_j^{CA}}{N_j^{US}}, j = 1, 2, ...J.$$

⁴ It would be best, of course, to apply the California I/O table, except it is released much later than the US table.

California's final demand can be translated from the J NIA categories to the larger number of I SIC codes by applying California's NIA code shares to the US SIC code aggregates. Specifically, for each NIA group j (j = 1, 2, ...J), determine all the associated SIC codes that are components of group j. We can then compute the final demand by SIC codes:

(6)
$$F_i^{CA} = F_i^{US} * \frac{N_j^{CA}}{N_j^{US}}$$
, for each SIC code i associated with NIA, $j = 1, 2...J$

The last step is to compute the California imports. To do this, for each SIC code, we would apply the California share of total demand (final demand plus intermediate inputs) to US imports:

(7)
$$M_{i}^{CA} = \frac{F_{i}^{CA} + U_{i}^{CA}}{F_{i}^{US} + U_{i}^{US}} M_{i}^{US}$$

Extensions of the Procedure

The above procedure assumes that the amount of California imports depends only on total demand, and, in particular, neither on the nearness of California to the exporting country nor on the level of California production of the good. In fact, one might expect California to import more goods, all else the same, when the foreign producer is relatively close. Similarly, California might import less of a given good, all else the same, if California is itself a major producer of the good.

To implement these refinements, we would have to measure and calibrate the likely magnitude of the effects. This would require that we combine our data set of US demand, production, imports, and exports by SIC code with worldwide production of the same goods. This could be based on a series of statistical tests, including the following two.

First, we could run a cross-section regression that determines the ratio of US net trade to US demand for each good as a function of the US share of total world production of that good. Presumably, we would find that US net imports relative to demand are less for those goods where the US is an important international producer. This relationship could then be applied to California's net imports as a function of its share of world or US trade in each good.

Second, we could run a cross-section regression that determines the ratio of US net trade to US demand for each good as a function of the proximity of the world's largest producer of that good. Presumably, we would find that US net imports relative to demand are greater for those goods where the world's largest producer is nearby. This relationship could then be applied to California net imports as a function of the proximity of world producers.

Data limitations and time constraints within the present study have precluded carrying out the computations of California imports described in this section. We hope to do so, however, in future work.

Appendix 1

Data from the *Annual Survey of Manufacturers* at the state level are not publicly released when that would disclose values for individual firms. For the state of California, over the period 1987 to 1995, this affected 2-digit SIC codes 22 and 31 and a number of 3-digit codes.⁵

However, the Department of Commerce does include the concealed values in its larger aggregates. For example, the aggregate manufacturing data for California include the values for the SIC codes 22 and 31, even though these values are not disclosed at the 2-digit level. Similarly, the 2-digit code data include the concealed values for the 3-digit sectors.

Consequently, it is possible to create statistical algorithms to estimate the concealed values.

The values that had to be estimated to complete the data matrix for the California manufacturing sector between 1987 and 1995 are shown in Tables 1 and 6 for employment and sales respectively; the "A" tables refer to 2-digit SIC codes and the "B" tables refer to 3-digit SIC codes. All the cells shown in bold were concealed in the official statistical releases. The specific values shown in these cells have been computed by the following statistical algorithms (the same algorithm was applied to both the employment and sales data):

Values for SIC codes 22 and 31 between 1987 and 1991. In each year, the difference between the state total (called ACT) and the sum over the disclosed 2-digit codes (called SUM) was computed. The difference (ACT-SUM) for each year was then allocated between codes 22 and 31 based on the relative size of these two codes in 1992 (the first year for which full disclosure was available). For example, in 1987, the employment amount to be allocated was 23,000 (=ACT-SUM), 70% of which was placed in code 22 and 20% of which was placed in code 31.

⁵ The 3-digit SIC codes are 221, 222, 223, 224, 226, 228, 229, 231, 237, 261, 262, 301, 302, 311, 313, 314, 315, 316, 317, 319, 325, 328, 333, 339, 373, 374, 375, 385, 387, 391, and 399.

- 2) 3-Digit SIC codes in 1992. The year 1992 has the fewest disclosure problems because that was a complete census (rather than a survey) year. In particular, as shown in Tables 1B and 3B, there were undisclosed values in only 10 3-digit SIC codes, which corresponded to 6 different 2-digit SIC codes.⁶ For each 2-digit code, the difference was computed between the complete count for the 2-digit code (called ACT) and the sum over the corresponding 3-digit codes for which data were available (called SUM). The difference ACT-SUM was then allocated across the 3-digit codes for which values had not been disclosed:
 - a) For the 2-digit SIC codes 22 and 31, only a single 3-digit code was missing, so the missing value was set directly equal to ACT-SUM.
 - b) For each of the other 2-digit codes, data were not disclosed for 2 of the 3-digit codes, so the amount of ACT-SUM had to be allocated across the two 3-digit codes. For SIC codes 26, 30, and 37, the allocation was based on the nearest date for which actual 3-digit level data were available. For example, in Table 1B for code 262, there was actual employment of 2,000 in 1995. The amount of ACT-SUM in that year was 2,300. Therefore, it could be deduced that the missing value for code 261 in 1995 had to be 300. The ratio of codes 261 and 262 in 1995 was then used to allocate the amount of ACT-SUM in all other years of missing data.
 - c) For codes 231 and 237, data were not disclosed for any year in the sample. Therefore, the amount ACT-SUM for code 23 was distributed between 231 and 237 based on the ratios of 231 and 237 at the U.S. level for each year.

⁶ The SIC codes were 223, 231, 237, 261, 262, 301, 302, 315, 374, and 375.

3-Digit Codes in Years Other than 1992. The estimation of missing values for all the years other than 1992 was carried out in a manner similar to that just described for 1992. In particular, for each year, the difference was computed between the complete count for the 2-digit code (called ACT) and the sum over the corresponding 3-digit codes for which data were available (called SUM). The difference ACT-SUM was then allocated across the 3-digit codes for which values had not been disclosed. The algorithm used the same 3 subcases, a, b, and c, just described for 1992. In all cases, the allocation among the 3-digit codes was based on the 1992 values. For example, for codes 277 and 278, for each year 1987 to 1991, the amount ACT-SUM was allocated between 277 and 278 based on the relative values for these codes in 1992

Tabl	e 1.A: Califo	rnia Mar	nufacturi	ng Emp	oyment,	2-digit	SIC Code	es				
Sour	ce: Annual S	urvey of	Manufac	turers, in	thousand	ds						
	Description	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995		
20	Food	162	165	166	169	168	170	171	169	170		
21	Tobacco	0	0	0	0	0	0	0	0	0		
22	Textile mills	16	16	17	17	16	15	14	16	14		
23	Apparel	127	126	118	121	122	132	134	148	167		
24	Lumber	65	65	63	66	57	52	51	52	51		
25	Furniture	64	64	63	58	49		49		52		
26	Paper	37	36	36	36	35	37	37	37	39		
27	Printing	157	156	163	170	164	160	154	157	156		
28	Chemical	54	58	55	55	54	59	57	59			
29	Petroleum	15	15	15	14	14	15	14	15			
30	Rubber	80	85	85	85	77	86	86	83	89		
31	Leather	7	7	7	7	7	6	6		7		
32	Stone, glass	49	52	52	51	47	42	41	41	43		
33	Metal, Prime	35	34	37	35	32	28	27	1			
34	Metal Fabr	144	146	146	143	129		125				
35	Machinery	214	217	212	201	183	183	174		1		
36	Electronic	260	264	250	241	222	227	225	240	258		
37	Transp Eq	296	305	316	305	260	244	202	175	161		
38	Instruments	192	196	190	191	181	176	163	151	4		
39	Misc	38	40	38	41	40	37	36	41			
	Subtotal	2011	2045	2028	2006	1856	1848	1767	1759	1817		
	Auxialiries 93 93 99 100 106 98 113											
	Total	2104	2138	2126	2106	1962	1947	1879	1876	1928		

Table	1.B: California Manufacturin	g Employ	yment, 3	-digt SIC	codes					
	e: Annual Survey of Manufactur									
	Description	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
	Meat Products	15.2	17.9	18.9	19.4	20.4	17.9	17.8	17.1	
	Dairy Products	10.5	10.8	11.6	12.8	12.7	13.3	13.4	12.3	
	Canned Foods	46.1	44.5	49.3	51.5	51.6	48.7	50.6		
204	Grain Mill Products	7.7	7.1	7.2	6.9	6.5	7.3	7.3	7.5	
	Bakery Products	22.9	24.0	20.9	21.0	20.5	23.0	23.8	23.8	23.7
	Sugar Products	11.9	12.6	12.5	11.5	11.4	11.1	10.6		
	Fats and Oils	2.3	2.3	2.5		2.1	2.1	1.9		
208	Beverages	23.9	23.9	22.9	24.1	23.1	23.6		24.4	
209	Misc Food	21.7	21.6	20.6	19.4	19.4	23.2	21.7	22.8	
211	Cigarettes	0.0	0.0	0.0	0.0	0.0	0.0			
212	Cigars	0.0	0.0	0.0	0.0		0.0			
213	Other Tobacco	0.0	0.0	0.0	0.0					
214	Tobacco Processing	0.0	0.0 0.2	0.0 0.2	0.0		0.0			
221	Fabric Mills, Cotton	0.2	0.2	0.2	0.2		0.2		1	
222	Fabric Mills, Other	0.3			0.4		0.3			
223	Fabric Mills, Wool	0.2	0.2 0.6	0.2	0.2		0.2			
224	Narrow Fabric Mills	0.6					5.3			
225	Knitting Mills	5.1	4.3							
226	Textile Finishing	2.0	2.0	2.1						
227	Carpets and rugs	3.7	4.7	3.3						
228	Yarn/Thread Mills	0.9	0.9							
229	Misc Textile Goods	2.9			0.6					
231	Men's & Boys' Outer	0.7	0.7	0.7						1
232	Men's/Boys' Furnish	14.1	14.1							
233	Women's Outerwear	75.1	74.8							
234 235	Women's Underware	4.9 0.9								
236	Hats, Caps, Millinery Girls' Outerwear	5.1						·		
237	Fur Goods	0.01	1							
238		3.8								
239	Misc Apparel Fabricated Textiles	22.2								
241	Logging	5.2								
242	Saw/Planing Mills	16.8								
243	Millwork, Plywood	24.2								
244	Wood Containers	4.1								
245	Wood Buildings	5.1								
249	Misc Wood Products	9.2								
251	Household Furniture	34.4								
252	Office Furniture	10.0								
253	Public Building Furni	2.7								
254	Store Fixtures	9.0								
259	Misc Furniture	8.2								
261	Pulp Mills	0.3								
262	Paper Mills	1.9								
263	Paperboard Mills	2.0	1	1						
265	Paperboard Boxes	17.1								
267	Convert Products	15.2								
271	Newspapers	52.1								
272	Periodicals	9.0				9.9	11.1			
273	Books	8.2		8.8	9.7	10.2				
274	Misc Publishing	8.4	8.0	7.7	8.2					
275	Commercial Printing	57.7			67.3	62.3				
276	Business Forms	5.3					4.3	3 4.2	2 4.	3 4.3
277	Greeting Cards	0.3						3 0.4	4 0.	
278	Blankbooks binding	7.5	7.5	6.4	7.3	3 7.5	8.2	2 7.8	8.	4 7.5

	1.B: California Manufacturin			-digt SIC	codes					
Source	e: Annual Survey of Manufactu	rers, in th	ousands							
		144000	1/4000	1/4000	V(4000	V4004	V4000	Y1993	Y1994	Y1995
	Description	Y1987	Y1988	Y1989	Y1990	Y1991 6.9	Y1992 7.5	7.0	7.5	7.4
	Printing Trade	8.0	8.2	7.1	6.9 4.5	4.6	4.1	4.7	3.7	3.5
	Inorganic Chemicals	3.4	3.6	3.4			2.0	1.8		
	Plastic & Synthetics	1.6	1.8	1.7	2.2	2.2		23.3		
	Drugs	19.6	21.0	19.3	17.7	16.3	23.6 12.6	11.7		
	Soap, Cleaners, etc	10.8	12.5	11.8		12.1	5.4	5.2		4.9
	Paints and Allied	6.4	6.3	5.9	6.1 2.2	6.0 2.3	1.5	1.5		2.6
	Organic Chemicals	3.5	3.3	2.2 2.6		2.3	2.7	2.3		
	Ag Chemicals	1.8	1.8			8.0	7.3	6.6		
	Misc Chemicals	7.0	7.3	8.0 11.7	10.6		11.6			
	Petroleum Refining	11.6	11.3 2.2	2.3			2.1	2.1		
	Paving/Roofing Mat	1.2	1.3	1.3	1.3	1.4	1.1	1.0		
	Misc Petroleum	0.5	0.5	0.6			0.7	0.7		
	Tires/Inner Tubes		L.		f		2.6	2.6		
	Footwear, rub/ plastic	1.7	1.6	1	1		4.1	4.2		
	Rubber belting ETC	3.3	3.3							
	Rubber Products, nec	8.2								
308	Misc Plastics	66.2		0.6			<u> </u>	0.6		
	Leather Tanning	0.8	0.8	0.6				0.0		1
	Footware cut stock	<u> </u>	1.4				1.2	1		
	Footwear, Exc Rub	1.4		1			1	1		
315	Leather Gloves	0.1	0.1		1	t	·			
316	Luggage	1.2								
317	Personal Leather	1.2								
319	Leather Goods, nec	1.7	·							
321	Flat Glass	1.2								
322	Glassware, Pressed	8.5								
323	Purchased Glass	5.1								
324	Cement, Hydraulic	2.3								
325	Structural Clay	1.8								
326	Pottery and Related	4.5								
327	Concrete, Gypsum	19.8								
328	Cut Stone Products	0.8								1
329	Nonmetallic Mineral	5.0								
331	Blast Furnace	6.2								
332	Iron/Steel Foundries	6.0								
333	Primary Nonfer Met	0.8								
334	Second Nonfer Met	1.5								
335	Nonferrous Rolling	9.2								
336	Nonfer Foundries	9.1								
339	Misc Primary Metal	2.2								
341	Metal Containers	7.3								
342	Cutlery, Hand Tools	13.7								
343	Plumbing & Heating	7.5								
344	Fabricated Structural	40.7								
345	Screws, Bolts, Etc	15.2								
346	Metal Forgings	14.2								
347	Coating, Engraving	18.6								
348	Ordnance, nec	6.1			2 4.4					
349	Misc Fabr Metals	20.8								
351	Engines/Turbines	7.0								
352	Farm/Garden Mach	3.5								
353	Construction Equip	7.8								
354	Metalworking Mach	13.9								
355	Spec Indus Mach	15.6 17.3								

	1.B: California Manufacturi				codes					
Sourc	e: Annual Survey of Manufact	urers, in th	ousands							-
SIC	Description	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
357	Computer/Office Eqp	92.5		89.9	84.0		77.5	69.4	60.8	65.1
358	Refrigeration Mach	11.7		10.6	10.7	10.5	9.8	9.8	9.8	9.6
359	Indus machinery, nec	45.2		45.4	41.6	38.9	35.7	36.0	34.3	41.2
361	Electric Trans Equip	4.9		4.4	4.2	3.9	2.9	3.2	2.4	2.8
362	Electrical Indust App	11.8	12.5	11.3	10.9		10.7	10.2	10.3	
363	Household App	3.3		2.7	2.5		2.5	2.0	2.1	2.2
364	Lighting/Wiring Equip	15.2	15.6	14.2		11.2	13.2	13.8	12.9	
365	Audio/Video Eqp	7.4	8.7	8.5				8.6	8.4	
366	Communication Eqp	44.9	46.9	43.6					47.0	
367	Electronic Comp	145.0	144.1	139.2	133.2		126.4		135.3	
369	Misc Electrical	27.3						20.8	21.4	
371	Motor Vehicles Eqp	34.0	33.3	35.0			29.9		30.7	
372	Aircraft and Parts	125.0	125.8	141.5	148.2			88.2		
373	Boat Build/Repair	13.8	12.9	12.7	12.1		. [11.5		
374	Railroad Equipment	0.2	0.2	0.2						
375	Motorcycles, Bicycles	1.5	1.5	1.7	1.7					
376	Missiles/Space Veh	114.2	124.3	117.7						
379	Misc Transportation	7.4	6.9	6.8	6.5	5.7	6.8			
381	Navigation Equipment	99.5	96.5	88.6						
382	Measur Instruments	51.5								
384	Medical Instruments	34.0	37.4							
385	Ophthalmic Goods	2.3						- L		
386	Photographic Eqp	4.5	5.0							
387	Watches, Clocks	0.2	2 0.2	0.2						
391	Jewelry, Silverware	3.7	3.8							
393	Musical Instruments	1.3	1.3	1.6	1.7	1.7				
394	Toys/Sporting Goods	9.7	7 10.4	10.7	12.6	12.6				
395	Pens, Pencils	4.4	4.8	4.2	4.3					
396	Costume, Jewelry	1.9	1.8	2.3						
399	Misc Manufacturing	17.1	18.0							
	Subtotal	2011	2045							
	Auxialiries	93								
	Total	2104	1 2138	2126	2106	1962	1947	1879	1876	1928

Table 2:	Computer Industry E	mployme	nt	T			T		
	Business Patterns, in the								
United S	tates								
SIC	Description	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994
1	All Manufacturing	19003	19262	19492	19173	18383	18162	18183	18098
	Computer and Office	374	338	326	301	288	255	235	224
	Computers	0	147	144	126	121	107	95	91
	Storage Devices	0	43	45	42	33	32	41	42
	Terminals	323	15	16	14	14	11	8	9
	Peripherals	8	91	77	78	81	71	57	56
	Calculating	6	13	12	9	8	6	7	7
	Nec	37	28	30	28	27	26	27	19
-									
	All Services	24140	25143	27339	28800	29575	30654	32259	33253
737	Computer and Data	619	679	722	773	799	834	966	984
	Programming services		203	208	217	221	228	262	272
	Prepackaged software	273	58	68	76	87	100	142	150
7373	Integrated systems	0	64	72	82	85	94	115	103
	Data processing	259	218	223	229	225	222	236	237
7375	Information retrieval	0	14	14	17	20	22	31	37
7376	Facilities managemen	0	22	23	24	25	25	31	30
7377	Rental and leasing	0	9	11	15	13	10	8	8
7378	Maintenance	0	50	51	53	54	56	62	56
7379	N.e.c	86	39	46	51	59	66	76	88
Californ	ia								
	Description	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994
	All Manufacturing	2100	2141	2186	2167	2055	1941	1879	1780
357	Computer and Office	93	96	93	87	84	71	64	60
	Computers	0	48	48	43	12	36	30	29
	Storage Devices	0	21	19	19	4	11	15	13
	Terminals	88	3	4	3	19	4	3	3
	Peripherals	0	18	18	18	0	17	13	13
	Calculating	1	4	2	1	2	0	1	1
3579		2	3	2	2	11	2	2	1
00.0			-						
	All Services	2977	3116	3375	3609	3661	3679	3833	3863
737	Computer and Data	101	110	115	123	126	130	156	164
	Programming services		38	36	37	38	37	39	43
	Prepackaged software		12	15	18	22	24	41	45
	Integrated systems	0	12	14	18	17	16		
	Data processing	32	28	28	28	23		26	
	Information retrieval	0	1	1	20	23			
			3	2	2	3		6	
	Facilities managemen	0	1	1	1	1			
	Rental and leasing	0	9	8	9				
	Maintenance		5			8			<u> </u>
/3/9	N.e.c	14	5	8		1 8	10	<u> </u>	13

Table 3: Employme	ent Data,	A Comp	arison o	f 3 Source	es					
in thousands	· · · · · · · · · · · · · · · ·	•								
CES = Current esta	blishmen	t survey								
ASM = Annual surv	ey of mai	nufacture	rs							
CBP = County busin	ness patte	erns								
US Manufacturing	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995	Y1996
CES	18999	19314	19391	19076	18406	18104	18075	18321	18468	18282
ASM	18950	19147	19041	18840	18062	18233	18233			
CBP	19003	19262	19492	19173	18383	18162	18183	18098		
110.057		<u> </u>								
US 357	101	450	450	400	415	391	363	354	352	363
CES	461	459	459	438		251	243		250	
ASM	328	1	305	288			235	<u> </u>		
СВР	374	338	326	301	288	255	235	224		
US 737	[
CES	629	673	736	772	797	836	893	959	1090	1208
CBP	619	679	722	773	799	834	966	984		
CA Manufacturing										
CES	2060	2097	2107	2069	1971	1891	1805	1777	1794	1853
ASM	2104			L		1947	1879	1863	1928	1
CBP	2100		2186				1879	1780		
CA 357					454				0.5	00
CES	103		1	1						1
ASM	93	<u> </u>								1
CBP	93	96	93	87	84	71	64	60)	
CA 737										
СВР	101	110	115	123	126	130	156	164		

Table 4.A: California Manufacturing Employment Location Quotients, 2-digit SIC Codes												
		ual Survey of Ma										
Rank	ed by	3-digit SIC cod	es and	1995 va	ues							
	1995											
SIC	Rank	Description	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995	
20	5	Food	0.99	0.99	1.00	1.01	1.03	1.04	1.08	1.08	1.07	
21	20	Tobacco	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
22	19	Textile mills	0.21	0.21	0.23	0.24	0.25	0.22	0.22	0.24	0.22	
23	2	Apparel	1.03	1.03	1.02	1.07	1.15	1.23	1.31	1.50	1.68	
24	16	Lumber	0.81	0.80	0.81	0.84	0.81	0.73	0.71	0.70	0.66	
25	9	Furniture	1.11	1.10	1.09	1.01	0.95	1.00	0.98	0.93	0.97	
26	17	Paper	0.53	0.52	0.49	0.51	0.51	0.54	0.57	0.58	0.59	
27	8	Printing	0.92	0.91	0.95	0.97	1.00	0.98	0.99	1.02	0.98	
28	15	Chemical	0.59	0.61	0.57	0.57	0.58	0.64	0.65	0.70	0.67	
29	4	Petroleum	1.15	1.12	1.20	1.11	1.15	1.19	1.19	1.34	1.27	
30	12	Rubber	0.85	0.87	0.85	0.86	0.83	0.87	0.88	0.83	0.84	
31	14	Leather	0.45	0.45	0.50	0.53	0.57	0.55	0.55	0.70	0.76	
32	13	Stone, glass	0.82	0.87	0.88	0.88	0.89	0.83	0.84	0.82	0.83	
33	18	Metal, Prime	0.44	0.41	0.44	0.43	0.43	0.38	0.40	0.38	0.39	
34	11	Metal Fabr	0.87	0.86	0.87	0.87	0.86	0.85	0.88	0.90		
35	10	Machinery	1.02	1.00	0.97	0.94	0.93	0.97	0.95	0.88	0.90	
36	3	Electronic	1.46	1.46	1.41	1.41	1.40	1.45	1.50	1.57	1.61	
37	7	Transp Eq	1.44	1.47	1.53	1.51	1.44	1.36	1.22	1.10	1.01	
38	1	Instruments	1.72	1.74	1.72	1.77	1.81	1.78		1.77	1.79	
39	6	Misc	0.90	0.90	0.87	0.93	1.01	0.93	0.91	1.03	1.06	
		Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Table	4.B: C	alifornia Manufacturing Emp	loyment	Locatio	n Quotie	ents				1	
		ual Survey of Manufacturers an									
Ranke	d by 3	-digit SIC codes and 1995 valu	es								
	-					_					
	1995										
	Rank	Name	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
201	104	Meat Products	0.39	0.44	0.46	0.45	0.47	0.41	0.41	0.39	0.40
202		Dairy Products	0.65	0.66	0.73	0.81	0.84	0.89		0.91	0.90
203		Canned Foods	1.95	1.89	2.03		2:16	2.09		2.18	
204		Grain Mill Products	0.66	0.61	0.61	0.59	0.57	0.62		0.70	
205		Bakery Products	0.93	0.95	0.86		0.89	0.98		1.04	
206		Sugar Products	1.16	1.24	1.20	1.09	1.12	1.11			1.20
207		Fats and Oils	0.68	0.66	0.72	0.75	0.68	0.69		0.71	0.74
208		Beverages	1.31	1.32	1.34		1.44	1.50			
209		Misc Food	1.21	1.19	1.16		1.12	1.28			
211		Cigarettes	0.00	0.00	0.00		0.00	0.00		0.00	
212		Cigars	0.00	0.00	0.00		0.00	0.00			
213		Other Tobacco	0.00	0.00	0.00		0.00	0.00			
214		Tobacco Processing	0.00	0.00	0.00		0.00	0.00			
221		Fabric Mills, Cotton	0.03	0.03	0.03		0.03	0.03			
222		Fabric Mills, Other	0.03	0.03	0.03		0.03	0.03			
223		Fabric Mills, Wool	0.14	0.12	0.12		0.11	0.13			
224		Narrow Fabric Mills	0.27	0.25	0.29		0.26	0.27	0.27	0.24	
225		Knitting Mills	0.22	0.19	0.26		0.36	0.25			
226		Textile Finishing	0.32	0.33	0.36			0.33			
227		Carpets and rugs	0.61	0.75	0.53		0.60	0.59		0.58	
228		Yarn/Thread Mills	0.07	0.07	0.08		0.07	0.08			
229		Misc Textile Goods	0.49	0.48	0.50		0.43	0.44			
231		Men's & Boys' Outer	0.10	0.10	0.11			0.16			
232		Men's/Boys' Furnish	0.44		0.47		0.44	0.47		0.64	
233		Women's Outerware	1.90	1.94	1.86		2.18	2.38			
234		Women's Underware	0.64	0.45			0.68	0.60			
235		Hats, Caps, Millinery	0.47	0.50	0.53		0.50	0.54			
236		Girls' Outerware	0.63	0.66	0.70		0.75	1.04			
237		Fur Goods	0.06	0.06	0.06			0.16			
238		Misc Apparel	0.82	0.87	1.16		1.11	1.36			
239		Fabricated Textiles	0.99	0.99	0.96		1.01	1.01			
241		Logging	0.53		0.59		0.63	0.46			
242		Saw/Planing Mills	0.82					0.68			
243	72	Millwork, Plywood	0.89		0.92			0.80			
244		Wood Containers	0.98								
245		Wood Buildings	0.69					0.47			
249		Misc Wood Products	0.90								
251		Household Furniture	1.07								
252		Office Furniture	1.09								
253		Public Building Furni	1.09					0.92			
254		Store Fixtures	1.07					0.88			
259		Misc Furniture	1.45					1.60			
261		Pulp Mills	0.19					0.20			
262		Paper Mills	0.13								
263		Paperboard Mills	0.34								
265		Paperboard Boxes	0.78								
267		Convert Products	0.60								
271		Newspapers	1.06								
272		Periodicals	0.72					0.88			
273		Books	0.64								
274		Misc Publishing	1.06								
275		Commercial Printing	0.92								
276	51	Business Forms	0.88	0.87	0.89	0.82	0.84	0.82	0.86	0.93	0.9

Table	4.B: C	alifornia Manufacturing Emp	loyment	Locatio	n Quotie	ents					
Source	e: Anni	ual Survey of Manufacturers an	d text eq	uation (1)					Ů.	
		-digit SIC codes and 1995 valu		<u> </u>							
	1995										
SIC	Rank	Name	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
277		Greeting Cards	0.11	0.12	0.10	0.10	0.10	0.12	0.17	0.17	0.13
278		Blankbooks binding	0.96	0.96	0.83	0.92	0.97	1.13	1.19	1.21	1.07
279		Printing Trade	1.02	1.01	0.94	0.91	1.01	1.06		1.27	1.23
281		Inorganic Chemicals	0.32	0.33	0.31	0.39	0.40	0.36	0.48	0.41	0.41
282		Plastic & Synthetics	0.12	0.12	0.11	0.15	0.16	0.14	1	0.14	0.14
283		Drugs	1.00	1.05	0.11	0.15	0.80	1.12	1.12	1.27	1.19
284		Soap, Cleaners, etc	0.80	0.86	0.80	0.84	0.89	0.94		0.99	0.93
285			1.02	0.80	0.80	0.99	1.06	0.97	0.99		0.90
		Paints and Allied									
286		Organic Chemicals	0.25	0.23	0.16	0.15	0.16	0.11	0.12	0.14	0.21
287		Ag Chemicals	0.39	0.38	0.55	0.55	0.53	0.62	0.56	0.59	0.44
289		Misc Chemicals	0.72	0.76	0.80	0.77		0.80		0.63	0.64
291		Petroleum Refining	1.37	1.35	1.42	1.29		1.42		1.55	1.46
295		Paving/Roofing Mat	0.72	0.67	0.77	0.72		0.75		1.02	1.00
299		Misc Petroleum	0.81	0.86	0.87	0.86		0.73		0.86	0.82
301		Tires/Inner Tubes	0.07	0.06	0.07	0.07		0.11		0.10	0.12
302		Footwear, rub/ plastic	1.38	1.22	1.56	1.62	1.86	1.72		2.04	1.90
305	96	Rubber belting ETC	0.56	0.51	0.47	0.53	0.63	0.72	0.74		0.51
306	85	Rubber Products, nec	0.69	0.80	0.70	0.69	0.69	0.72	0.69	0.65	0.62
308		Misc Plastics	0.97	1.00	0.98	0.98	0.93	0.96	0.97	0.92	0.94
311		Leather Tanning	0.49	0.47	0.44	0.34		0.39			0.30
313		Footware cut stock	0.21	0.22	0.18	0.11	0.15	0.25			0.21
314		Footwear, Exc Rub	0.17	0.17	0.14	0.11	0.17	0.22			0.47
315		Leather Gloves	0.33	0.34	0.32			0.33			
316		Luggage	0.93	1.03	1.91	2.50		1.42			
317		Personal Leather	0.62	0.60	0.54			0.82			
319		Leather Goods, nec	2.17	2.07	1.44		1.24	1.74			1.58
321		Flat Glass	0.72	0.70	0.76			1.00			
322		Glassware, Pressed	0.72	1.02	1.03			0.85			
323											
		Purchased Glass	0.88	0.97	0.84			0.70			1
324		Cement, Hydraulic	1.06	1.04	1.04			1.08			
325		Structural Clay	0.47	0.55	0.60			0.50			
326		Pottery and Related	1.04	1.14	1.14			1.05			
327		Concrete, Gypsum	0.86	0.91	0.95			0.90			
328		Cut Stone Products	0.53	0.59	0.65			0.52			
329		Nonmetallic Mineral	0.60								
331		Blast Furnace	0.22		0.22			0.23	0.24		
332		Iron/Steel Foundries	0.41	<u> </u>				0.36			
333		Primary Nonfer Met	0.23	0.21	0.21			0.21		0.17	0.17
334	50	Second Nonfer Met	1.06							0.96	0.98
335		Nonferrous Rolling	0.50					0.39			
336		Nonfer Foundries	1.01					0.78			
339		Misc Primary Metal	0.60					0.64			
341		Metal Containers	1.33		1.27			1.32			
342		Cutlery, Hand Tools	0.83								
343		Plumbing & Heating	1.45								
344											
		Fabricated Structural	0.88					0.88			
345		Screws, Bolts, Etc	1.41					1.30			
346		Metal Forgings	0.49						 		
347		Coating, Engraving	1.46					1.44			
348		Ordnance, nec	0.61								
349		Misc Fabr Metals	0.70				0.66				
351		Engines/Turbines	0.71								
352	118	Farm/Garden Mach	0.38	0.34	0.31	0.28	0.21	0.22	0.26	0.25	0.24

Table	4.B: C	alifornia Manufacturing Emp	loyment	Locatio	n Quotie	nts					
Source	: Anni	ual Survey of Manufacturers an	d text eq	uation (1)						
Ranke	d by 3	-digit SIC codes and 1995 valu	es								
	1995										
SIC	Rank	Name	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
353	112	Construction Equip	0.36	0.33	0.33	0.32	0.31	0.28	0.30	0.28	0.28
354	101	Metalworking Mach	0.46	0.45	0.43	0.41	0.40	0.44		0.43	0.45
355	31	Spec Indus Mach	0.81	0.81	0.81	0.81	0.92	0.97	0.99	1.11	1.19
356	89	Genl Indus Mach	0.63	0.64	0.72	0.74	0.74	0.65		0.61	0.57
357	4	Computer/Office Eqp	2.49	2.47	2.59		2.48	2.84		2.49	2.50
358	100	Refrigeration Mach	0.54	0.47	0.48	0.50		0.51		0.50	0.47
359		Indus machinery, nec	1.36	1.33	1.27	1.18		1.09		0.99	1.05
361	108	Electric Trans Equip	0.56	0.50						0.33	
362	86	Electrical Indust App	0.63	0.66			0.59	0.63		0.61	0.61
363	122	Household App	0.25	0.23			0.20			0.18	
364		Lighting/Wiring Equip	0.80	0.82			0.70				0.82
365		Audio/Video Eqp	1.47	1.67	1.59			1.64			
366		Communication Eqp	1.52	1.54						1.87	2.05
367		Electronic Comp	2.34	2.29						2.38	
369		Misc Electrical	1.28	1.32	1.26	1.44	1.31	1.38			
371		Motor Vehicles Eqp	0.40	0.40							
372		Aircraft and Parts	1.85	1.85							
373	81	Boat Build/Repair	0.69	0.62	0.62	0.60					
374		Railroad Equipment	0.07	0.05							
375		Motorcycles, Bicycles	1.79	1.75							
376		Missiles/Space Veh	4.71	4.87							
379		Misc Transportation	1.32	1.28	1.40			1.40	1.16		
381		Navigation Equipment	2.37	2.34							
382		Measur Instruments	1.59	1.67							
384	16	Medical Instruments	1.47	1.53	1.61	1.77					
385	24	Ophthalmic Goods	0.84	0.86	0.75	0.96					
386	78	Photographic Eqp	0.45	0.50	0.55	0.66					
387		Watches, Clocks	0.14	0.14							
391	48	Jewelry, Silverware	0.66	0.65							
393	32	Musical Instruments	0.97								
394		Toys/Sporting Goods	0.96								
395		Pens, Pencils	1.35	1.42	1.17						
396		Costume, Jewelry	0.52			0.72	0.82				
399		Misc Manufacturing	0.92		0.81	0.80	0.89				
		Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

		California Manufactu					Quotie	1115			
Source	e: An	nual Survey of Manufa	4005 V	and tex	(i equal	1011 (1)					
Kanke	ea by	3-digit SIC codes and	1995 V	alues							
400E											
1995	SIC	Name	V1097	V1000	V1080	V1000	V1001	V1002	V1993	Y1994	Y1995
			4.71	4.87	4.68	4.51	4.56	4.89	5.11	4.80	4.74
		Missiles/Space Veh	0.93	1.03	1.91	2.50	2.03	1.42	1.60	2.74	3.70
		Luggage Women's Outerware	1.90	1.03	1.86	1.97	2.03	2.38	2.48	3.02	3.37
		Computer/Office Eqp	2.49	2.47	2.59	2.56	2.48	2.84	2.74	2.49	2.50
		Electronic Comp	2.49	2.29	2.22	2.18	2.18	2.18	2.27	2.38	2.39
		Navigation Equipment	2.37	2.23	2.29	2.14	2.31	2.33	2.32	2.16	2.14
		Canned Foods	1.95	1.89	2.03	2.07	2.16	2.09	2.26	2.18	2.14
		Measur Instruments	1.59	1.67	1.63	1.79	1.81	1.78	1.78	1.95	2.0
		Communication Eqp	1.52	1.54	1.51	1.45	1.38	1.56	1.71	1.87	2.0
		Footwear, rub/ plastic	1.38	1.22	1.56	1.62	1.86		2.04	2.04	1.90
		Plumbing & Heating	1.45	1.48		1.57	1.59	1.53	1.87	1.87	1.82
		Audio/Video Eqp	1.47	1.67		1.69	2.13		1.74	1.79	1.7
		Beverages	1.31	1.32		1.44	1.44		1.55	1.70	1.70
		Motorcycles, Bicycles	1.79	1.75	1.78	1.58	1.34	1.45	1.38	1.48	1.6
		Aircraft and Parts	1.85	1.85	2.06	2.11	1.96	1.90	1.75	1.70	1.6
		Medical Instruments	1.47	1.53	1.61	1.77	1.69	1.64	1.71	1.64	1.62
		Leather Goods, nec	2.17	2.07	1.44	1.02	1.24	I	1.30		1.58
	1	Petroleum Refining	1.37	1.35		1.29	1.32		1.43		1.46
		Misc Furniture	1.45	1.45		1.48	1.41			1.28	1.4
		Misc Electrical	1.28	1.32		1.44	1.31	I			1.4
		Metal Containers	1.33	1.34	1	1.20		I			1.4
	i	Coating, Engraving	1.46	1.36		1.54	1.51	1.44			1
		Pottery and Related	1.04	1.14			1.21			1.12	1.3
		Ophthalmic Goods	0.84	0.86		0.96	0.96			1	
		Misc Food	1.21	1.19	1			1			1
		Toys/Sporting Goods	0.96	0.97			1	4		1.16	1
		Misc Apparel	0.82	0.87		1.19					
		Printing Trade	1.02	1.01			1.01				1.2
		Misc Publishing	1.06			1.10					
		Sugar Products	1.16								
		Spec Indus Mach	0.81	0.81		0.81				1	
		Musical Instruments	0.97	0.92							1
		Drugs	1.00								
		Costume, Jewelry	0.52								
		Girls' Outerware	0.63								
		Newspapers	1.06								
		Periodicals	0.72								·
		Screws, Bolts, Etc	1.41								
		Blankbooks binding	0.96								
		Indus machinery, nec									
		Misc Transportation	1.32								1
		Bakery Products	0.93						1	· · · · · · · · · · · · · · · · · · ·	
		Flat Glass	0.72								
		Cement, Hydraulic	1.06								
		Pens, Pencils	1.35								
		Paving/Roofing Mat	0.72								
		Household Furniture	1.07								
		Jewelry, Silverware	0.66								
		Fabricated Textiles	0.00			1					
		Second Nonfer Met	1.06				1				
		Business Forms	0.88					-			
			0.00								
D2	. 3U8	Misc Plastics Misc Manufacturing	0.97								_

Table	4.C:	California Manufactu	ring E	mployn	nent Lo	cation	Quotie	nts			
		nual Survey of Manufa									
		3-digit SIC codes and									
	ĺ										
1995											
Rank	SIC	Name	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
54	344	Fabricated Structural	0.88	0.89	0.92	0.89	0.87	0.88	0.91	0.95	0.93
55	284	Soap, Cleaners, etc	0.80	0.86	0.80	0.84	0.89	0.94	0.90	0.99	0.93
		Store Fixtures	1.07	1.01	1.08	1.06	1.11	0.88	0.94	0.91	0.92
		Paints and Allied	1.02	0.97	0.94	0.99	1.06	0.97	0.99	1.01	0.90
58	202	Dairy Products	0.65	0.66	0.73	0.81	0.84	0.89	0.95	0.91	0.90
		Commercial Printing	0.92	0.88	0.97	1.02	1.01	0.95	0.96	0.94	0.89
60	249	Misc Wood Products	0.90	0.88	0.90	0.84	0.86	0.90	0.85	0.94	0.89
61	342	Cutlery, Hand Tools	0.83	0.84	0.90	0.92	0.84	0.82	0.86	0.93	0.87
62	327	Concrete, Gypsum	0.86	0.91	0.95	1.00	0.99	0.90	0.92	0.89	0.86
63	265	Paperboard Boxes	0.78	0.78	0.77	0.77	0.78	0.79	0.84	0.88	0.86
64	244	Wood Containers	0.98	0.96	1.10	1.03	1.00	1.06	1.00	0.90	0.83
65	299	Misc Petroleum	0.81	0.86	0.87	0.86	0.97	0.73	0.67	0.86	0.82
		Lighting/Wiring Equip	0.80	0.82	0.76	0.73	0.70	0.82	0.88	0.81	0.82
		Women's Underware	0.64	0.45	0.50	0.58	0.68	0.60	0.64		0.79
		Personal Leather	0.62	0.60	0.54	0.46		0.82	0.91	0.85	0.79
69	252	Office Furniture	1.09	1.04	1.05	0.97	0.74	1.01	0.95	0.89	0.79
		Men's/Boys' Furnish	0.44	0.45	0.47	0.44	0.44	0.47	0.51	0.64	0.77
		Glassware, Pressed	0.97	1.02	1.03	0.96	0.99	0.85	0.85	0.84	0.76
72	243	Millwork, Plywood	0.89	0.90	0.92	0.97	0.92	0.80	0.74	0.78	0.75
73	207	Fats and Oils	0.68	0.66	0.72	0.75	0.68	0.69	0.67	0.71	0.74
74	323	Purchased Glass	0.88	0.97	0.84	0.83	0.90	0.70	0.72		0.73
75	349	Misc Fabr Metals	0.70	0.69	0.67	0.65	0.66	0.72	0.70	0.72	0.73
76	351	Engines/Turbines	0.71	0.83		0.37		0.72			0.73
		Nonfer Foundries	1.01	1.00			1.01	0.78			1
78		Photographic Eqp	0.45								0.69
79		Convert Products	0.60			0.56					0.67
		Grain Mill Products	0.66			0.59		0.62			1
		Boat Build/Repair	0.69								
		Nonmetallic Mineral	0.60	4				4			
	_	Books	0.64								
1		Misc Chemicals	0.72								
		Rubber Products, nec									
		Electrical Indust App	0.63								
		Cut Stone Products	0.53								
		Carpets and rugs	0.61								
		Genl Indus Mach	0.63								
		Saw/Planing Mills	0.82								
		Misc Primary Metal	0.60								
		Misc Textile Goods	0.49								
		Public Building Furni	1.09								
		Structural Clay	0.47								
		Logging	0.53								
		Rubber belting ETC	0.56				4				
		Metal Forgings	0.49								
		Footwear, Exc Rub	0.17		1						
		Ordnance, nec	0.61				l				
		Refrigeration Mach	0.54								
		Metalworking Mach	0.46								
		Ag Chemicals	0.39								
		Inorganic Chemicals	0.32								
		Meat Products	0.39		-1						
		Nonferrous Rolling	0.50								
106	245	Wood Buildings	0.69	0.69	0.74	0.81	0.72	0.47	0.43	0.42	0.37

Table	4.C:	California Manufactu	iring E	mployn	nent Lo	cation	Quotie	ents			
Sourc	e: Ar	nual Survey of Manufa	cturers	and tex	d equat	ion (1)					
		3-digit SIC codes and				,					
1995											
	SIC	Name	Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
		Motor Vehicles Eqp	0.40	0.40	0.42	0.41	0.40	0.39	0.35	0.38	0.37
		Electric Trans Equip	0.56	0.50	0.50	0.49	0.50	0.39	0.46	0.33	0.37
		Iron/Steel Foundries	0.41	0.39	0.38	0.36	0.32	0.36	0.36	0.35	0.35
110	226	Textile Finishing	0.32	0.33	0.36	0.38	0.30	0.33	0.36	0.34	0.31
		Leather Tanning	0.49	0.47	0.44	0.34	0.46	0.39	0.36	0.31	0.30
		Construction Equip	0.36	0.33	0.33	0.32	0.31	0.28	0.30	0.28	0.28
		Watches, Clocks	0.14	0.14	0.14	0.23	0.24	0.36	0.27	0.41	0.28
114	263	Paperboard Mills	0.34	0.33	0.32	0.33	0.30	0.30	0.31	0.28	0.27
		Narrow Fabric Mills	0.27	0.25	0.29	0.31	0.26	0.27	0.27	0.24	0.26
		Leather Gloves	0.33	0.34	0.32	0.21	0.30	0.33	0.32	0.26	0.25
		Blast Furnace	0.22	0.20	0.22	0.22	0.23	0.23	0.24	0.24	0.25
118	352	Farm/Garden Mach	0.38	0.34	0.31	0.28	0.21	0.22	0.26	0.25	0.24
119	261	Pulp Mills	0.19	0.18	0.20	0.18	0.17	0.20	0.23	0.22	0.21
		Organic Chemicals	0.25	0.23	0.16	0.15	0.16	0.11	0.12	0.14	0.21
		Footware cut stock	0.21	0.22	0.18	0.11	0.15	0.25	0.25	0.21	0.21
122	363	Household App	0.25	0.23	0.21	0.20	0.20	0.22	0.18		0.19
123	225	Knitting Mills	0.22	0.19	0.26	0.29	0.36	0.25	0.25	0.28	0.19
	1	Primary Nonfer Met	0.23	0.21	0.21	0.20	0.20	0.21	0.25	0.17	0.17
125	262	Paper Mills	0.13	0.13	0.15	0.14	0.14	0.16	0.16	0.15	0.16
		Plastic & Synthetics	0.12	0.12	0.11	0.15	0.16	0.14			0.14
127	223	Fabric Mills, Wool	0.14	0.12	0.12	0.13	0.11	0.13	0.13	0.12	0.13
		Greeting Cards	0.11	0.12	0.10	0.10	0.10	0.12	0.17	0.17	0.13
129	301	Tires/Inner Tubes	0.07	0.06	0.07	0.07	0.10	0.11	0.11		0.12
130	235	Hats, Caps, Millinery	0.47	0.50	0.53	0.47	0.50	0.54	0.59	0.00	0.09
131	374	Railroad Equipment	0.07	0.05	0.05	0.04	0.04	0.05			
		Yarn/Thread Mills	0.07	0.07	0.08	0.08	0.07	0.08			
133	237	Fur Goods	0.06	0.06	0.06	0.06	0.09	0.16	0.24	0.00	
134	231	Men's & Boys' Outer	0.10	0.10	0.11	0.12	0.13	0.16	0.20	0.00	0.04
		Fabric Mills, Other	0.03	0.03	0.03	0.04	0.03	0.03			
		Fabric Mills, Cotton	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
		Cigarettes	0.00			0.00	0.00	0.00	0.00	0.00	0.00
		Cigars	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Other Tobacco	0.00			0.00	0.00	0.00	0.00	0.00	0.00
		Tobacco Processing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	california Computer E ounty Business Pattern							
Obuloc. O	Junty Buomicoo i attern	o una tox	guano	(.)				
SIC	Description	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994
357	Computer and Office	2.24	2.56	2.55	2.56	2.63	2.60	2.63
3571	Computers	(NA)	2.91	2.95	3.05	0.88	3.14	
3572	Storage Devices	(NA)	4.48	3.83	3.94	1.19	3.22	
3575	Terminals	2.48	1.77	2.03	2.25	12.72	3.12	3.03
3577	Peripherals	(NA)	1.79	2.06	2.00	0.05	2.21	2.23
3578	Calculating	1.54	2.35	1.67	0.88	2.30	0.00	0.93
3579	Nec	0.39	0.83	0.69	0.66	3.53	0.73	0.63
737	Computer and Data	1.32	1.31	1.29	1.27	1.27	1.30	1
7371	Programming service	s(NA)	1.51	1.41	1.37	1.39	1.34	1.26
7372	Prepackaged software	1.64	1.72	1.84	1.85	2.02	1.98	.l
7373	Integrated systems	(NA)	1.55	1.57	1.73	1.61	1.39	0.97
7374	Data processing	0.99	1.04	1.03	0.97	0.84	0.92	0.94
7375	Information retrieval	(NA)	0.78	0.75	0.73	0.83	1.20	1.57
7376	Facilities managemen	(NA)	0.92	0.73	0.72	0.93	1.40	1.63
7377	Rental and leasing	(NA)	0.93	0.77	0.51	0.78	1.22	1.55
7378	Maintenance	(NA)	1.42	1.28	1.42	1.45	1.32	1.5
7379	N.e.c	1.30	1.11	1.37	1.04	1.08	1.24	1.20

Table	6.A: California	Manufa	acturing	Sales, 2	2-digit S	IC Code	S			
Sourc	e: Annual Surve	ey of Mai	nufacture	ers, in \$	Millions					
SIC		Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
20	Food	35451	36546	38817	41402	41651	44297	45424	46772	47864
21	Tobacco	0	0	0	0	0	0	0	0	0
22	Textile mills	1654	1742	1682	1692	1808	1729	1713	1952	1939
23	Apparel	8285	8981	8345	9122	9657	11232	12024	12678	13689
24	Lumber	6714	7012	7258	7347	6487	6565	7280	7571	6831
25	Furniture	4623	4719	4746	4698	4222	4702	4779	4457	4937
26	Paper	6744	7350	7674	7589	7393	7806	7642	8102	9237
27	Printing	13943	14581	15942	17604	17335	17705	17922	18319	19263
28	Chemical	11097	12593	12604	13894	14272	16355	18072	17671	18057
29	Petroleum	17059	17049	18221	21516	19797	18775	18076	17949	18413
30	Rubber	7787	8872	8960	8878	8374	9322	10055	10317	10932
31	Leather	465	490	473	476	509	487	407	487	511
32	Stone, glass	6591	6856	7320	7228	6308	5935	5952	6137	
33	Metal, Prime	4976	5585	6154	5894	5670	4958	5150	5734	6116
34	Metal Fabr	13765	14931	15328	15401	14783	14580	14657	15655	17158
35	Machinery	27044	30759	30831	32304	30473	35617	36224	42761	48495
36	Electronic	26541	29924	29963	29755	30737	34995	36535	41875	54264
37	Transp Eq	36922	39377	41216	41653	42283	42469	39497	35276	33076
38	Instruments	19912	21317	19989	22678	23879	24700	24849	24598	26230
39	Misc	3157	3517	3700				4160		1
	Total	252729	272202	279221	293190	289613	306277	310418	322896	348765

	6.B: California Manufactur				:S					
ourc	e: Annual Survey of Manufac	turers, in S	Millions							
		V4007	V4000	V4000	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
C	No at Day double	Y1987	Y1988 3323	Y1989 3780	4064	3851	3877	4015	3989	436
	Meat Products	3379 4178	4339	4621	5697	5653	6247	6442	6633	690
	Dairy Products	7905	7870	8851	9442	9955	9809	10184	10439	1055
	Canned Foods Grain Mill Products	2661	2892	3052	3145	2963	3463	3399	4000	413
	Bakery Products	2386	2504	2598	2799	2642	2840	2921	3048	313
	Sugar Products	2661	2731	2753	2731	2773	3066	3020	3206	316
	Fats and Oils	847	926	1051	914	907	901	989	924	89
	Beverages	7669	8132	8257	8692	8821	9652	9917	9812	1024
	Misc Food	3765	3830	3855	3920	4087	4442	4537	4722	447
	Cigarettes	0,00	0	0	0	0	0	0	0	
	Cigars	0			0		0	0	0	
	Other Tobacco	0	0		0		0	0	0	
	Tobacco Processing	0			0	L	0	0	0	
	Fabric Mills, Cotton	15	17	16	17	15	16	16	17	1
	Fabric Mills, Other	19	22	21	21	I	21	20	21	2
	Fabric Mills, Wool	6	6	6	6		6	6		
	Narrow Fabric Mills	42	48		46		45	44	46	5
	Knitting Mills	358	1		404	1	523	494	620	53
	Textile Finishing	154			169					16
	Carpets and rugs	688		648	622			585		1
	Yarn/Thread Mills	82								
	Misc Textile Goods	290		I	318					1
	Men's & Boys' Outer	46			63					
	Men's/Boys' Furnish	1110			1089				1	1
	Women's Outerware	4785								
	Women's Underware	324			350					
	Hats, Caps, Millinery	30								
	Girls' Outerware	340			1					
	Fur Goods	4	<u> </u>		·					
	Misc Apparel	197		. I.	1					3:
	Fabricated Textiles	1448								
	Logging	659								
	Saw/Planing Mills	2324								
	Millwork, Plywood	2179								
	Wood Containers	286								
	Wood Containers Wood Buildings	522								
	Misc Wood Products	745								
	Household Furniture	2343								
	Office Furniture	891								
	Public Building Furni	209								
	Store Fixtures	637								
	Misc Furniture	544								
	Pulp Mills	134								1 1
	Paper Mills	577								
	Paperboard Mills	600								1
	Paperboard Boxes	2970								
	Convert Products	2462								
	Newspapers	3925								
	Periodicals	1372								
	Books	910								
	Misc Publishing	1395								
	Commercial Printing	4588								
	Business Forms	773								
	Greeting Cards	2								
	Blankbooks binding	426								

IC 279 F 281 II 282 F 283 C 284 S 285 F 286 C 287 F 289 M 301 T 302 F 306 F 308 M 311 L 313 F 314 F 315 L 316 L	Printing Trade Inorganic Chemicals Plastic & Synthetics Drugs Soap, Cleaners, etc Paints and Allied Organic Chemicals Ag Chemicals Misc Chemicals Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footwear, Exc Rub		Y1988 559 1090 759 3138 2936 1619 1279 519 1255 15563 878 608 152 82 262 748	Y1989 528 1133 789 3187 2882 1705 681 839 1388 16647 927 648 151 81	Y1990 615 1326 924 3474 3511 1721 672 815 1452 19881 893 742 159	Y1991 580 1257 875 4206 3249 1847 632 759 1447 18216 849 732	Y1992 632 1280 891 6146 3398 1759 615 854 1413 17277 859 639	Y1993 619 1612 844 7424 3481 1840 615 890 1367 16548 858 670	720 1152 891 7596 3361 1858 635 802 1376 16352 867	1688: 86:
279 F 281 282 F 283 284 285 F 286 287 289 291 F 299 301 302 F 306 308 311 313 314 315 316	norganic Chemicals Plastic & Synthetics Drugs Soap, Cleaners, etc Paints and Allied Organic Chemicals Ag Chemicals Misc Chemicals Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	534 998 695 2773 2560 1523 817 546 1184 15639 858 562 129 69 253 600 6736	559 1090 759 3138 2936 1619 1279 519 1255 15563 878 608 152 82	528 1133 789 3187 2882 1705 681 839 1388 16647 927 648 151	615 1326 924 3474 3511 1721 672 815 1452 19881 893 742	580 1257 875 4206 3249 1847 632 759 1447 18216 849 732	632 1280 891 6146 3398 1759 615 854 1413 17277 859	619 1612 844 7424 3481 1840 615 890 1367 16548 858	720 1152 891 7596 3361 1858 635 802 1376 16352 867	71 108 101 818 297 174 108 46 149 1688
281 282 283 284 3 285 286 287	norganic Chemicals Plastic & Synthetics Drugs Soap, Cleaners, etc Paints and Allied Organic Chemicals Ag Chemicals Misc Chemicals Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	998 695 2773 2560 1523 817 546 1184 15639 858 562 129 69 253 600 6736	1090 759 3138 2936 1619 1279 519 1255 15563 878 608 152 82	1133 789 3187 2882 1705 681 839 1388 16647 927 648 151	1326 924 3474 3511 1721 672 815 1452 19881 893 742 159	1257 875 4206 3249 1847 632 759 1447 18216 849 732	1280 891 6146 3398 1759 615 854 1413 17277 859	1612 844 7424 3481 1840 615 890 1367 16548 858	1152 891 7596 3361 1858 635 802 1376 16352 867	108 101 818 297 174 108 46 149 1688
282 F 283 C 284 S 285 F 286 C 287 A 289 M 291 F 295 F 301 7 302 F 305 F 306 G 308 M 311 L 313 F 314 G	Plastic & Synthetics Drugs Soap, Cleaners, etc Paints and Allied Organic Chemicals Ag Chemicals Misc Chemicals Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	695 2773 2560 1523 817 546 1184 15639 858 562 129 69 253 600 6736	759 3138 2936 1619 1279 519 1255 15563 878 608 152 82	789 3187 2882 1705 681 839 1388 16647 927 648 151	924 3474 3511 1721 672 815 1452 19881 893 742	875 4206 3249 1847 632 759 1447 18216 849	891 6146 3398 1759 615 854 1413 17277 859	844 7424 3481 1840 615 890 1367 16548 858	891 7596 3361 1858 635 802 1376 16352 867	101 818 297 174 108 46 149 1688
283 [284 5 285 6 287 7 289 6 295 6 295 6 305 6 306 6 311 6 315 6 316 316 6 316 316 316 316 316 316 316 316 316 3	Drugs Soap, Cleaners, etc Paints and Allied Organic Chemicals Ag Chemicals Misc Chemicals Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	2773 2560 1523 817 546 1184 15639 858 562 129 69 253 600 6736	3138 2936 1619 1279 519 1255 15563 878 608 152 82	3187 2882 1705 681 839 1388 16647 927 648 151	3474 3511 1721 672 815 1452 19881 893 742	4206 3249 1847 632 759 1447 18216 849 732	6146 3398 1759 615 854 1413 17277 859	7424 3481 1840 615 890 1367 16548 858	7596 3361 1858 635 802 1376 16352 867	818 297 174 108 46 149 1688
284 S F 285 F 286 C 287 F 299 F 299 F 301 T 302 F 306 F 311 L 313 F 315 L 316 L 316 L 316 L	Soap, Cleaners, etc Paints and Allied Organic Chemicals Ag Chemicals Misc Chemicals Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	2560 1523 817 546 1184 15639 858 562 129 69 253 600 6736	2936 1619 1279 519 1255 15563 878 608 152 82	2882 1705 681 839 1388 16647 927 648 151	3511 1721 672 815 1452 19881 893 742	3249 1847 632 759 1447 18216 849 732	3398 1759 615 854 1413 17277 859	3481 1840 615 890 1367 16548 858	3361 1858 635 802 1376 16352 867	297 174 108 46 149 1688
285 F 286 C 287 / 289 M 291 F 295 F 299 M 301 T 302 F 306 F 311 L 313 F 314 F 315 L	Paints and Allied Organic Chemicals Ag Chemicals Misc Chemicals Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	1523 817 546 1184 15639 858 562 129 69 253 600 6736	1619 1279 519 1255 15563 878 608 152 82	1705 681 839 1388 16647 927 648 151	1721 672 815 1452 19881 893 742	1847 632 759 1447 18216 849 732	1759 615 854 1413 17277 859	1840 615 890 1367 16548 858	1858 635 802 1376 16352 867	174 108 46 149 1688
286 (287 / 289 M 291 F 295 F 301 T 302 F 306 F 311 L 313 F 315 L 316 L 3	Organic Chemicals Ag Chemicals Misc Chemicals Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	817 546 1184 15639 858 562 129 69 253 600 6736	1279 519 1255 15563 878 608 152 82	681 839 1388 16647 927 648 151	672 815 1452 19881 893 742 159	632 759 1447 18216 849 732	615 854 1413 17277 859	615 890 1367 16548 858	635 802 1376 16352 867	108 46 149 1688 86
287 / 289 M 291 F 295 F 299 M 301 T 302 F 306 F 308 M 311 L 313 F 314 F 315 L	Ag Chemicals Misc Chemicals Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	546 1184 15639 858 562 129 69 253 600 6736	519 1255 15563 878 608 152 82 262	839 1388 16647 927 648 151 81	815 1452 19881 893 742 159	759 1447 18216 849 732	854 1413 17277 859	890 1367 16548 858	802 1376 16352 867	149 1688 86
289 M 291 F 295 F 299 M 301 7 302 F 305 F 306 F 311 L 313 F 314 F 315 L	Misc Chemicals Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	1184 15639 858 562 129 69 253 600 6736	1255 15563 878 608 152 82 262	1388 16647 927 648 151 81	1452 19881 893 742 159	1447 18216 849 732	1413 17277 859	1367 16548 858	1376 16352 867	149 1688 86
291 F 295 F 299 M 301 T 302 F 305 F 306 F 311 L 313 F 314 F 315 L 316 L	Petroleum Refining Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	15639 858 562 129 69 253 600 6736	15563 878 608 152 82 262	16647 927 648 151 81	19881 893 742 159	18216 849 732	17277 859	16548 858	16352 867	1688
295 F 299 M 301 T 302 F 306 F 308 M 311 L 313 F 314 F 315 L 316 L	Paving/Roofing Mat Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	858 562 129 69 253 600 6736	878 608 152 82 262	927 648 151 81	893 742 15 9	849 732	859	858	867	86
299 N 301 7 302 F 305 F 306 F 308 N 311 L 313 F 314 F 315 L 316 L	Misc Petroleum Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	562 129 69 253 600 6736	608 152 82 262	648 151 81	742 15 9	732				
301 7 302 F 305 F 306 F 308 F 311 L 313 F 314 F 315 L 316 L	Tires/Inner Tubes Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	129 69 253 600 6736	152 82 262	151 81	159		820			
302 F 305 F 306 F 308 T 311 L 313 F 314 F 315 L	Footwear, rub/ plastic Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	69 253 600 6736	82 262	81	L				730	66
305 F 306 F 308 F 311 L 313 F 314 F 315 L	Rubber belting ETC Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	253 600 6736	262			175	241	286	179	18
306 F 308 M 311 L 313 F 314 F 315 L 316 L	Rubber Products, nec Misc Plastics Leather Tanning Footware cut stock	600 6736		2/14	85	94	129	153		
308 M 311 L 313 M 314 M 315 L 316 L	Misc Plastics Leather Tanning Footware cut stock	6736	748		267	245	363	398		
311 L 313 F 314 F 315 L 316 L	Leather Tanning Footware cut stock			742	757	688	697	756		
313 F 314 F 315 L 316 L	Footware cut stock	91	7629	7745		7172	7892	8462		950
314 F 315 L 316 L			96	93			96	70	<u> </u>	
315 l 316 l	Footwear Exc Rub	6	7	6	6	7	7	5	i	
316 l		95	100	97	97	104	100	93		
	Leather Gloves	5	5	5	1	1	5			1
	Luggage	112	118			1	117	111	165	
317	Personal Leather	55	58				57	42		
319 I	Leather Goods, nec	101	106				105			
321 I	Flat Glass	258	223		251		230			
322	Glassware, Pressed	1089	1107	1129			982	965		
323	Purchased Glass	424	448				438			
	Cement, Hydraulic	621	633							
	Structural Clay	152	182							1
326	Pottery and Related	197	247				241	244		
	Concrete, Gypsum	3086	3226							
	Cut Stone Products	65	78	1			1			1
329	Nonmetallic Mineral	698	714							
	Blast Furnace	1730	1975							
	Iron/Steel Foundries	421	487							
333	Primary Nonfer Met	151	179	151	152	141				
334	Second Nonfer Met	539								
335	Nonferrous Rolling	1429								
336	Nonfer Foundries	568								
339	Misc Primary Metal	138								
341	Metal Containers	1827								
342	Cutlery, Hand Tools	1133								
	Plumbing & Heating	796								
344	Fabricated Structural	3851								
345	Screws, Bolts, Etc	1202								
	Metal Forgings	1297								
	Coating, Engraving	1145								
	Ordnance, nec	658								
	Misc Fabr Metals	1856								
	Engines/Turbines	731								
352	Farm/Garden Mach	314								
353	Construction Equip	918								
	Metalworking Mach	1072								
355	Spec Indus Mach	1602	1881 1870		3 2324	2344	2668	3172	2 4127	7 53

	6.B: California Manufacturir				s					
Source	e: Annual Survey of Manufactu	ırers, in \$	Millions							
SIC		Y1987	Y1988	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
	Computer/Office Eqp	16293	18958	18924	20309	18529	23271	23444	28516	30817
	Refrigeration Mach	1251	1225	1284	1360	1325	1401	1329	1570	1679
	Indus machinery, nec	3266	3381	3396	3161	3087	3038	2810	3209	3910
	Electric Trans Equip	494	569	559	503	503	371	398	362	407
	Electrical Indusl App	916	1049	994	965	905	1141	1177	1262	1357
	Household App	428	421	459	406	364	464	421	536	554
	Lighting/Wiring Equip	1556	1669	1520	1524		1581	1677	1935	1884
	Audio/Video Eqp	1522	1863	2065	1969		2420	2739	3150	4066
	Communication Eqp	5272	5779	5626	5475		7542	7957	9641	13203
	Electronic Comp	13595	15417	16001	15622		18224	18869	21359	28799
	Misc Electrical	2759	3158	2740	3290		3252	3298	3630	3994
371	Motor Vehicles Eqp	6027	6640	6898	6802		5783	6648	7904	8348
	Aircraft and Parts	14623	14767	16372	16957		19552	16651	14493	13527
373	Boat Build/Repair	931	908	989	982	906	1108	1055		1248
374	Railroad Equipment	38	37	40	40		45	49	51	53
	Motorcycles, Bicycles	164	157	184	209	211	309	336	348	367
	Missiles/Space Veh	14118	15871	15650	15587	14120	14457	13622	10112	
	Misc Transportation	1022	997	1085	1077	994	1216	1136	L	826
	Navigation Equipment	9811	10054	8582	8795	9766	8967	8870		6375
	Measur Instruments	5239	5899	5545	6420	6421				10145
384	Medical Instruments	4051	4478	4811	6086					8461
385	Ophthalmic Goods	177	212	270	281					497
	Photographic Eqp	622	659	761	1076					729
	Watches, Clocks	13	15	19	20	i .				24
	Jewelry, Silverware	421	445	423	392	372				
	Musical Instruments	91	93	107	132					1
	Toys/Sporting Goods	944	1168	1329	1499	1557				
	Pens, Pencils	426	460	477	633	512				
	Costume, Jewelry	104	106	122	150	138	170	177	196	223
	Misc Manufacturing	1170	1245	1243	1254	1276	1334			1
1	Total	252729				289613	306277	310418	322896	348765

Table	7: US Sales in Compu	ter Servi	ce Indus	tries						
	Survey of Service Indu									
		1987	1988	1989	1990	1991	1992	1993	1994	1995
73	Business	188856	223369	251648	280699	287214	309439	336491	374850	424322
	Computer programming	56004	68305	78653	88299	94363	104651	116834	133143	152213
	Programming services		(NA)	(NA)	21318	23376	24973	27964	32434	37447
	Prepackaged software		(NA)	(NA)	16523	18306	21236	24648	27597	31087
			(NA)	(NA)	12916	13751	15177	17084	18953	20592
		(NA)	(NA)	(NA)	17820	18824	20447	22604	26641	31144
	1	(NA)	(NA)	(NA)	3547	3691	3931	4316	4644	5489
	Facilities management		(NA)	(NA)	1994	2206	2608	2638	2814	3110
		(NA)	(NA)	(NA)	2644	2396	2385	2252	2205	2213
	Maintenance	(NA)	(NA)	(NA)	7000	6919	7660	7559	7764	8228
	N.e.c	(NA)	(NA)	(NA)	4537	4894	6234	7769	10091	12903

		JS Manufacti				·			
Sour	ce: Inte	rnational Trac	le Adminis	tration an	d text equ	uation (2)	, in perce	nt	
Rank	ed by 3	3-digit SIC cod	ies and 19	95 values	}				
	1995								
SIC	Rank	Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
20	17	Food	4.2	4.3	4.6	5.0	5.0	5.5	6.0
21	4	Tobacco	16.4	20.2	16.6	14.6			18.9
22	13	Textile mills	4.2	5.6	6.3	6.4	6.4		7.2
23	15	Apparel	2.8	3.4	4.3	4.8		5.8	
24	14	Lumber	8.2	9.0	9.6	8.4	7.7	6.9	7.0
25	18	Furniture	2.4	3.7	5.1	5.6			
26	9	Paper	6.1	6.5	7.2				8.7
27	20	Printing	1.9	2.1	2.4	2.4			2.4
28	6	Chemical	13.9	14.2	15.4	14.8			17.2
29	19	Petroleum	3.3	3.8	4.4	4.2			
30	12	Rubber	4.8	6.1	6.8	6.8			
31	10	Leather	6.3	7.4	8.1	8.3			
32	16	Stone, glass	3.9	4.9	5.6	5.8	5.8	5.9	
33	8	Metal, Prime	7.2	8.3	10.8	10.0	12.9		
34	11	Metal Fabr	5.5	6.8	7.6	7.9	7.9		
35	1	Machinery	23.9	26.8	30.7			1	29.1
36	2	Electronic	17.1	21.0	22.5	22.7	24.1	25.6	
37	5	Transp Eq	14.6	17.9	20.8	20.7	19.0		
38	3	Instruments	16.2	17.5	19.2	19.0	19.5		
39	7	Misc	10.2	12.0	13.2	13.2	12.7		
		Total	10.0	11.4	12.8	12.8	12.8	13.2	13.9

SOUTCA.	Interna	Manufacturing, Gross I tional Trade Administrati	on and tex	t equation	(2), in per	cent			
anked	hv 3-di	git SIC codes and 1995	/alues	c oquation.	(=), p =				
anked	by o u.	git old boads and loss	1						
	1995								
SIC		Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
201		Meat Products	5.7	5.8	6.0	6.4	6.1	7.4	8.9
202	121	Dairy Products	1.0	0.9	1.1	1.6	1.8	1.6	1.6
203		Canned Foods	3.4	4.1	4.3	4.9	4.8	5.2	5.6
204	77	Grain Mill Products	7.4	7.0	7.3	7.4	7.5	7.7	7.4
205	124	Bakery Products	0.4	0.7	0.8	1.0	1.1	1.2	1.1
206	76	Sugar Products	5.3	6.2	6.4		7.1	7.7	7.5
207	35	Fats and Oils	14.5	12.6	14.3	16.9	14.4	15.4	19.7
208	109	Beverages	1.8	1.9		2.4	2.6	3.0	3.1
209	94	Misc Food	2.6			4.2	4.6	5.4	
211	31	Cigarettes	18.3				19.8		
212	119	Cigars	2.9	2.6			1.8		
213		Other Tobacco	20.1	17.5			18.8		
214		Tobacco Processing	1.4			1.8	1.7	2.3	
221		Fabric Mills, Cotton	6.1	8.7	8.6	8.8	9.3		
222		Fabric Mills, Other	7.4			9.8	10.4		
223		Fabric Mills, Wool	1.9						
224		Narrow Fabric Mills	15.4					24.6	
225		Knitting Mills	1.4				3.2		
226		Textile Finishing	0.0				0.0		
227		Carpets and rugs	3.8						
228		Yarn/Thread Mills	1.7						
229		Misc Textile Goods	10.6						
231		Men's & Boys' Outer	2.4						
232		Men's/Boys' Furnish	3.5						
233		Women's Outerware	1.0						
234		Women's Underware	6.4						
235		Hats, Caps, Millinery	2.2						
236		Girls' Outerware	3.0						
237		Fur Goods	12.5						
238		Misc Apparel	4.1						
239		Fabricated Textiles	3.0						
241		Logging	30.7						
242		Saw/Planing Mills	9.8						
243		Millwork, Plywood	2.9						
244		Wood Containers	1.4					1.8	
245		Wood Buildings	0.7						
249		Misc Wood Products	3.5						
251		Household Furniture	0.3						
252		Office Furniture	0.3						
253		Public Building Furni	0.0						
254		Store Fixtures	1.1						
259		Misc Furniture	11.3						
261		Pulp Mills	63.0						
262		Paper Mills	7.7						
263		Paperboard Mills	0.0						
265		Paperboard Boxes	1.4						
267		Convert Products	2.6						
271		Newspapers	0.1						
272		Periodicals	2.3						
273		Books	6.5						
274	1 129	Misc Publishing	0.5						
275		Commercial Printing	2.0	0 1.					
276		Business Forms	0.1	1 0.	1 0.3	2 0.2	2 0.3	2 0.	2 (

		Manufacturing, Gross I		<u> </u>	(2) in no	roomt			
		tional Trade Administrati		t equation	(2), in pe	cent			
Ranked	by 3-di	git SIC codes and 1995 v	/aiues						
	1995			V/4000	1/4004	V4000	Y1993	Y1994	Y1995
		Name	Y1989	Y1990	Y1991	Y1992			3.2
277		Greeting Cards	0.9	1.3	1.3	1.4	1.4	1.8	
278		Blankbooks binding	0.8	1.4	1.9	2.0	2.1	2.0	
279		Printing Trade	1.0		1.2	1.2	1.1	1.3	
281	21	Inorganic Chemicals	22.1	20.3	21.7	22.5	21.7	25.0	
282		Plastic & Synthetics	17.4	20.7	25.5	22.5	21.7	22.5	
283	64	Drugs	9.2	9.9	9.8	10.4	10.5	10.3	
284	74	Soap, Cleaners, etc	4.2	4.7	5.6	6.2	6.5		
285		Paints and Allied	3.2	4.1	5.0		5.3		
286	27	Organic Chemicals	16.4	16.1	17.1	16.8	17.5		
287		Ag Chemicals	31.7	27.7	30.2	25.0	21.0	25.5	28.0
289		Misc Chemicals	12.5		14.8	13.9	14.2	14.0	
291		Petroleum Refining	3.1	3.6	4.4	4.1	4.3	3.8	3.9
295		Paving/Roofing Mat	0.5				1.1		
299		Misc Petroleum	12.7	13.3					
301		Tires/Inner Tubes	6.4	8.7	10.0				
302		Footwear, rub/ plastic	2.7	4.4	4.8				
302		Rubber belting ETC	11.8						
			4.6						
306		Rubber Products, nec	4.0						
308		Misc Plastics							
311		Leather Tanning	24.5						
313		Footware cut stock	22.2						
314		Footwear, Exc Rub	2.2						
315		Leather Gloves	3.8						
316		Luggage	3.3						
317		Personal Leather	2.1						
319		Leather Goods, nec	7.6						
321		Flat Glass	13.8						
322		Glassware, Pressed	6.5						
323	82	Purchased Glass	4.2						
324	126	Cement, Hydraulic	0.6						
325	97	Structural Clay	3.2	3.8	4.3				
326		Pottery and Related	7.5	9.0	9.9	10.0	11.3	11.4	
327		Concrete, Gypsum	0.4	0.5	0.6	0.7	0.5	0.5	5 0.
328		Cut Stone Products	1.8						5 2.
329		Nonmetallic Mineral	7.7	9.5	10.8				
331		Blast Furnace	4.4						
332		Iron/Steel Foundries	2.6	·					
333		Primary Nonfer Met	21.6						
		Second Nonfer Met	0.2						
334									
335		Nonferrous Rolling	8.8						
336		Nonfer Foundries	1.2						
339		Misc Primary Metal	4.1						
341		Metal Containers	1.0						
342		Cutlery, Hand Tools	7.8						
343		Plumbing & Heating	4.0						
344	103	Fabricated Structural	2.5						
345		Screws, Bolts, Etc	3.8						
346		Metal Forgings	4.8	5.6	5.3				
347		Coating, Engraving	0.0			0.0			
348		Ordnance, nec	31.6						5 76
349		Misc Fabr Metals	8.4						
351		Engines/Turbines	27.3						
		Farm/Garden Mach	18.6						

		Manufacturing, Gross I							
Source:	Interna	tional Trade Administrati	on and tex	t equation	(2), in pe	rcent			
Ranked	by 3-di	git SIC codes and 1995 v	alues	•					
	1995								
SIC	Rank	Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
353	6	Construction Equip	31.3	36.4	51.9	51.6	42.3	41.1	40.8
354	44	Metalworking Mach	12.8	14.1	14.4	16.4	16.3	17.0	
355	17	Spec Indus Mach	21.7	23.6	25.2	23.9	24.1	25.0	
356	16	Genl Indus Mach	22.0	26.9	29.7	29.4	28.6		
357	7	Computer/Office Eqp	39.2	44.1	49.3	42.9	38.8		
358		Refrigeration Mach	10.5	12.7	14.6	15.4	15.2		
359	59	Indus machinery, nec	7.7	8.4	9.8	9.5	10.6		
361	73	Electric Trans Equip	7.1	6.8		7.7	8.0		
362		Electrical Indust App	18.0			20.4	18.6		
363	52	Household App	8.6		12.5	12.9	12.8		
364	36	Lighting/Wiring Equip	10.3	12.7	14.9	15.3	16.2		
365	14	Audio/Video Eqp	15.6		26.8	27.9	31.0		
366	26	Communication Eqp	12.3						
367	9	Electronic Comp	25.6						
369	10	Misc Electrical	20.3	26.6		31.2	32.5		
371	50	Motor Vehicles Eqp	9.0			13.4	13.2		
372	4	Aircraft and Parts	48.0						
373	72	Boat Build/Repair	6.5						
374		Railroad Equipment	8.2						
375	28	Motorcycles, Bicycles	11.8				22.1		
376	132	Missiles/Space Veh	0.1	0.2			0.1		
379	13	Misc Transportation	20.9	19.8					
. 381		Navigation Equipment	6.1						
382	8	Measur Instruments	29.9						
384	22	Medical Instruments	19.8						
385	40	Ophthalmic Goods	10.9	13.8					
386	39	Photographic Eqp	12.9						
387	60	Watches, Clocks	9.9						
391	24	Jewelry, Silverware	18.4						
393		Musical Instruments	21.0						
394		Toys/Sporting Goods	8.6						
395		Pens, Pencils	10.4	13.4	15.7				
396		Costume, Jewelry	7.1						
399		Misc Manufacturing	5.1		6.9				
		Total	10.0	11.4	12.8	12.8	12.8	13.2	13.8

Table 9.A: US Manufacturing, Gross Import Share Source: International Trade Administration and text equation (2), in percent												
						uation (2	2), in pe	rcent				
Ranked	by 3-dig	it SIC codes a	and 1995	5 values								
	1995											
SIC	Rank	Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995			
20	18	Food	4.1	4.3	4.1	4.2	4.0	4.2	4.2			
21	20	Tobacco	0.5	0.5	0.8	1.2	2.5		0.7			
22	15	Textile mills	7.0	7.3	8.1	8.3	8.3					
23	3	Apparel	29.7	30.5	31.0	33.0	34.2					
24		Lumber	8.0	7.6	7.7	8.3	9.3	9.9				
25	9	Furniture	11.3	11.4	11.8	11.9	12.5	13.8				
26	14	Paper	8.8	8.7	8.1	7.8	8.1	8.2				
27	19	Printing	1.2	1.2	1.2	1.2	1.3	1.4				
28		Chemical	7.8	8.1	8.6	9.2	9.3	10.2				
29	17	Petroleum	8.3	8.3	7.1	7.1	7.0					
30	11	Rubber	9.7	9.7	10.0	10.1	10:4	10.4				
31	1	Leather	52.2	55.7	57.4	57.4	58.6	62.4				
32	12	Stone, glass	8.7	8.9	9.0	9.2	9.5	10.2	10.7			
33		Metal, Prime	14.9	14.4	15.3	14.9	15.6	17.3	17.5			
34		Metal Fabr	6.9	7.0	7:2	7.4	7.7	7.8	8.1			
35		Machinery	21.8	22.5			27.0	28.7				
36		Electronic	27.3		29.2	30.0	31.4	33.4	35.7			
37		Transp Eq	22.2		23.6	22.8	23.3	24.1	24.3			
38		Instruments	13.8		15.6	16.0	16.9	18.5	20.4			
39		Misc	38.8			41.3	42.1	42.9	43.6			
		Total	13.8				15.4	16.5	17.3			

able	9.B: US	Manufacturing, Gross	tion and t	nare	n (2) in n	ercent			
Source	e: Intern	ational Trade Administra	tion and te	ext equation	n (2), m p	ercent			
kanke	ed by 3-0	ligit SIC codes and 1995	values						
	1995								
SIC		Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
201		Meat Products	3.4	3.6	3.6	3.3	3.2	3.2	2.8
202		Dairy Products	1.6	1.6	1.4	1.5	1.5	1.6	1.9
203		Canned Foods	5.5		4.9		4.8	5.0	5.1
204		Grain Mill Products	1.2	1.2	1.3	1.4	1.4	1.7	1.6
205		Bakery Products	1.4	1.3	1.4	1.5	1.6	1.7	1.8
206		Sugar Products	8.7	10.4	9.5		8.8	8.8	9.3
207		Fats and Oils	4.7	4.9	5.5		6.4	7.2	7.9
208		Beverages	6.9		6.4		6.6	6.9	6.9
209		Misc Food	5.6		5.7	5.5		5.8	5.9
211		Cigarettes	0.3		0.6	1.0	2.5	0.4	0.3
212		Cigars	18.1		12.9	13.9		18.4	19.7
213		Other Tobacco	1.5		3.3			1.7	1.5
214		Tobacco Processing	0.0		0.0	0.0			0.0
221		Fabric Mills, Cotton	17.3			22.2			
222		Fabric Mills, Other	13.7	14.0	16.1	16.3			
223		Fabric Mills, Wool	10.4	12.0	12.4		12.7	12.1	13.1
224		Narrow Fabric Mills	12.7	13.7	15.2				
225		Knitting Mills	1.9	2.4					
226		Textile Finishing	0.0	0.0					
227		Carpets and rugs	5.8						
228		Yarn/Thread Mills	3.1	2.5					
229		Misc Textile Goods	11.4	12.5					
231		Men's & Boys' Outer	20.9						
232		Men's/Boys' Furnish	32.6						
233		Women's Outerware	25.2						
234		Women's Underware	23.1						
235		Hats, Caps, Millinery	28.5						
236		Girls' Outerware	64.6						
237	5	Fur Goods	54.2						
238	67	Misc Apparel	51.2						
239	91	Fabricated Textiles	10.6						
241	29	Logging	0.9						
242	75	Saw/Planing Mills	14.3						
243	105	Millwork, Plywood	4.6	3 4.8	3 4.6		5.4	5.5	5 5.
244	120	Wood Containers	1.5						
245	127	Wood Buildings	0.3						
249		Misc Wood Products	15.						
251		Household Furniture	0.9						
252	135	Office Furniture	0.						
253	139	Public Building Furni	0.						
254	118	Store Fixtures	1.						
259		Misc Furniture	59.						
261	1	Pulp Mills	52.						
262	2 49	Paper Mills	18.						
263		Paperboard Mills	0.						
265		Paperboard Boxes	0.						
267	7 90	Convert Products	3.						
27		Newspapers	0.						
272		Periodicals	0.						
273		Books	4.						
274		Misc Publishing	0.						
27		Commercial Printing	0.						
270		4 Business Forms	0.			0 0.	0 0.	0 0.	0 0

<u> </u>	l=+-==	Manufacturing, Gross ational Trade Administra	tion and te	ovt equation	n (2) in n	ercent			
Sourc	e: Intern	digit SIC codes and 1995	values	equalio	11 (<i>2)</i> , 111 P	CIOCIL			
canke	ed by 3-0	ligit SIC codes and 1990	Values						
	1995								
SIC		Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
277		Greeting Cards	0.8	1.1	1.2	1.3	1.4	2.3	2.3
278		Blankbooks binding	5.3	5.0	5.1	5.1	5.5	5.5	6.5
279		Printing Trade	0.7	0.7	0.2	0.1	0.1	0.1	0.1
281		Inorganic Chemicals	19.7	18.2	18.5		17.9	21.6	23.9
282		Plastic & Synthetics	5.9	7.1	7.7	8.3	9.5	10.5	11.0
283		Drugs	7.3	7.3	8.2	9.0	9.0	9.2	10.
284	74	Soap, Cleaners, etc	2.7	2.8	3.0	3.6	3.6	4.1	4.4
285	88	Paints and Allied	0.8	1.0	1.0	1.3	1.3	1.6	2.0
286		Organic Chemicals	9.7	10.5	11.1	12.2	12.5	13.7	14.9
287		Ag Chemicals	12.0	10.9	10.9	11.4	12.0	12.2	13.
289		Misc Chemicals	4.3	4.8	5.7		6.4	6.5	7.:
291		Petroleum Refining	8.9				7.6	7.3	
295		Paving/Roofing Mat	0.9				1.2		1.
299		Misc Petroleum	1.7	1.5				1.8	1.
301		Tires/Inner Tubes	19.8	19.3					20.
302		Footwear, rub/ plastic	78.6						81.
305	38	Rubber belting ETC	15.6	16.7					
306		Rubber Products, nec	7.5						
308		Misc Plastics	5.2						
311		Leather Tanning	29.0						
313		Footware cut stock	52.9						
314	104	Footwear, Exc Rub	59.9						
315		Leather Gloves	56.4						
316	79	Luggage	48.7						
317	93	Personal Leather	57.0						
319		Leather Goods, nec	21.5						
321	15	Flat Glass	12.4						
322		Glassware, Pressed	11.4						
323	82	Purchased Glass	6.3						
324		Cement, Hydraulic	10.7						
325	97	Structural Clay	14.2						
326		Pottery and Related	40.1						
327		Concrete, Gypsum	0.5						
328	3 117	Cut Stone Products	34.6						
329	55	Nonmetallic Mineral	8.5						
33		Blast Furnace	14.9						
332		Iron/Steel Foundries	2.2						
333		Primary Nonfer Met	41.4						
334		Second Nonfer Met	15.2						
33		Nonferrous Rolling	9.						
33		Nonfer Foundries	0.4						
33		Misc Primary Metal	5.9						
34		1 Metal Containers	1.4						
34		4 Cutlery, Hand Tools	14.8						
34		2 Plumbing & Heating	6.2						
34		3 Fabricated Structural	1.		4 1.				
34		O Screws, Bolts, Etc	12.						
34		3 Metal Forgings	3.:						
34		0 Coating, Engraving	0.						
34		2 Ordnance, nec	8.						
34		8 Misc Fabr Metals	16.		2 16.				
35		3 Engines/Turbines	16.						
35		3 Farm/Garden Mach	16.			1 15.	3 14.	4 16.	1 10

Source	e Intern	Manufacturing, Gross ational Trade Administra	tion and te	ext equation	n (2), in p	ercent			
Danke	d by 3-c	ligit SIC codes and 1995	values	and organis					
Nanke	u by 3-c	igit GIO codes and 1000	Valued						
	1995								
SIC		Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
353		Construction Equip	20.2	19.7	18.8	20.7	21.4	23.5	23.2
354		Metalworking Mach	19.9	18.8	20.6	18.6	20.3	23.1	24.4
355		Spec Indus Mach	25.8	26.5	25.6	26.2	26.8	27.5	
356		Geni Indus Mach	22.4	23.0	23.2	24.4	24.5	27.6	
357		Computer/Office Eqp	35.8	39.1	46.9	47.0	50.2	52.0	
358		Refrigeration Mach	8.1	7.8	7.6	7.6	7.4	7.8	
359		Indus machinery, nec	6.2	5.9	6.5	6.2	6.7	6.7	
361		Electric Trans Equip	5.3		7.5	8.3	9.4	9.0	
362		Electrical Indust App	16.9		18.8	20.0	19.8	22.6	
363		Household App	18.0			21.3	20.6	20.1	
364		Lighting/Wiring Equip	17.2	18.6		21.2	23.3		
365		Audio/Video Eqp	67.2	69.8			75.6	77.5	
366		Communication Eqp	22.3			21.8			
367		Electronic Comp	31.1	33.5	33.1	32.3	35.0		
369		Misc Electrical	25.7	29.7	29.7	33.3	35.3		
371		Motor Vehicles Eqp	27.3	29.0	29.7	27.7	27.6		
372		Aircraft and Parts	15.3		17.0	17.3			
373		Boat Build/Repair	3.7		1.6	1.9			
374		Railroad Equipment	14.4			12.7			
375		Motorcycles, Bicycles	55.0	55.1	53.2	58.2	49.7		
376		Missiles/Space Veh	0.0			0.0	0.0		
379		Misc Transportation	6.2	4.9	5.2	3.6			
381		Navigation Equipment	2.3			2.7			
382		Measur Instruments	17.0	16.7	17.8	18.3			
384		Medical Instruments	12.0						
385		Ophthalmic Goods	34.2	35.5					
386		Photographic Eqp	22.9		25.8	26.9			
387		Watches, Clocks	41.4	60.1	66.4	80.5			
391		Jewelry, Silverware	68.3						
393		Musical Instruments	54.1						
394		Toys/Sporting Goods	44.5						
395		Pens, Pencils	18.2		21.1	22.1	23.5		
396		Costume, Jewelry	28.2						
399		Misc Manufacturing	14.0					16.	
	1 30	Total	13.8					1 16.	5 17.3

Table	ble 10.A: US Manufacturing, Net Export Share											
Sourc	e: Inte	rnational Trad	e Admin	istration a	nd text e	quation ((2), in per	cent				
Ranke	ed by 3	3-digit SIC cod	es and 1	995 valu	es							
	1995											
SIC	Rank	Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995			
20	4	Food	0.2	0.0	0.5	0.8	1.0	1.3	1.7			
21	1	Tobacco	15.9	19.7	15.8	13.4	14.8	21.2	18.2			
22	9	Textile mills	-2.8	-1.8	-1.8	-1.9	-1.9	-1.7	-1.5			
23	19	Apparel	-26.8	-27.2	-26.6	-28.2	-28.9	-29.6	-30.3			
24	11	Lumber	0.2	1.5	1.9	0.1	-1.6	-3.0	-2 .7			
25	17	Furniture	-8.9	-7.8	-6.7	-6.3	-6.7	-8.0	-8.8			
26	7	Paper	-2.7	-2.2	-0.9	-0.3	-1.0	-0.5	-0.9			
27	5	Printing	0.6	0.9	1.2	1.2		1.0	0.9			
28	2	Chemical	6.1	6.1	6.8	5.7	5.2	5.5	6.0			
29	10	Petroleum	-5.0	-4.5	-2.7	-2.9	-2.8	-3.0	-1.9			
30	12	Rubber	-4.8	-3.6	-3.1	-3.3	-3.5	-3.1	-3.2			
31	20	Leather	-45.9	-48.3	-49.3	-49.1	-50.4	-54.4	-57.0			
32	13	Stone, glass	-4.8	-4.0	-3.4	-3.4	-3.6	-4.3	-4.6			
33		Metal, Prime	-7.8	-6.1	-4.5	-4.9	-2.7	-7.7	-6.7			
34	6	Metal Fabr	-1.4	-0.2	0.4	0.5	0.3	-0.6	-0.5			
35	8	Machinery	2.0	4.3	6.2	4.4		-0.6	-1.1			
36		Electronic	-10.1	-7.2	-6.7	-7.3		-7.9	-7.9			
37		Transp Eq	-7.6	-5.1	-2.8	-2.0	-4.3	-5.7	-7.1			
38		Instruments	2.4	3.1	3.6	3.0	2.6		2.4			
39		Misc	-28.6	-26.9	-26.1	-28.1	-29.4	-29.2	-29.0			
		Total	-3.8	-2.6	-1.5	-1.9	-2.6	-3.4	-3.4			

		US Manufacturing, Net Expo							
Source	e: Inter	national Trade Administration	and text	equation	(2), in po	ercent			
Ranke	d by 3-	digit SIC codes and 1995 val	ues						
	1995						-		
SIC	Rank	Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
201		Meat Products	2.3	2.2	2.4	3.1	2.9	4.2	6.1
202		Dairy Products	-0.5	-0.7	-0.3		0.3	0.0	-0.3
203		Canned Foods	-2.2	-1.9	-0.6		0.0		0.5
203		Grain Mill Products	6.2		6.0		6.1	6.0	5.8
205		Bakery Products	-0.9	-0.6	-0.6		-0.4	-0.5	
205			-3.5	-4.1	-3.1	-3.0	-1.7	-1.1	-1.8
		Sugar Products	9.9	7.7	8.8			8.1	11.8
207		Fats and Oils	-5.1	-5.1	-4.2				
208		Beverages							
209		Misc Food	-3.0						
211		Cigarettes	18.0						
212		Cigars	-15.2						
213		Other Tobacco	18.6						
214		Tobacco Processing	1.4						
221		Fabric Mills, Cotton	-11.2						
222		Fabric Mills, Other	-6.3						
223		Fabric Mills, Wool	-8.5			-7.8			
224		Narrow Fabric Mills	2.7	4.9					
225	50	Knitting Mills	-0.5						
226	55	Textile Finishing	0.0						
227	73	Carpets and rugs	-2.0	-0.2					
228		Yarn/Thread Mills	-1.3	-0.1	-0.2	-1.0	-1.4	-1.1	
229		Misc Textile Goods	-0.8	1.2	2.7	2.7	2.1	2.8	2.8
231		Men's & Boys' Outer	-18.5	-16.5	-17.2	-19.6	-19.1	-21.7	-26.9
232		Men's/Boys' Furnish	-29.2				-32.1	-33.8	-36.6
233		Women's Outerware	-24.2						-25.5
234		Women's Underware	-16.7						
235		Hats, Caps, Millinery	-26.2						
236		Girls' Outerware	-61.7						
237		Fur Goods	-41.7						
238		Misc Apparel	-47.1						
239		Fabricated Textiles	-7.7						
241		Logging	29.8						
242			-4.5						
	<u> </u>	Saw/Planing Mills	-1.7						
243		Millwork, Plywood							
244		Wood Containers	0.0						
245		Wood Buildings	0.4						
249		Misc Wood Products	-12.0						
251		Household Furniture	-0.6						
252		Office Furniture	0.2						
253		Public Building Furni	0.0						
254		Store Fixtures	-0.2						
259		Misc Furniture	-48.4						
261		Pulp Mills	10.5						
262		Paper Mills	-10.8						
263		Paperboard Mills	0.0						
265		Paperboard Boxes	0.9	1.1	1.4	1.4	1.6		
267		Convert Products	-0.5					1.3	2 0.
271		Newspapers	-0.2						
272		Periodicals	1.6						
273		Books	2.1						
274		Misc Publishing	-0.4						
			1.1						
275		Commercial Printing Business Forms	0.0						

-	10.6.	US Manufacturing, Net Exp	on Share	equation	(2) in n	rcent			
Source	e: Inter	national Trade Administration	n and text	equation	(2), in pe	ercent			
Ranke	d by 3	digit SIC codes and 1995 va	lues						
	4005								
	1995	Ntown	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
SIC	Rank		0.1	0.2	0.1	0.1	0.0		0.9
277		Greeting Cards	-4.5	-3.5	-3.2	-3.1	-3.4		-4.2
278		Blankbooks binding	0.3		1.0		1.1		1.5
279	36	Printing Trade Inorganic Chemicals	2.4	2.1	3.3		3.8	3.4	3.7
281 282		Plastic & Synthetics	11.5	13.5	17.8		12.2	12.0	13.7
283		Drugs	1.8		1.6	1.3	1.5		-0.4
284		Soap, Cleaners, etc	1.6		2.6		2.9		3.4
285		Paints and Allied	2.4		4.0		4.0		3.9
286		Organic Chemicals	6.8		5.9		5.0		
287		Ag Chemicals	19.7	16.8			9.0		
289		Misc Chemicals	8.3				7.8		
291		Petroleum Refining	-5.7	1					
295		Paving/Roofing Mat	-0.4						
299		Misc Petroleum	11.0				6.2		
301		Tires/Inner Tubes	-13.4						
302		Footwear, rub/ plastic	-75.9						
305		Rubber belting ETC	-3.8						
306		Rubber Products, nec	-2.9						
308		Misc Plastics	-1.1						
311		Leather Tanning	-4.4						
313		Footware cut stock	-30.7						
314		Footwear, Exc Rub	-57.6						
315		Leather Gloves	-52.6						
316		Luggage	-45.4						
317		Personal Leather	-54.8						-68.9
319		Leather Goods, nec	-13.9						-25.5
321		Flat Glass	1.4						13.0
322		Glassware, Pressed	-5.0						-6.8
323		Purchased Glass	-2.1					0.1	-0.7
324		Cement, Hydraulic	-10.2						8.3
325		Structural Clay	-10.9						-12.
326		Pottery and Related	-32.5						-30.9
327		Concrete, Gypsum	-0.1						
328		Cut Stone Products	-32.8					2 -27.7	
329		Nonmetallic Mineral	-0.8						3 0.:
331		Blast Furnace	-10.5						
332		Iron/Steel Foundries	0.5				0.7	7 0.1	1 0.1
333		Primary Nonfer Met	-19.8					-16.6	-18.
334		Second Nonfer Met	-15.0						4 -10.
335		Nonferrous Rolling	-0.3						3 2.
336		Nonfer Foundries	0.8						
339		Misc Primary Metal	-1.8						
341		Metal Containers	-0.4						
342		Cutlery, Hand Tools	-7.0						
343		Plumbing & Heating	-2.2						
344		Fabricated Structural	1.0						
345		Screws, Bolts, Etc	-8.9						
346		Metal Forgings	1.0						
		Coating, Engraving	0.0						
347			23.						
348		Ordnance, nec	-8.						
349		Misc Fabr Metals	11.						
35		Engines/Turbines Farm/Garden Mach	2.						

Table	10.B:	US Manufacturing, Net Expo	ort Share)				-	
Source	e: Inter	national Trade Administration	and text	equation	(2), in pe	ercent			
Ranke	d by 3	digit SIC codes and 1995 val	ues						
	1995								144555
SIC	Rank		Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
353		Construction Equip	11.1	16.7	33.0	30.9	20.9	17.5	17.6
354		Metalworking Mach	-7.1	-4.7	-6.2	-2.2	-4.0	-6.2	-9.2
355		Spec Indus Mach	-4.1	-2.9	-0.5	-2.3	-2.7	-2.5	
356		Genl Indus Mach	-0.3	3.9	6.4	5.0	4.1	2.2	
357		Computer/Office Eqp	3.4	5.0	2.3	-4.2	-11.4		
358		Refrigeration Mach	2.3	4.9	7.1	7.8	7.8		
359		Indus machinery, nec	1.5	2.5	3.3	3.3	3.9		
361		Electric Trans Equip	1.8	0.7	-0.3		-1.4		
362	81	Electrical Indusl App	1.1	-0.6					
363	102	Household App	-9.4	-7.5			-7.8		
364	91	Lighting/Wiring Equip	-6.9	-5.9					
365	131	Audio/Video Eqp	-51.6	-46.1	-44.5		-44.7		
366	71	Communication Eqp	-9.9	-6.9	-7.5				
367	89	Electronic Comp	-5.5	-1.3					
369	87	Misc Electrical	-5.4	-3.1					
371	110	Motor Vehicles Eqp	-18.4						
372	3	Aircraft and Parts	32.8	37.2					
373	30	Boat Build/Repair	2.8	6.4					
374		Railroad Equipment	-6.2	-3.1					
375		Motorcycles, Bicycles	-43.2	-33.1	-25.7	-30.5	-27.6	-28.3	
376		Missiles/Space Veh	0.1	0.2	0.1	0.1			
379		Misc Transportation	14.8	14.9					
381		Navigation Equipment	3.8	3.8					
382		Measur Instruments	12.9	14.8	16.7	15.3	15.5		
384		Medical Instruments	7.9	8.1	9.2				
385	115	Ophthalmic Goods	-23.3	-21.7	-19.4	-19.6			
386		Photographic Eqp	-10.1	-8.2	-8.4				
387		Watches, Clocks	-31.5	-51.8	-58.3	-70.5	-71.6		
391	133	Jewelry, Silverware	-49.9	-46.4					
393		Musical Instruments	-33.0	-27.3	-25.5	-25.7			
394		Toys/Sporting Goods	-35.9				-37.2	-36.3	
395		Pens, Pencils	-7.8				-8.1	-8.5	-8.8
396		Costume, Jewelry	-21.1					-21.3	-19.8
399		Misc Manufacturing	-9.0						
 	1.57	Total	-3.8						

	SIC 348 351 372 379 211 241 213 353 261 287 282	Name Ordnance, nec Engines/Turbines Aircraft and Parts Misc Transportation Cigarettes Logging Other Tobacco Construction Equip Pulp Mills		Y1990 39.7 13.7	Y1991 40.4 20.6 40.3 19.9 17.9	Y1992 39.8 24.0 40.0 23.9	Y1993 37.3 26.7 39.4	35.9 28.7	Y1995 57.6 32.5 31.7
1995 Rank \$ 1 2 3 4 5 6 7 8 9 10 11 12 13	SIC 348 351 372 379 211 241 213 353 261 287 282	Name Ordnance, nec Engines/Turbines Aircraft and Parts Misc Transportation Cigarettes Logging Other Tobacco Construction Equip Pulp Mills	Y1989 23.5 11.1 32.8 14.8 18.0 29.8 18.6	39.7 13.7 37.2 14.9 22.6	40.4 20.6 40.3 19.9	39.8 24.0 40.0	37.3 26.7 39.4	35.9 28.7	57.6 32.5
Rank \$ 1 2 3 4 5 6 7 8 9 10 11 12 13	348 351 372 379 211 241 213 353 261 287 282	Ordnance, nec Engines/Turbines Aircraft and Parts Misc Transportation Cigarettes Logging Other Tobacco Construction Equip Pulp Mills	23.5 11.1 32.8 14.8 18.0 29.8 18.6	39.7 13.7 37.2 14.9 22.6	40.4 20.6 40.3 19.9	39.8 24.0 40.0	37.3 26.7 39.4	35.9 28.7	57.6 32.5
Rank \$ 1 2 3 4 5 6 7 8 9 10 11 12 13	348 351 372 379 211 241 213 353 261 287 282	Ordnance, nec Engines/Turbines Aircraft and Parts Misc Transportation Cigarettes Logging Other Tobacco Construction Equip Pulp Mills	23.5 11.1 32.8 14.8 18.0 29.8 18.6	39.7 13.7 37.2 14.9 22.6	40.4 20.6 40.3 19.9	39.8 24.0 40.0	37.3 26.7 39.4	35.9 28.7	57.6 32.5
1 2 3 4 5 6 7 8 9 10 11 12 13	348 351 372 379 211 241 213 353 261 287 282	Ordnance, nec Engines/Turbines Aircraft and Parts Misc Transportation Cigarettes Logging Other Tobacco Construction Equip Pulp Mills	23.5 11.1 32.8 14.8 18.0 29.8 18.6	39.7 13.7 37.2 14.9 22.6	40.4 20.6 40.3 19.9	39.8 24.0 40.0	37.3 26.7 39.4	35.9 28.7	57.6 32.5
2 3 4 5 6 7 8 9 10 11 12 13	351 372 379 211 241 213 353 261 287 282	Engines/Turbines Aircraft and Parts Misc Transportation Cigarettes Logging Other Tobacco Construction Equip Pulp Mills	11.1 32.8 14.8 18.0 29.8 18.6	13.7 37.2 14.9 22.6	20.6 40.3 19.9	24.0 40.0	26.7 39.4	28.7	32.5
3 4 5 6 7 8 9 10 11 12 13	372 379 211 241 213 353 261 287 282	Aircraft and Parts Misc Transportation Cigarettes Logging Other Tobacco Construction Equip Pulp Mills	32.8 14.8 18.0 29.8 18.6	37.2 14.9 22.6	40.3 19.9	40.0	39.4		
4 5 6 7 8 9 10 11 12 13	379 211 241 213 353 261 287 282	Misc Transportation Cigarettes Logging Other Tobacco Construction Equip Pulp Mills	14.8 18.0 29.8 18.6	14.9 22.6	19.9				
5 6 7 8 9 10 11 12 13	211 241 213 353 261 287 282	Cigarettes Logging Other Tobacco Construction Equip Pulp Mills	18.0 29.8 18.6	22.6		2.1 9	456	26.9	26.8
6 7 8 9 10 11 12	241 213 353 261 287 282	Logging Other Tobacco Construction Equip Pulp Mills	29.8 18.6		1 7 U		15.6 17.3	24.8	20.8
7 8 9 10 11 12 13	213 353 261 287 282	Other Tobacco Construction Equip Pulp Mills	18.6	28.0		15.2		19.1	19.5
8 9 10 11 12 13	353 261 287 282	Construction Equip Pulp Mills			28.3	22.5	21.5 14.6	19.1	19.4
9 10 11 12 13	261 287 282	Pulp Mills	1 11 1	16.0	15.9 33.0	13.8 30.9		17.5	17.6
10 11 12 13	287 282			16.7	17.7	26.8	17.3		17.
11 12 13	282		10.5 19.7	8.0 16.8		13.6		13.3	
12 13		Ag Chemicals				14.2			13.
13		Plastic & Synthetics	11.5					9.1	13.0
		Flat Glass	1.4			15.3			
777		Measur Instruments	12.9	1		8.9		11.1	12.
		Medical Instruments	7.9			9.9			11.
15		Fats and Oils	9.9			8.1			
16		Misc Petroleum	11.0			5.0			
17		Narrow Fabric Mills	2.7	4.9 8.6		7.6			
18		Misc Chemicals	8.3						
19		Organic Chemicals	6.8			7.8		·	
20		Refrigeration Mach	2.3						
21		Meat Products	6.2	· · · · · · · · · · · · · · · · · · ·					
22		Grain Mill Products Paints and Allied	2.4						
23			3.8						
24 25		Navigation Equipment Inorganic Chemicals	2.4						
26		Farm/Garden Mach	2.3						
27		Indus machinery, nec	1.5						
			1.6						
28 29		Soap, Cleaners, etc Tobacco Processing	1.4						
30		Boat Build/Repair	2.8						
31		Misc Textile Goods	-0.8						
32		Nonferrous Rolling	-0.3						
33		Periodicals	1.6						
34		Books	2.1						
35		Fabricated Structural	1.0				2.4		
36		Paperboard Boxes	0.9						
37		Spec Indus Mach	-4.1						
		Printing Trade	0.3						
38 39			-0.4		1				
40		Metal Containers Genl Indus Mach	-0.3						
		Greeting Cards	0.1						
41		Commercial Printing	1.1						
43		Convert Products	-0.5						
		1	0.4						
44		Wood Buildings							
45		Canned Foods Misc Plastics	-2.2						
46	I		-1.1						
47		Nonmetallic Mineral	-0.8						
48		Missiles/Space Veh	0.1						
49		Misc Publishing	-0.4						
50		Knitting Mills	-0.5						
51		Nonfer Foundries	0.8						
52 53		Misc Primary Metal Newspapers	-1.8 -0.2						

Table	10.C:	US Manufacturing, Net Exp	ort Shar	'e					
		national Trade Administration			n (2), in I	percent			
		digit SIC codes and 1995 va							
10	1								
1995									
Rank	SIC	Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
54		Business Forms	0.0	0.1	0.2	0.1	0.1	0.2	0.0
55		Textile Finishing	0.0	0.0	0.0		0.0	0.0	0.0
56		Public Building Furni	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57		Paperboard Mills	0.0	0.0	0.0	0.0	0.0		0.0
58		Coating, Engraving	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59		Iron/Steel Foundries	0.5	0.6	0.8	1.4	0.7	0.1	0.0
60		Office Furniture	0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.0
61		Wood Containers	0.0		1	0.4	0.5	0.3	-0.2
62		Dairy Products	-0.5	-0.7	-0.3		0.3		-0.3
63		Paving/Roofing Mat	-0.4	-0.2			-0.1		-0.3
64		Drugs	1.8	2.6					-0.4
65		Yarn/Thread Mills	-1.3						-0.5
66		Store Fixtures	-0.2						
67		Metal Forgings	1.6						
68		Concrete, Gypsum	-0.1	0.0					
69		Purchased Glass	-0.1	-0.3			1.0		
70		Bakery Products	-0.9						
			-9.9						
71 72		Communication Eqp Misc Food	-3.0						
73		Carpets and rugs	-3.0						
74			-3.5						
		Sugar Products	1.8						
75		Electric Trans Equip							
76		Millwork, Plywood	-1.7						
77		Household Furniture	-0.6 -2.2						
78		Plumbing & Heating	-2.2						
79		Petroleum Refining	-3.8						
80		Rubber belting ETC							
81		Electrical Indust App	1.1						
82		Beverages	-5.1						
83		Railroad Equipment	-6.2						
84		Blankbooks binding	-4.5						
85		Misc Fabr Metals	-8.2						
86		Fabric Mills, Other	-6.3						
87		Misc Electrical	-5.4				-2.8		
88		Rubber Products, nec	-2.9						
89		Electronic Comp	-5.5						
90		Cutlery, Hand Tools	-7.C						
91		Lighting/Wiring Equip	-6.9						
92		Glassware, Pressed	-5.0						
93		Screws, Bolts, Etc	-8.9						
94		Fabric Mills, Wool	-8.5						
95		Leather Tanning	-4.4						
96		Paper Mills	-10.8						
97		Tires/Inner Tubes	-13.4						
98		Cement, Hydraulic	-10.2						
99		Pens, Pencils	-7.8						
100	354	Metalworking Mach	-7.1						
101	239	Fabricated Textiles	-7.7						
102		Household App	-9.4	-7.5	-6.9				
103		Saw/Planing Mills	-4.5						
104		Second Nonfer Met	-15.0				-10.	7 -9.4	
105		Fabric Mills, Cotton	-11.2					2 -11.	1 -10.
106		Blast Furnace	-10.5						

Table	10.C: \	US Manufacturing, Net Exp	ort Shar	·e					
Source	e: Inter	national Trade Administratio	n and tex	t equatio	n (2), in	percent			
Ranke	d by 3-	digit SIC codes and 1995 va	alues						
1995									
Rank	SIC	Name	Y1989	Y1990	Y1991	Y1992	Y1993	Y1994	Y1995
107		Misc Manufacturing	-9.0	-8.2	-7.6	-8.5	-9.2	-9.9	-11.0
108		Misc Wood Products	-12.0	-7.7	-7.2	-8.7		-10.7	
109		Structural Clay	-10.9	-10.0	-9.4	-11.2	-12.3	-12.2	
110		Motor Vehicles Eqp	-18.4	-17.8	-16.6				
111	357	Computer/Office Eqp	3.4	5.0	2.3	-4.2	-11.4	-14.5	-16.0
112		Photographic Eqp	-10.1	-8.2	-8.4	-10.4			
113		Cigars	-15.2	-15.5	-10.9				
114		Primary Nonfer Met	-19.8	-10.9	-11.1			-16.6	
115		Ophthalmic Goods	-23.3	-21.7	-19.4	-19.6	-17.7	-18.2	
116		Costume, Jewelry	-21.1	-19.4	-20.4	-21.9	-21.3		
117		Leather Goods, nec	-13.9	-14.8	-11.1	-12.7	-11.8	-19.3	
118	233	Women's Outerware	-24.2	-24.2					
119	231	Men's & Boys' Outer	-18.5	-16.5	-17.2	-19.6	-19.1	-21.7	
120	234	Women's Underware	-16.7	-19.0		-22.1			
121	328	Cut Stone Products	-32.8	-35.2		-26.7			
122	393	Musical Instruments	-33.0	-27.3	-25.5	-25.7	-26.2		
123	326	Pottery and Related	-32.5		-31.2	-32.7	-31.0		
124	375	Motorcycles, Bicycles	-43.2	-33.1	-25.7	-30.5	-27.6		
125	394	Toys/Sporting Goods	-35.9						
126	232	Men's/Boys' Furnish	-29.2	-29.9	-28.5	-30.2	-32.1	-33.8	
127	235	Hats, Caps, Millinery	-26.2	-30.7	-31.2				-37.5
128	237	Fur Goods	-41.7	-33.2	-28.4				
129	238	Misc Apparel	-47.1	-48.6					
130	313	Footware cut stock	-30.7	-31.8	-34.7				
131	365	Audio/Video Eqp	-51.6	-46.1	-44.5				
132	259	Misc Furniture	-48.4						
133	391	Jewelry, Silverware	-49.9						
134		Girls' Outerware	-61.7	-61.9	-63.2	-70.2			
135		Footwear, Exc Rub	-57.6						
136		Luggage	-45.4	-45.9					
137	317	Personal Leather	-54.8						
138	315	Leather Gloves	-52.6						
139		Watches, Clocks	-31.5	-51.8	-58.3				
140		Footwear, rub/ plastic	-75.9	-75.3	-74.7				
		Total	-3.8		-1.5	-1.9	-2.6	-3.4	-3.4

Ta	blo 11	US International Trade	in San	icae							
		Survey of Current Busines			96						
)C	Juice. S	Turvey or Current Busines	35, 14046	IIIDEI 13	30						
T.,		\$ Millions									
<u> </u>	age in	3 WILLIOUS									
_	<u> </u>		4007	4000	1989	1990	1991	1992	1993	1994	1995
Exports			1987	1988	117870			164057			
Total Private Services							48385	54742	57875	58417	61137
	Travel		23563	29434	36205	43007	17819	19715	20323	22272	26953
	Royalties		10183 4280	12146	13818	16634	11249	11994	13296	15728	16264
		Business Services		5426	6152	6951		2543	3002	3837	410
	Cor	mputer Services	782	1394	1183	1314	2180			2724	2823
		Computer/Data Proces	649	1198	978	1031	1738	1902	2308		1278
		Database	133	196	205	283	442	641	694	1113	12/0
	ports						101555	400000	444015	404445	40005
To		rate Services	74835	81967	86351			103328			
	Travel		29310	32114	33416	37349	1	38552	40713	43782	
	Royalt		1857	2601	2528	3135		5074	4765	5518	
	Busine	ess Services	1319	1848	1971	1891		3295		4262	4502
	Cor	mputer Services	99	146	77	98		213			
		Computer/Data Proces	74	107	46			141	304		
		Database	25	39	31	54	51	72	110	141	155
N	et Expo	orts									ļ
Total Private Services			11851	19018	31519	37544	50898	60729	61123	61556	66756
	Travel		-5747	-2680	2789	5658	13063	16190	17162	14635	15282
		Royalties		9545	11290	13499	13784	14641	15558	16754	2064
		Business Services		3578	<u> </u>	5060	8464	8699	9284	11466	11762
	1	mputer Services	2961 683			1216	2013	2330	2588	3452	3484
	 	Computer/Data Proces		1091				1761	2004	2480	236
	+ +	Database	108	157	1	1		569			112
		Dutabass									
N	et Inco	me, Direct Investment,	\$ Milliio	ns							
Computer Manufacturing			*				3406	1562	2271	1855	323
Computer Services							194		 		
		.,									
T	rade St	nares for Business and	Compu	l ter Serv	rices. in	percent		` ` `			
<u> </u>											
F	xports	. \$		 	1	1				1	
_		Services	2.30	2.47	2.49	2.52	4.04	3.99	4.06	4.33	3.9
Computer Services			0.42						.1		
_	Impute	7 001 71000	J.72	0.00	J. 77	1	 	1	1		
l۳	nports					-	+	1	+		1
		Saninas	0.69	0.82	0.78	0.67	0.95	1.05	1.17	1.12	2 1.0
Business Services Computer Services			0.09								
<u> </u>	ompute	i Services	0.05	0.07	0.03	0.03	0.00	0.07	0.12	. 0.10	, <u>U.</u>
N	et Expo	orts									
_		Services	1.59	1.63	1.69	1.84	3.04	2.89	2.84	3.16	3 2.8
P		- 	1.00	1.00	1.00	1.5	0.71				