

SUPPORTING STATEMENT  
UNITED STATES INTERNATIONAL TRADE COMMISSION QUESTIONNAIRE  
Trade, Investment, and Industrial Policies in India: Effects on the U.S. Economy

Part B—Collection of Information Employing Statistical Methods

**1. Response universe, sample sources, and sampling strata**

**Survey objectives**

The House Ways and Means Committee and the Senate Finance Committee (Committees) instigated this investigation on August 2, 2013. The Committees directed the U.S. International Trade Commission (USITC or Commission) to survey U.S. firms about recent changes in Indian policies and the effect these changes have had on company strategies toward India. This survey is part of a larger investigation into industrial policies in India that discriminate against U.S. trade and investment.

**Respondent universe**

The respondent universe includes all companies that conduct business in the United States and abroad, particularly those that export to or have foreign affiliates in India, and are in a sector identified by industry experts at the USITC as being particularly affected by discriminatory industrial policies in India. The USITC has identified approximately 54,000 such firms for its sampling frame, of which 9,000 will be sampled. The sampling unit is the firm, rather than the establishment.

The response universe will particularly target—to the extent possible—those firms that are “engaged in India” (i.e., firms that export to India or have foreign affiliates in India). To examine the effect of any prohibitive barriers to trade with India, it is necessary to include a broader list of firms that are not exporting to India but are potentially interested in doing so. As a result, the response universe will also include more broadly “globally engaged firms” (i.e., firms that either export abroad or have foreign affiliates abroad).<sup>1</sup>

The potential respondent universe represents the sum of firms, net of duplicative records, identified in these data sources:

1. **Industry databases:** Databases derived from industry analyst knowledge as well as various industry associations and industry directories, of which some are focused on firms that have engaged in trade with India, and others are generally global firms.
2. **Specialty databases:** lists of firms derived from sources that collect data from certain subgroups of U.S. firms
  - Firms with intellectual property licensing agreements that mention India as identified in the ktMINE database.<sup>2</sup>

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<sup>1</sup> Although it is possible that firms that do not export.

<sup>2</sup> ktMINE is a proprietary global database of information on intellectual property licensing agreements.

- o Firms identified as exporting goods to India from the United States in the PIERS database.<sup>3</sup>
  - o Firms identified as multinational corporations in the Bureau van Dijk's Orbis database.<sup>4</sup>
3. **Broad-based Orbis list:** A broad-based database of firms obtained from Orbis in industries that face barriers to trade in India, and are likely to engage in trade via exports or investment. These industries include selected sectors based on NAICS, as discussed below.
  4. **Confidential Census list:** A potential database from the U.S. Census Bureau (Census) of establishments exporting from the United States to India. The USITC is in discussions with Census to obtain this confidential database. If this database becomes available before the end of December 2013, up to 1,000 U.S. exporting companies based on the establishments in this database may be included in the final sampling frame.

The firms identified in the broad-based Orbis list are thought to be less likely to have relevant experience to share with respect to India than other lists, but will permit the USITC to capture responses from a greater number of exporters that could not be found in the specialty databases.

Because the focus of this study is on globally engaged firms, which tend to be larger than the average firm, the response universe was generally restricted to firms with 50 or more employees.<sup>5</sup>

## Sample design

Survey respondents will be selected through a stratified random sampling methodology that stratifies firms through a combination of: (1) data source, (2) industry, and (3) size. There will be a total of 52 strata (eight industries, seven data sources/size combinations, and four strata that are empty).<sup>6</sup>

1. The data source may be one of the industry databases, the specialty database lists, the Orbis-based list, or the Census list, as given above. Sources vary in their level of engagement with India, and sampling rates will reflect this variation.
2. Industries comprise the following eight sectors: (1) agriculture, food, and beverage, (2) natural resources, (3) chemicals and textiles, (4) other manufacturing, (5) finance and insurance services, (6) distribution services, (7) information services, (8) other services. See appendix table A.1 for a complete list of NAICS sectors included in the respondent universe.<sup>7</sup>

<sup>3</sup> PIERS is a proprietary database of U.S. international trade.

<sup>4</sup> Orbis is a proprietary global database with information on public and private companies.

<sup>5</sup> See table 5 below, which shows that small firms are very unlikely to export to India. For select agriculture and food processing NAICS categories, the employment cutoff was lowered to 20 employees as such firms are more frequently able to export. For select services NAICS categories, the cutoff was raised to 100 employees, as they were deemed unlikely to export or have a foreign affiliate with fewer than 100 employees.

<sup>6</sup> By design these strata will be non-overlapping. Each firm is identified with a sole industry and size. There may be duplicates as sources may contain overlapping sets. These will be manually deleted.

<sup>7</sup> These NAICS sectors are those used for obtaining the broad-based Orbis list. Although these are the main sectors of interest, firms whose primary NAICS sectors are not included in the list in appendix table A.1 may be included in the specialty databases, as long as these firms operate within an industry of interest.

3. Size is defined by the number of employees or value of exports, depending on the data source.
  - a. For firms identified through ktMINE, Orbis, or industry lists, size is measured by the number of employees. Employment is the most readily available measure of firm size in these databases and is known to be highly correlated with both exports and investment abroad.
    - As discussed above, the smallest firms in each stratum are not sampled in order to reduce respondent burden and to improve the statistical properties of the remaining estimates.
    - Medium sized firms are defined as firms with fewer than 500 employees
    - Large firms are defined as firms with 500 or more employees.
  - b. For firms selected from the PIERS exporter database, size is measured by the value of exports.
    - Firms that have exported to India are included in the database if they have more than \$100,000 in total exports in the year ending October 2013.
    - Firms that have exported to countries other than India are included in the database if they have more than \$1 million in total exports in the year ending October 2013.

Table 1 presents the sampling frame, the population of firms in each stratum. Table 2 presents the sample size for each stratum, selected following the methodology described in the next section. 9,000 firms are expected to be sampled: 8,000 as indicated in table 1 plus an additional 1,000 from the Census list if it becomes available in time for USITC staff to process the data.

There are no publicly available, comprehensive lists of U.S. firms that are globally engaged or are engaged in India.<sup>8</sup> As a result, some coverage error is unavoidable. This may be particularly problematic with respect to exporters to India. USITC staff have made a substantial effort to obtain lists of relevant firms. For example, we have sought out firms with exports to India through the use of the Piers database on exports, which includes data from approximately 80 percent of the firm population, and moreover collects only waterborne transactions. The Census export data, if they become available, could eliminate the coverage error for exporters, as the data contain a list of all known exporting establishments to India and the rest of the world. In addition, to the extent feasible, USITC staff obtained lists of firms via industry associations that are in India or interested in entering the Indian market.

Based on results of similar past surveys, we expect the response rate to range from 40–60 percent,<sup>9</sup> which would result in 3,200–4,800 surveys received from the sampled companies (assuming 8,000 surveys sent out). Responses in previous and ongoing USITC surveys have not differed significantly by firm size or across industries. Thus a uniform response rate has been assumed for all strata.

**TABLE 1** Sampling frame by stratum, excluding firms from the Census list

<sup>8</sup> The Bureau of Economic Analysis collects data on firms with foreign investment, and Census collects data on exporting firms; no list of all globally engaged firms is publicly available. Census data may become available to us (see above) in time for partial inclusion into the survey.

<sup>9</sup> In prior surveys undertaken by the USITC, the response rates have ranged between 39 percent and 57 percent.

Sector	Multinational corporations	India-specific firms	Exporters to countries other than India	Firms in Orbis <sup>a</sup>		Industry association lists	Total
				Medium	Large		
Agriculture, food, and beverages	43	44	116	4,981	213	36	5,433
Natural resources and metals	363	109	— <sup>b</sup>	4,452	371	82	5,377
Chemicals and textiles	284	240	221	2,665	292	— <sup>b</sup>	3,702
Other manufacturing	544	215	123	3,746	580	71	5,279
Distribution services	130	114	93	3,824	830	51	5,042
Finance and insurance services	134	68	— <sup>b</sup>	2,270	283	648	3,403
Information services	334	135	— <sup>b</sup>	4,028	388	150	5,035
Other services	392	467	817	16,797	2,122	— <sup>b</sup>	20,595
<b>Total</b>	<b>2,224</b>	<b>1,392</b>	<b>1,370</b>	<b>42,763</b>	<b>5,079</b>	<b>1,038</b>	<b>53,866</b>

<sup>a</sup> Large firms have 500 or more employees; medium-sized firms have between 50 and 500 employees; small firms with less than 50 employees are generally not sampled, except in the case of the agriculture, food, and beverages sector which has a minimum threshold of 20 employees.

<sup>b</sup> Not all strata are populated.

**TABLE 2** Number of firms in the sample by stratum, excluding firms from the Census list

Sector	Multinational corporations	India-specific firms	Exporters to countries other than India	Firms in Orbis <sup>a</sup>		Industry association lists	Total
				Medium	Large		
Agriculture, food, and beverages	40	43	53	448	49	36	669
Natural resources and metals	235	95	— <sup>b</sup>	274	76	53	733
Chemicals and textiles	141	160	70	164	46	— <sup>b</sup>	581
Other manufacturing	451	215	64	226	152	59	1,167
Distribution services	86	101	40	161	173	40	601
Finance and insurance services	67	46	— <sup>b</sup>	146	45	326	630
Information services	329	135	— <sup>b</sup>	251	121	148	984
Other services	283	452	373	1,043	484	— <sup>b</sup>	2,635
<b>Total</b>	<b>1,632</b>	<b>1,247</b>	<b>600</b>	<b>2,713</b>	<b>1,146</b>	<b>662</b>	<b>8,000</b>

Note: Samples are based on the optimal allocations presented in table 3 except where noted

<sup>a</sup> Large firms have 500 or more employees; medium-sized firms have between 50 and 500 employees; small firms with less than 50 employees are generally not sampled.

<sup>b</sup> Not all strata are populated.

## 2. Collection of information employing statistical methods

### a. Statistical methodology for stratification and sample selection

A stratified sample based on a simple stratification process is being implemented for this project. The goal of the stratification scheme is to develop a set of strata such that the variance of responses (such as level of employment, type of activities, and likelihood of engagement with India) within each stratum is minimized to the extent possible. Stratification is also being used to include rare observations. Because no pro-forma reliable data exist on the size and scope of the number of firms that are engaged in India, or are interested in engaging with India but do not as a result of its industrial policies, the stratification scheme was based on the best judgment of industry and USITC experts.

The approach to stratification in this survey is based on a two-part procedure designed to maximize efficiency of the resulting estimates, and hence reduce the total number of firms sampled. First, firms identified by the Orbis database are optimally allocated across size and industry strata based on the coefficient of variation of employment within each strata. Second, oversampling is used to allocate firms identified by the specialty databases (including the industry database), to reflect the higher expected prevalence of firms in this list that are engaged in India or engaged globally. For each industry, a higher sampling fraction is chosen for firms from the specialty databases than from the Orbis database. These procedures are discussed in more detail below.

1. Orbis-based strata: In these strata, the Neyman method is used to determine the share of the total allocated to each stratum, based on the coefficient of variation of employment and the number of firms in each stratum. Strata with larger coefficients of variation in employment (i.e., the more heterogeneous strata) will therefore be sampled at higher rates.
2. Specialty database-based strata: Selection rates in these strata were based on disproportionate sampling procedures for rare populations. Table 3 presents the estimated share of firms from each database that are of interest (i.e., they are engaged in India or are prevented from such engagement by Indian policies). Assuming that 5 percent of large firms in the Orbis database will be of interest, the sampling rates are based on Christman (2009) and Kalton (2009).<sup>10</sup> Although not shown in table 3, the sampling rate varies by industry. For example, multinational corporations in the agriculture, food, and beverage sector were sampled at a rate of  $3.2 \times (49/213) = 23$  percent. Where possible, the sample includes at least 40 firms per stratum.
3. Census list: Firms from the Census list will be chosen using the same methodology as those from specialty databases, assuming that 100 percent of these firms are of interest. In addition, since Census exporter data are expected to have greater coverage of the firms of interest, we may reduce the number of firms sampled from Orbis and replace them with

<sup>10</sup> Shares are based on USITC judgment of the likelihood of engagement with India. See Christman, Mary, 2009, "Sampling of rare populations," *Handbook of Statistics* vol. 29A, 112; and Kalton, Graham, 2009, "Methods for oversampling rare subpopulations in social surveys," *Survey Methodology* vol. 35 no. 2, 127.

firms sampled from Census. This may result in fewer than 9,000 firms being sampled overall but a sample that has better coverage of the firms of interest.

**TABLE 3** Disproportionate sampling of firms selected from industry lists and specialty databases

	Multinational corporations	India-specific firms	Exporters to countries other than India	Industry association lists	Census data
Estimated prevalence of firms of interest (percent) <sup>a</sup>	50	90	20	50	100
Sampling rate relative to Orbis large firms <sup>b</sup>	3.2	4.2	2.0	3.2	4.5
Average share of population sampled (percent) <sup>c</sup>	73.4	89.6	43.8	63.8	83.8

<sup>a</sup>Based on staff experience with similar databases and association lists.

<sup>b</sup>For specific industries, the sampling rates for large Orbis firms are as follows: 23% for agriculture, food, and beverage; 20% for natural resources; 16% for chemicals and textiles; 26% for other manufacturing; 21% for distribution services; 16% for finance and insurance services; 31% for information services; and 23% for other services.

<sup>c</sup>The sampling rate relative to large firms is on a sectoral basis; as a result, although the sampling rate relative to Orbis is the same for both the multinational corporations and the industry association lists, the average share of the population to be sampled differs due to compositional effects.

## b. Estimation Procedure

Survey estimates will be based on weighted data. The weighting procedure will incorporate a sample selection weight, a nonresponse adjustment factor, and if necessary, a poststratification weighting factor. There is an equal probability of selection with each stratum.

- *Sample selection weighting*: Because the sampling rates are based on two criteria, as discussed above, the selection weight factor will account for both the probability of selection within a particular industry and size, and the oversampling of firms from the association list.
- *Nonresponse adjustment*: The nonresponse adjustment factor is designed to attenuate bias due to differential response rates. See the section below on accuracy and reliability of information collected for further discussion.
- *Poststratification weighting*: If necessary, a poststratification weighting factor will be used to attenuate bias due to sample frame noncoverage or omissions. Population information from Census data, such as the number of firms in each NAICS industry and in each size category (organized by number of employees), may be used to conduct poststratification. Although the best effort has been made to obtain a representative sample of firms engaged in India or other countries, the distribution of such firms across industries is not known with certainty in advance.

The general weighting formula can be represented as

$$W_h = S_h \times NR_h \times PS_h, \quad (1)$$

where  $S_h$  is the sample selection weight for stratum  $h$ ,  $NR_h$  is the nonresponse adjustment factor for stratum  $h$ , and  $PS_h$  is the poststratification weight of stratum  $h$ .  $W_h$  is the weight applied to all observations in stratum  $h$ . This formula may be adjusted to include a firm-specific weighting component if non-response is determined to be related to factors aside from the factors used to design the strata.

Standard estimation procedures will be used as in Heeringa et al (2010).<sup>11</sup> For example, the formula used to estimate the population attribute of interest is found in equation 2. Per standard notation, the total estimate  $\tau_{st}$  from a stratified random sample is given by

$$\tau_{st} = \sum_{h=1}^L N_h \bar{y}_h, \tag{2}$$

where  $h$  denotes an individual stratum,  $N_h$  equals the population of stratum  $h$ , and  $\bar{y}_h$  equals the average of the attribute of interest of the sampled items in stratum  $h$ . For example,  $\bar{y}_h$  could represent the average amount of revenue within each stratum.

The variance estimate for sampling without replacement is given by

$$\text{var}(\tau_{st}) = \sum_{h=1}^L N_h (N_h - n_h) \frac{s^2}{n_h} \tag{3}$$

where  $s^2$  equals the standard deviation of the attribute of interest within stratum  $h$ , and  $n_h$  is the sample size for stratum  $h$ .

**c. Degree of accuracy needed for the purpose described in the justification**

A sample size of 8,000 is needed to achieve estimates of +/-5 percent at 90 percent confidence; as noted above, the extra 1,000 firms from Census, if available, will provide better coverage of firms of interest but are not necessary for improved accuracy. It is expected that it will be feasible to produce statistically significant results for the majority of survey items at the aggregate level at a 90 percent confidence level, both for the binary questions and for questions requiring responses in U.S. dollars. For example, table 4 provides the maximum margin of error for a binary question, given alternative response rates. Note that this table is based on a sample size of 8,000 (excluding the potential 1,000 additional firms from the Census export database).

**TABLE 4** Margin of error for 90 percent confidence interval

Measure	Response Rates, percent		
	40	50	60
Number of respondents	3,200	4,000	4,800
Standard error, percent	0.88	0.79	0.72
Margin of error, percent	1.45	1.30	1.19

Note: This assumes a maximum margin of error of 50% for a binary question.

<sup>11</sup> Heeringa, Steven G., Brady T. West, and Patricia A. Berglund. 2010. *Applied Survey Data Analysis*. Chapman and Hall/CRC.

Given the sample size per stratum, it is assumed that it will also be feasible to distinguish the responses across the largest industries within a 90 percent confidence interval. This degree of confidence is sufficient for the purposes described in the justification.

**d. Unusual problems requiring specialized sampling procedures**

No unusual problems were encountered.

**e. Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

This data collection is currently only intended to occur once, and therefore will not be repeated on a periodic basis. As such, the total recurring annual cost burden is zero.

**3. Methods to maximize response rates and deal with non-response**

**a. Maximizing response rates**

Commission staff will employ several techniques to increase the response rates of questionnaire recipient firms. Recipients will receive separate notices that (1) notify them that their firm was selected for the survey, (2) direct them to complete the survey, and (3) remind them, if necessary, to complete the survey before the deadline. Once the submission deadline has passed, firms that still have not responded will receive an additional reminder. Each of these communications will include a phone number and email address of a person who can help firms with filling out the questionnaire or answer their questions regarding the survey and/or study. Commission staff may also contact firms directly, via phone or email, to urge them to complete the survey and to answer any questions they may have regarding this information collection or study in general. Commission staff may also contact firms, via phone or email, to correct information or fill in incomplete responses, or solicit additional information about a response. The burden associated with follow up calls or emails is included in the total response burden amount.

In addition to pre-contact and follow-up, the questionnaire itself has been designed to be clear and succinct as possible to gather the specific material requested by the Committees. (See discussion of testing below.) This clarity and brevity should reduce burden and improve response rates. The questionnaire will clearly point out that firms are obligated by law to respond. Finally, the ability to access, fill out, and submit the survey electronically may also increase response.

**b. Accuracy and reliability of information collected**

The sample methodology has been designed to be as accurate and reliable as possible, based on Commission experience in past surveys. The sampling frame has been chosen to include firms in industries that are globally engaged or engaged in India.

The size of firms included in the survey has also been carefully considered to improve accuracy and reliability. Small firms are unlikely to be exporters (see table 5), and are even less likely to have foreign affiliates in other countries. Thus, the survey should capture many exporters, while

excluding firms of the smallest size that are unlikely to be exporters. Foreign affiliates tend to be a subset of exporting firms, and are generally even larger (and more rare) than exporters.

**TABLE 5** Firm size and exporters

Share of U.S. firms that	Firm size		
	Small (1-49 employees <sup>a</sup> )	Medium (50-499 employees)	Large (500+ employees)
Export	3.8	8.8	37.2
Export to India	0.2	1.3	11.3

Source: U.S. Census, 2011 Country Business Patterns

<sup>a</sup> Including firms of unknown size, which are generally small.

Response rates in USITC surveys have recently approached 60%. The USITC will examine survey responses to detect and correct for any non-response bias. The team will first examine conditional response rates for groups of firms based on characteristics available in the data frame that are hypothesized to impact outcomes of interest. These may include variables such as firm size, industry, NAICS code, or location. Any differences in response rates can be further investigated through logistic regression analysis, using firm characteristics as predictors, and whether or not a recipient responded to the survey as a binary outcome. If the results of the logistic regression indicate that one or more of the characteristics investigated above affects the propensity of a survey recipient to respond to the survey, then those characteristics will be examined to determine whether they are associated with differences in the outcome variables under study across the dataset of survey responses collected. If any sources of non-response bias are found, they can be controlled for by the development of weights, which can then be used in concert with weighting based on population stratification, in the extrapolation of results to the entire population.

Since each frame (based on industry and firm size) from the industry association list and specialty database lists has a corresponding frame from the Orbis database, the Commission expects that all sampled information will yield “reliable” data that can be generalized to the universe studied.

#### **4. Tests of procedures or methods to minimize burden or improve utility**

The Commission sought public comment on the questionnaire with industry representatives of several relevant industries. These representatives provided feedback in areas such as availability of data, product coverage, definitions, and clarity of instructions. See part A for information about the 9 field testers, the comments they made, and the subsequent changes made to the questionnaire.

In addition to field testing, the questionnaire has been made available for public comment. Notice of the draft questionnaire was published in the Federal Register, and the draft questionnaire was publicized by industry associations. It has also been extensively reviewed within the Commission. Industry analysts and economists have reviewed the document to ensure

it contains information needed to adequately answer questions posed in the study while imposing a minimum burden on the responding businesses. The burden on the smallest companies (those with fewer than 20 employees) has been eliminated, as these firms have been excluded from the survey. Moreover, in most sectors, firms with fewer than 50 employees have also been excluded from the survey.

The sampling methodology and procedures in this survey are quite similar to those in prior USITC survey work, including the study on digital trade, the study on remanufactured goods, and the study on used electronics. Prior studies, for example, also have had populations drawn from Orbis and industry association lists; have also stratified by industry and size; and have used similar methods of survey distribution and data collection. Although the USITC has not specifically tested the methodology and procedures of the India trade, investment, and industrial policies survey, prior surveys have provided implicit tests of its practicability and utility.

## **5. Contact information**

Collection and analysis of the data will be the responsibility of the Office of Economics and the Office of Industries within the Commission. Project leader William Powers can be contacted at [william.powers@usitc.gov](mailto:william.powers@usitc.gov) or 202-708-5405, deputy project leader Renee Berry can be contacted at [renee.berry@usitc.gov](mailto:renee.berry@usitc.gov) or 202-205-3498, and lead economist for this study Tani Fukui can be contacted at [tani.fukui@usitc.gov](mailto:tani.fukui@usitc.gov) or 202-205-3220. Commission staff also worked with Mariel Townsend and her colleagues at Summit Consulting, a survey design and data analysis consulting firm. Ms. Townsend may be contacted at 202-407-8328 or at [mariel.townsend@summitllc.us](mailto:mariel.townsend@summitllc.us).

**TABLE A.1** The eight industrial groupings used in the survey, with associated NAICS codes

**1. Agriculture, food, and beverage**

11111	
0	Soybean Farming
11114	
0	Wheat Farming
11115	
0	Corn Farming
11116	
0	Rice Farming
11119	
9	All Other Grain Farming
1112	Vegetable and Melon Farming
1113	Fruit and Tree Nut Farming
11142	Nursery and Floriculture Production
11211	Beef Cattle Ranching and Farming, including Feedlots
11212	
0	Dairy Cattle and Milk Production
11221	
0	Hog and Pig Farming
1123	Poultry and Egg Production
11521	
0	Support Activities for Animal Production
31122	
2	Soybean Processing
31122	
3	Other Oilseed Processing
31122	
5	Fats and Oils Refining and Blending
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing
31161	
1	Animal (except Poultry) Slaughtering
31161	
2	Meat Processed from Carcasses
31161	
5	Poultry Processing
3119	Other Food Manufacturing
31213	
0	Wineries
31214	
0	Distilleries

**2. Chemicals and textiles**

314	Textile Product Mills
315	Apparel Manufacturing
316	Leather and Allied Product Manufacturing
325	Chemical Manufacturing

### 3. Natural resources

1133	Logging
2111	Oil and Gas Extraction
2121	Coal Mining
2122	Metal Ore Mining
2131	Support Activities for Mining
3211	Sawmills and Wood Preservation
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing
32191	Millwork
32192	Wood Container and Pallet Manufacturing
32199	
2	Prefabricated Wood Building Manufacturing

**TABLE A.1** The eight industrial groupings used in the survey, with associated NAICS codes - *continued*

32199	
9	All Other Misc Wood Product Manufacturing
32712	
5	Nonclay Refractory Manufacturing
3311	Iron and Steel Mills and Ferroalloy Manufacturing
3313	Alumina and Aluminum Production and Processing
3314	Nonferrous Metal (except Aluminum) Production and Processing
3321	Forging and Stamping
3331	Agriculture, Construction, and Mining Machinery Manufacturing
3339	Other General Purpose Machinery Manufacturing
42352	
0	Coal and Other Mineral and Ore Merchant Wholesalers

### 4. Other manufacturing

32621	
1	Tire Manufacturing (except Retreading)
33241	
0	Power Boiler and Heat Exchanger Manufacturing
33361	
1	Turbine and Turbine Generator Set Units Manufacturing
3341	Computer and Peripheral Equipment Manufacturing
3342	Communications Equipment Manufacturing
3343	Audio and Video Equipment Manufacturing
33441	
3	Semiconductor and Related Device Manufacturing
33441	
7	Electronic Connector Manufacturing
33441	
9	Other Electronic Component Manufacturing
33451	
0	Electromedical and Electrotherapeutic Apparatus Manufacturing
33451	
1	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing

- 3353 Electrical Equipment Manufacturing
- 3359 Other Electrical Equipment and Component Manufacturing
- 3361 Motor Vehicle Manufacturing
- 3363 Motor Vehicle Parts Manufacturing
- 33651
  - 0 Railroad Rolling Stock Manufacturing
- 3391 Medical Equipment and Supplies Manufacturing
- 33993 Doll, Toy, and Game Manufacturing

## 5. Distribution services

- 4231 Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers
- 4236 Electrical and Electronic Goods Merchant Wholesalers
- 4243 Apparel, Piece Goods, and Notions Merchant Wholesalers
- 4244 Grocery and Related Product Merchant Wholesalers
- 4245 Farm Product Raw Material Merchant Wholesalers
- 4248 Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers
- 4431 Electronics and Appliance Stores
- 4441 Building Material and Supplies Dealers
- 4451 Grocery Stores
- 4452 Specialty Food Stores
- 4453 Beer, Wine, and Liquor Stores

**TABLE A.1** The eight industrial groupings used in the survey, with associated NAICS codes - *continued*

- 4481 Clothing Stores
- 4482 Shoe Stores
- 4483 Jewelry, Luggage, and Leather Goods Stores
- 4521 Department Stores
- 4532 Office Supplies, Stationery, and Gift Stores
- 4541 Electronic Shopping and Mail-Order Houses

## 6. Information services

- 5111 Newspaper, Periodical, Book, and Directory Publishers
- 5112 Software Publishers
- 51211 Motion Picture and Video Production
- 51212 Motion Picture and Video Distribution
- 51213
  - 1 Motion Picture theaters except drive-in
- 51219 Postproduction Services and Other Motion Picture and Video Industries
- 5122 Sound Recording Industries
- 5151 Radio and Television Broadcasting
- 5152 Cable and Other Subscription Programming
- 517 Telecommunications
- 51911 New Syndicates
- 51913 Internet Publishing and Broadcasting and Web Search Portals
- 51919 All Other Information Services

## 7. Finance and insurance services

- 52221 Credit Card Issuing
- 52232
  - 0 Financial Transactions Processing, Reserve, and Clearinghouse Activities
- 52392 Portfolio Management
- 5241 Insurance Carriers
- 52421 Insurance Agencies and Brokerages

## 8. Other services

- 2362 Nonresidential Building Construction
- 2371 Utility System Construction
- 2373 Highway, Street, and Bridge Construction
- 2379 Other Heavy and Civil Engineering Construction
- 48111
  - 1 Scheduled Passenger Air Transportation
- 48111
  - 2 Scheduled Freight Air Transportation
- 48311
  - 1 Deep Sea Freight Transportation
- 48311
  - 2 Deep Sea Passenger Transportation
- 48811
  - 9 Other airport operations
- 48819 Other Support Activities for Air Transportation
- 4883 Support Activities for Water Transportation
- 48851
  - 0 Freight Transportation Arrangement

**TABLE A.1** The eight industrial groupings used in the survey, with associated NAICS codes - *continued*

- 4921 Couriers and Express Delivery Services
- 5331 Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)
- 5411 Legal Services
- 5412 Accounting, Tax Preparation, Bookkeeping, and Payroll Services
- 54133 Engineering Services
- 5414 Specialized Design Services
- 5415 Computer Systems Design and Related Services
- 54161
  - 4 Process, Physical Distribution, and Logistics Consulting Services
- 54171
  - 2 Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)
- 54181 Advertising Agencies
- 54182 Public Relations Agencies
- 54183 Media Buying Agencies
- 54184 Media Representatives
- 54185 Display Advertising
- 54187 Advertising Material Distribution Services

54189 Other Services Related to Advertising  
54191 Marketing Research and Public Opinion Polling  
54192  
    2 Commercial Photography  
54193 Translation and Interpretation Services  
54194 Veterinary Services  
54199 All Other Professional, Scientific, and Technical Services  
56152  
    0 Tour Operators  
6113 Colleges, Universities, and Professional Schools  
6114 Business Schools and Computer and Management Training  
6221 General Medical and Surgical Hospitals