

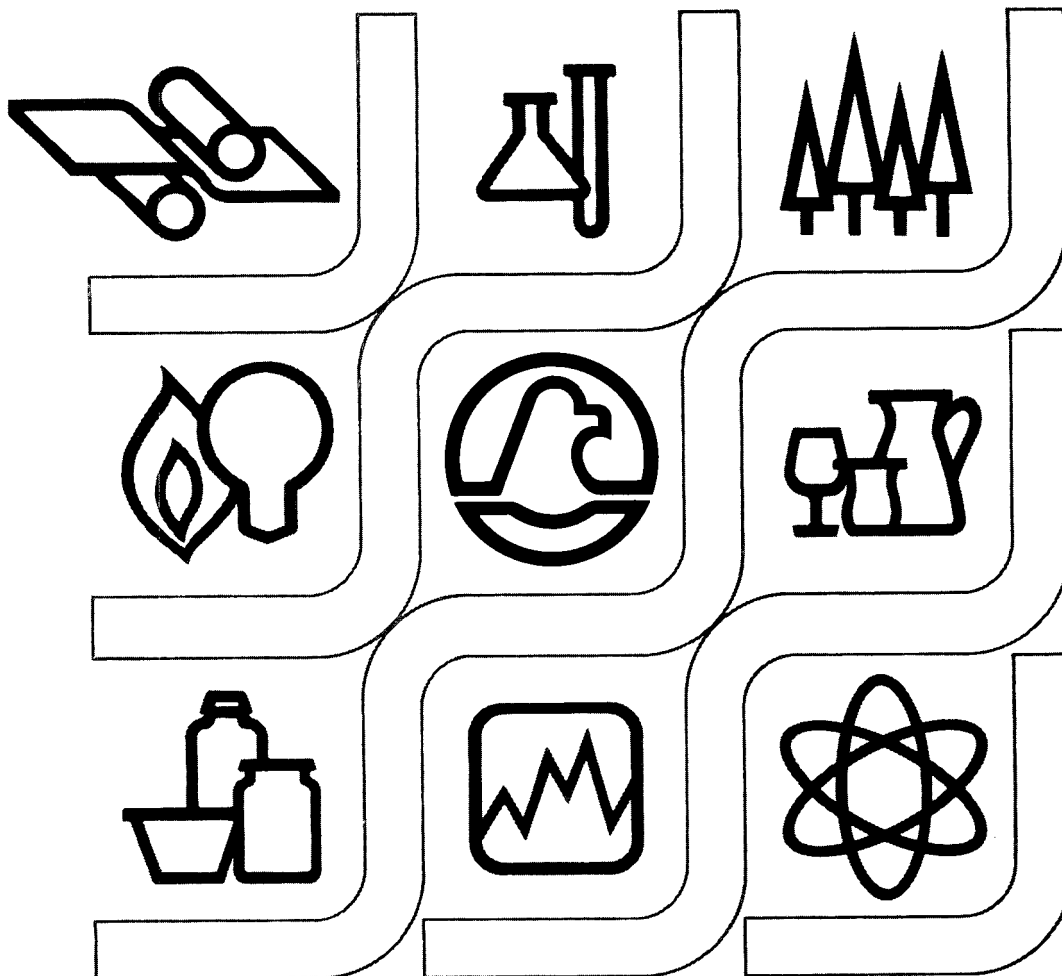
Current Industrial Reports

U.S. Department of Commerce

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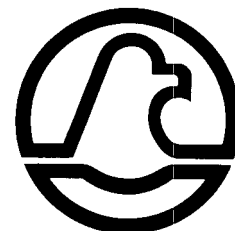
Shipments to Federal Government Agencies, 1979 MA-175(79)-1

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Current Industrial Reports



Issued June 1981

Shipments to Federal Government Agencies, 1979

MA - 175 (79)- 1



U.S. Department of Commerce

Malcolm Baldrige, Secretary

Joseph R. Wright, Jr.,

Deputy Secretary

William A. Cox,

Acting Chief Economist

BUREAU OF THE CENSUS

Daniel B. Levine,

Acting Director



BUREAU OF THE CENSUS
Daniel B. Levine, Acting Director
Shirley Kallek, Associate Director
for Economic Fields

INDUSTRY DIVISION
Roger H. Bugenhagen, Chief

ACKNOWLEDGMENTS—This report was prepared in the Industry Division by Wayne McCaughey, Chief Special Projects Branch, and reviewed by Mary W. Jenkins with the assistance of David Peterson, under the direction of John Wikoff, Assistant Division Chief for Commodity and Special Programs, and Jacob Silver, Assistant Division Chief for Minerals and Special Projects. Electronic computer programs were developed by Stephen Potemkin under the direction of Charles Wood and John Wasil. Special acknowledgment is given to the many private firms and the Department of Defense which participated in these surveys.

SUGGESTED CITATION

U.S. Bureau of the Census,
Shipments to Federal Government Agencies, 1979, MA-175(79)-1
U.S. Government Printing Office, Washington, D.C. 1981.

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Introduction

SUMMARY OF SURVEY RESULTS

The total value of all shipments by private manufacturing firms in 92 selected industries was estimated at \$534.9 billion in 1979, of which \$58.7 billion or 11 percent was accounted for by shipments to the Federal Government. The agency with the largest dollar volume of procurement during 1979 was the Department of Defense (DOD) with \$43.0 billion, followed by the Department of Energy (DOE) with \$3.1 billion and the National Aeronautics and Space Administration (NASA) with \$3.0 billion. The "other agencies" category (i.e., agencies other than DOD, NASA, and DOE; receiving agencies not known to the manufacturer; and plants which have less than \$1 million in Federal shipments) was estimated at \$9.6 billion. (See chart A.) Of the \$58.7 billion of manufactured products shipped, \$42.9 billion represented prime shipments, and \$15.8 billion were done on indirect or subcontracts.

Total employment in all defense-oriented industries was estimated to be 6.0 million, of which 998,500 employees were engaged in work related to Federal Government expenditures for manufactured products. By agency, DOD shipments supported an estimated 719,800 employees; NASA, 46,200; DOE, 39,600; and "other agencies," 192,900.

Ten industries shipped more than \$1 billion of their products to the Federal Government. (See chart B.) These industries were led by SIC 3662, radio and TV communications equipment, at \$10,249.5 million; SIC 3721, aircraft, at \$7,932.5 million; and SIC 3761, guided missiles and space vehicles, at \$7,778.6 million.

Manufacturers in 17 States shipped more than \$1 billion in manufactured goods to Federal agencies in 1979. This compares with manufacturers in 15 States in 1978. California led with \$14,186.4 million; New York was second with \$4,482.2 million; followed by Texas with \$3,555.0 million; Missouri with \$3,189.9 million; and Connecticut with \$2,872.1 million. (See chart C.) Los Angeles led, among standard metropolitan statistical areas (SMSA's), with \$7,805.0 million; second was St. Louis, Mo.-Illinois with \$2,796.8 million; and third was San Jose with \$2,640.8 million. (Appendix A contains definitions of the SMSA's.)

The value of shipments to the Federal Government rose approximately 14 percent, from \$51.7 billion in 1978 to \$58.7 billion in 1979. Related employment increased by 4 percent, from 958,700 to 998,500.

SOURCE OF DATA

These data are based on a survey conducted by the Bureau of the Census, Report on Shipments to Federal Government

Agencies in 1979. Appendix B provides limitations of the data and an explanation of the terms. This report continues several revisions in the methodology and data presentation which were initiated with the 1978 survey. (See *Shipments to Federal Government Agencies, 1978*, MA-175(78)-1). Appendix C describes the major methodology change as well as the survey sample and estimating procedure. Appendix D contains reproductions of the report forms and instructions.

In addition to form MA-175, which collected information on the amounts private industry shipped to the Federal Government, tables 7 and 8 contain information on Department of Defense-owned and -operated manufacturing facilities. In 1979, total revenue at these facilities amounted to \$9.9 billion, an increase of 9 percent from the 1978 level of \$9.1 billion. Total employment in 1979 was 240,400, a slight increase from the 240,300 employed in 1978. These data are based upon reports filed by the Department of Defense: Department of Defense-Owned and -Operated Establishments Primarily Engaged in Manufacturing and Assembly and/or Research and Development (Form MA-171). For 1979 and 1978, there were reports from 85 such installations.

CONFIDENTIALITY OF DATA FOR INDIVIDUAL COMPANIES

The Bureau of the Census is prohibited by law (title 13, United States Code) from publishing any statistics that disclose information reported by individual companies. In suppressing figures to avoid disclosing information on individual companies, geographic region and division totals are given precedence over individual States, and States are given precedence over standard metropolitan statistical areas. In tables showing industry detail, major industry group (two-digit) totals take precedence over industry group (three-digit) totals which, in turn, take precedence over individual industries (four-digit).

DESCRIPTION OF TABLES

Abbreviations—The following abbreviations and symbols occur frequently in the tables and footnotes:

—	Represents zero.
(X)	Not applicable.
(NA)	Not available.
(D)	Withheld to avoid disclosing figures for individual companies.
n.e.c.	Not elsewhere classified.
DOD	Department of Defense.
DOE	Department of Energy.

NASA National Aeronautics and Space Administration.
 SMSA Standard metropolitan statistical area.
 SIC Standard Industrial Classification.

Rounding of Data—For all tables, the sum of the detailed figures may not add to the total because of independent rounding of the figures making up the totals.

Industry Classification—Establishments in these surveys are coded into industries and geographical areas based upon the 1972 Standard Industrial Classification (SIC system¹ and the 1977 *Geographic Reference Manual*²).

Dollar Adjustment—All dollar figures are in current dollars; i.e., they have not been adjusted for price change.

¹ Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual 1972*. Washington, D.C. 20402: Superintendent of Documents, U.S. Government Printing Office.

² *Geographic Reference Manual*, 1977 Economic Censuses, Reference Series: U.S. Department of Commerce, Bureau of the Census, EC 77-R-1.

RELATED REPORTS

The Bureau of the Census also publishes the following related reports:

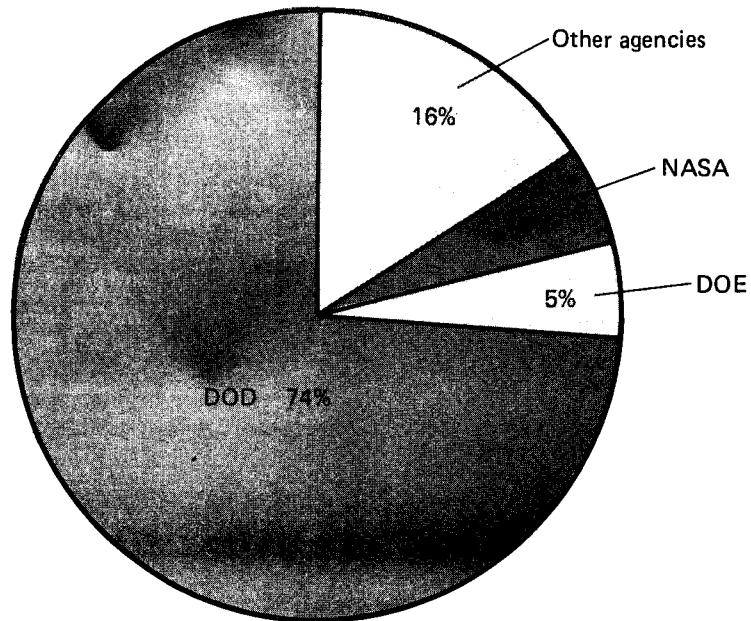
Series	Frequency	Title
MQ-37D	Quarterly	<i>Backlog of Orders of Aerospace Companies</i>
M3-1	Monthly	<i>Manufacturers' Shipments, Inventories, and Orders</i>

CONTACTS FOR DATA USERS

Subject Area	Contact	Phone Number
Current Industrial Report MQ-37D	Odelle Thomas	(301) 763-2824
M3-1 Report	Ruth Runyan	(301) 763-2502
To order Census Bureau publications	Customer Services (DUSD)	(301) 449-1600

CHART A.

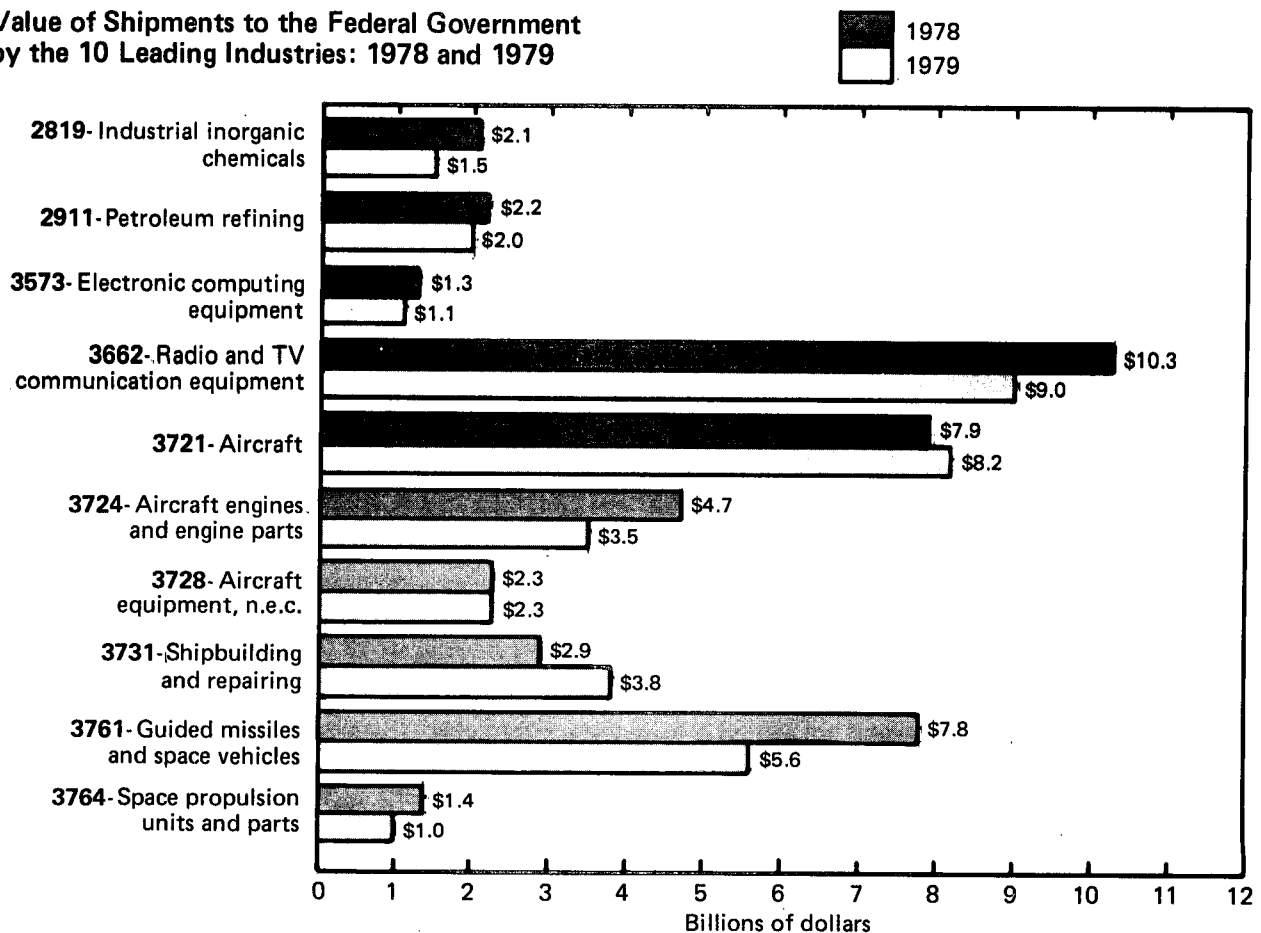
**Distribution of Value
of Manufacturers' Shipments
to Federal Agencies: 1979**



Note: Total shipments, \$58.7 billion.

CHART B.

**Value of Shipments to the Federal Government
by the 10 Leading Industries: 1978 and 1979**



**Table 1. Value of Shipments to Federal Government Agencies—Summary by Agency:
1977 to 1979**

(Millions of dollars)

Item	1979	1978	1977
Total ¹	534,942.0	431,212.4	381,273.3
Government shipments.....	58,713.2	51,719.5	50,196.3
Prime contracts.....	42,908.7	38,331.4	36,904.5
DOD.....	34,896.4	31,925.7	30,737.3
NASA.....	2,293.3	1,864.4	1,869.4
DOE.....	1,939.6	1,625.9	² 2,068.6
Other agencies.....	3,779.4	2,915.4	2,229.2
Subcontracts.....	15,804.5	13,388.1	13,291.8
Agency known.....	10,527.4	9,317.3	9,016.1
DOD.....	8,151.0	7,457.1	7,557.8
NASA.....	709.3	676.6	568.2
DOE.....	1,126.3	866.5	² 452.0
Other agencies.....	540.8	417.1	438.1
Agency not known.....	5,277.1	4,070.8	4,275.7
DOD, NASA, DOE.....	³ 2,472.9	³ 1,907.4	1,557.7
Other agencies.....			445.7
Data from plants with less than \$1 million in Federal shipments.....	2,804.2	2,163.4	2,272.3
Other than Government shipments.....	476,228.2	379,492.9	331,077.0

Note: See appendix C for a description of the methodology.

¹Represents value of shipments (Federal Government and private) for the industries covered.

²DOE was created in 1978 from several agencies. The data for 1977 are for the Energy Research and Development Administration (ERDA).

³Beginning with the 1978 form, the subcontract categories for DOD, NASA, DOE, and other agencies were combined for respondents.

CHART C. Value of Manufacturers' Shipments to the Federal Government, by State of Origin: 1979

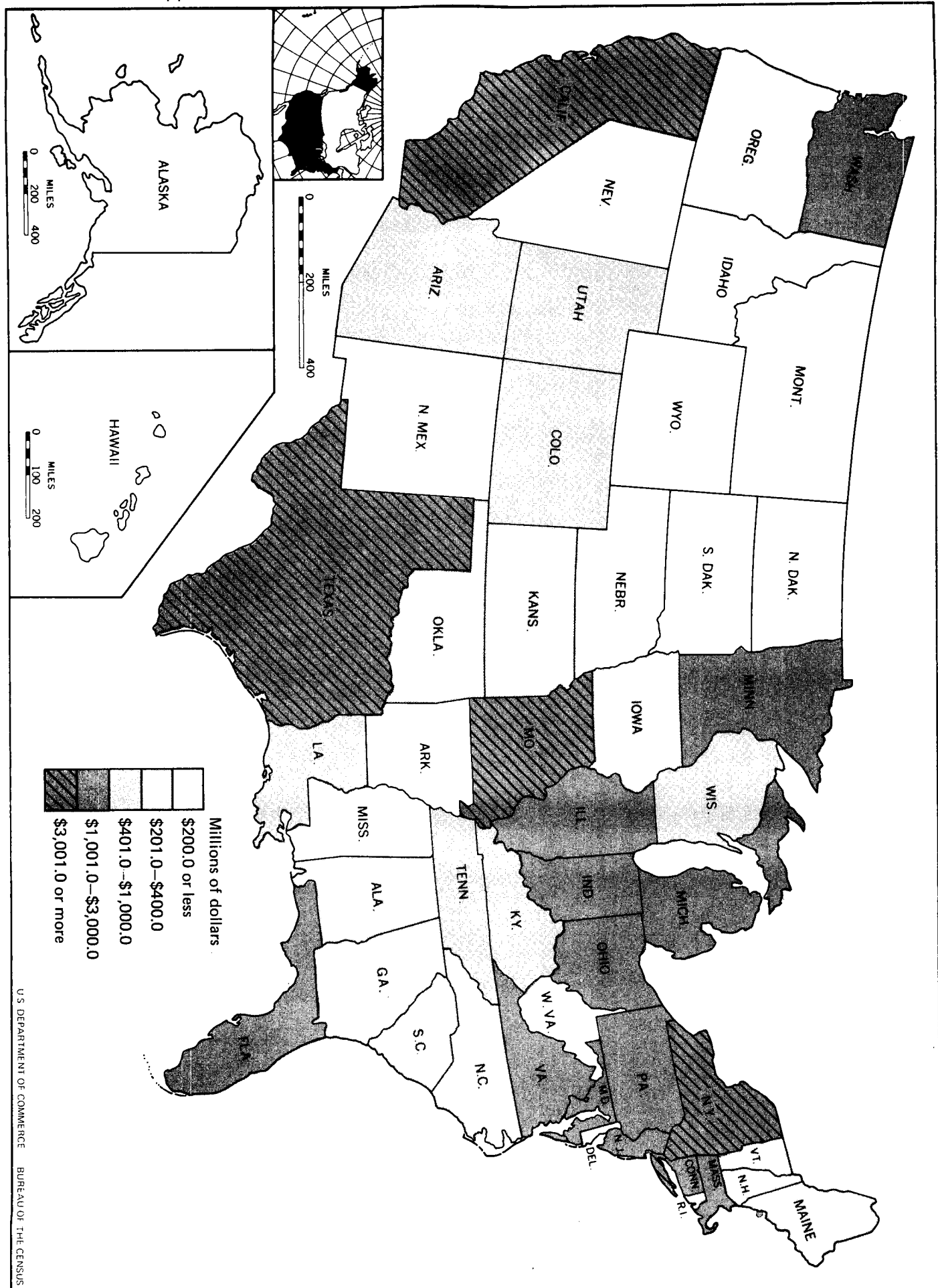


Table 2. Total Employment, Value Added, Value of Shipments, and Government Shipments, by Industry Groups: 1977 to 1979

(Employment figures in thousands, value and government shipments in million dollars)

Industry group	SIC industries included	Number of employees			Value added by manufacture			Value of shipments			Government shipments		
		1979	1978	1977	1979	1978	1977	1979	1978	1977	1979	1978	1977
Total.....	6,030.6	5,591.1	5,132.4	234,440.0	197,023.4	172,907.2	534,942.0	431,212.4	381,273.3	58,713.2	51,719.5	50,196.3
Selected chemicals and allied products.....	2813, 2819, 2873, 2874, 2892.....	122.4	128.4	124.5	7,572.4	7,938.3	7,496.3	17,940.5	17,408.5	15,801.7	2,313.1	1,874.1	1,812.4
Petroleum refineries.....	2911, 2992.....	114.0	111.9	112.8	27,161.7	14,409.2	14,948.7	136,001.0	98,671.3	93,333.5	2,194.5	1,993.0	2,073.1
Fabricated rubber products, n.e.c.....	3041, 3069, 3293.....	185.0	171.8	165.9	4,890.1	4,501.1	4,073.7	9,833.7	8,419.1	7,597.8	309.8	287.7	291.4
Selected primary metal industries.....	3324, 3325, 3339, 3351, 3353, 3354, 3355, 3356, 3357, 3361, 3369.....	371.2	438.5	321.5	14,188.8	11,562.8	9,746.4	39,757.6	32,644.6	29,263.7	1,278.1	1,001.3	968.0
Selected fabricated metal products.....	3441, 3443, 3451, 3452, 3462, 3463, 3494, 3499.....	636.4	572.5	551.5	19,047.3	17,891.5	16,241.8	39,298.5	34,181.3	30,372.7	2,046.2	1,982.9	2,082.7
Shipbuilding, repairing, and ordnance.....	3482, 3483, 3484, 3489, 3731, 3795.....	268.4	264.7	260.7	7,333.7	6,583.3	6,033.4	12,572.8	11,235.7	10,129.2	5,688.2	6,047.4	5,508.6
Turbines, construction machinery, machine tools, computers, and related products.....	3511, 3531, 3541, 3542, 3573, 3574, 3579.....	682.8	594.8	531.5	28,585.4	24,190.3	19,596.5	53,912.9	44,035.1	35,801.4	1,889.1	1,789.6	1,948.6
Other machinery.....	3519, 3536, 3537, 3561, 3562, 3563, 3566, 3568, 3569, 3592, 3599.....	747.2	664.0	617.0	22,747.1	21,523.4	18,276.6	43,201.8	38,552.2	32,508.8	1,990.8	1,537.8	1,759.2
Electric transmission and industrial apparatus, and miscellaneous electrical equipment.....	3612, 3613, 3621, 3622, 3643, 3644, 3691, 3692, 3693, 3694, 3699.....	553.9	525.6	489.6	18,053.8	16,026.1	14,322.8	33,140.4	28,416.9	24,892.3	1,068.6	969.7	1,003.5
Communication equipment.....	3661, 3662.....	546.0	503.5	458.5	18,920.6	16,174.6	14,130.0	32,522.0	25,696.9	22,744.3	10,554.7	9,179.5	8,551.2
Electronic components and accessories.....	3671, 3672, 3673, 3674, 3675, 3676, 3677, 3678, 3679.....	480.0	412.3	373.5	14,663.1	10,981.1	9,259.7	24,938.1	17,911.7	15,389.6	1,466.8	1,535.8	1,463.6
Truck bodies and truck trailers.....	3713, 3715.....	62.2	68.4	62.9	1,593.0	1,935.5	1,592.2	5,152.9	4,790.5	3,913.4	89.7	51.4	78.7
Aerospace industries.....	3721, 3724, 3728, 3761, 3764, 3769.....	686.6	585.7	549.0	25,756.2	22,266.1	19,119.5	49,739.5	37,451.3	32,407.9	24,493.9	21,001.7	20,181.4
Scientific instruments, mechanical measuring devices, optical instruments, and photographic equipment.....	3811, 3823, 3824, 3825, 3829, 3832, 3861.....	404.1	372.3	345.2	17,859.6	15,708.3	13,299.7	27,241.1	23,399.6	19,755.5	2,301.6	1,598.0	1,762.7
Surgical and dental equipment, ophthalmic goods, and watches and watch cases.....	3842, 3843, 3851, 3873..	133.6	142.0	131.7	4,195.2	3,852.7	3,393.8	7,676.4	6,779.2	5,950.5	270.0	338.9	239.5
Miscellaneous industries.....	(³)	36.8	34.7	36.6	1,872.0	1,479.1	1,378.1	2,012.8	1,618.5	1,411.0	758.1	530.7	471.7

Note: See appendix C for a description of the methodology.

N.e.c. Not elsewhere classified.

¹Value of production rather than value of shipments data collected for industry 3731.²Represents nonmanufacturing facilities of the manufacturing companies canvassed, in addition to related nonprofit research corporations working on Government contracts.

Table 3. Total Employment, Value Added, Value of Shipments,

(Employment figures in thousands;

Code	Industry	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
	All industries.....	6,030.6	234,440.0	534,942.0	998.5	58,713.2	691.4	42,908.7
28	Chemicals and allied products.....	122.4	7,572.4	17,940.5	21.8	2,313.1	20.0	2,142.3
2813	Industrial gases.....	8.4	988.1	1,867.1	(S)	(S)	(S)	(S)
2819	Industrial inorganic chemicals, n.e.c.....	76.1	4,181.9	9,613.3	16.3	2,056.8	15.2	1,926.1
2873	Nitrogenous fertilizers.....	10.4	1,159.7	2,588.4	(S)	(S)	(S)	(S)
2874	Phosphatic fertilizers.....	13.6	735.6	3,001.9	(S)	(S)	(S)	(S)
2892	Explosives.....	13.9	507.1	869.8	5.1	187.7	4.5	163.3
29	Petroleum and coal products.....	114.0	27,161.7	136,001.0	1.8	2,194.5	1.3	1,832.9
2911	Petroleum refining.....	103.7	26,405.5	133,328.1	1.7	2,183.2	1.3	1,832.9
2992	Lubricating oils and greases.....	10.3	756.2	2,672.9	(S)	(S)	(S)	(S)
30	Rubber and miscellaneous plastics products.....	151.5	3,980.4	8,262.9	5.9	283.0	2.7	144.8
3041	Rubber and plastic hose and belting.....	36.9	1,047.8	2,133.2	0.6	24.0	0.4	14.6
3069	Fabricated rubber products, n.e.c.....	114.6	2,932.6	6,129.7	5.3	259.0	2.3	130.2
3293	Gaskets, packets, and sealing devices.....	33.5	909.7	1,570.8	0.8	26.8	0.1	4.4
33	Primary metal industries.....	371.2	14,188.8	39,757.6	19.1	1,278.1	2.1	182.1
3324	Steel investment foundries.....	16.6	455.8	785.9	2.2	116.7	(A)	0.6
3325	Steel foundries, n.e.c.....	57.1	1,847.0	248.5	(S)	(S)	(S)	(S)
3339	Primary nonferrous metals, n.e.c.....	9.7	743.1	1,437.3	0.7	63.8	(A)	4.7
3351	Copper rolling and drawing.....	38.0	1,776.5	5,689.3	0.8	84.3	0.3	37.8
3353	Aluminum sheet, plate, and foil.....	36.7	1,889.4	8,162.7	0.6	123.7	0.1	12.0
3354	Aluminum extruded products.....	31.2	1,155.6	3,073.9	(S)	(S)	(S)	(S)
3355	Aluminum rolling and drawing, n.e.c.....	4.6	342.0	1,243.5	0.1	20.1	(A)	0.7
3356	Nonferrous rolling and drawing, n.e.c.....	21.0	926.5	3,452.8	1.5	206.8	(A)	3.5
3357	Nonferrous wire drawing and insulating.....	65.7	2,607.6	7,919.2	2.6	162.0	0.9	73.7
3361	Aluminum foundries.....	70.0	1,863.4	3,626.0	6.0	244.0	0.7	43.9
3369	Nonferrous foundries, n.e.c.....	20.6	581.9	1,118.5	(S)	(S)	(S)	(S)
34	Fabricated metal products.....	712.1	21,324.8	42,960.6	91.4	4,068.7	50.3	2,340.7
3441	Fabricated structural metal.....	115.8	3,213.0	7,841.4	6.3	311.5	4.2	194.7
3443	Fabricated plate work (boiler shops).....	144.7	3,403.4	6,983.1	12.5	380.1	1.8	103.7
3451	Screw machine products.....	53.2	1,485.7	2,790.6	1.6	70.9	-	-
3452	Bolts, nuts, rivets, and washers.....	71.2	2,171.7	4,550.2	4.1	284.4	0.4	30.4
3462	Iron and steel forgings.....	37.5	1,497.0	3,385.2	2.3	202.5	(A)	0.7
3463	Nonferrous forgings.....	7.9	369.1	849.5	1.3	172.9	(A)	0.2
3482	Small arms ammunition.....	10.2	294.0	602.5	(S)	(S)	(S)	(S)
3483	Ammunition, except for small arms, n.e.c.....	21.5	537.8	1,074.6	19.8	847.4	19.0	805.0
3484	Small arms.....	19.2	658.5	973.9	3.8	199.0	2.6	139.4
3489	Ordnance and accessories, n.e.c.....	24.8	787.2	1,011.1	19.0	745.4	15.4	643.6
3494	Valves and pipe fittings.....	114.3	4,007.8	7,225.7	5.3	302.2	1.5	98.4
3499	Fabricated metal products, n.e.c.....	91.8	2,899.6	5,672.8	11.4	321.7	1.5	96.5
35	Machinery, except electrical.....	1,430.0	51,332.5	97,114.7	72.4	3,879.9	34.7	2,185.1
3511	Turbines and turbine generator sets.....	38.2	1,795.1	3,067.7	3.6	234.1	2.1	153.3
3519	Internal combustion engines, n.e.c.....	107.7	4,051.2	10,255.3	3.8	342.6	1.8	180.3
3531	Construction machinery.....	179.7	7,923.0	16,707.9	3.5	223.6	1.3	102.5
3536	Hoists, cranes, and monorails.....	15.3	552.1	1,025.7	(S)	(S)	(S)	(S)
3537	Industrial trucks and tractors.....	35.4	1,171.8	2,836.5	(S)	(S)	(S)	(S)
3541	Machine tools, metal cutting types.....	73.3	2,744.8	4,607.5	0.8	43.2	0.2	11.9
3542	Machine tools, metal forming types.....	31.9	907.0	1,933.5	2.1	22.1	0.2	9.3
3561	Pumps and pumping equipment.....	63.9	2,470.8	4,517.7	2.8	175.4	1.2	76.7
3562	Ball and roller bearings.....	56.8	1,686.7	3,123.5	2.8	117.6	0.6	25.0
3563	Air and gas compressors.....	34.6	1,291.2	2,447.0	1.2	72.3	0.6	42.1
3566	Speed changers, drives, and gears.....	27.1	809.3	1,340.7	(S)	(S)	(S)	(S)
3568	Power transmission equipment, n.e.c.....	31.8	1,097.2	1,906.1	1.4	77.4	0.3	18.1
3569	General industrial machinery, n.e.c.....	61.9	1,921.9	3,225.1	1.1	67.2	0.5	31.0
3573	Electronic computing equipment.....	293.3	12,792.4	23,146.9	19.6	1,268.0	15.3	987.3
3574	Calculating and accounting machines.....	17.6	564.9	1,163.7	(S)	(S)	(S)	(S)
3579	Office machines, n.e.c.....	48.8	1,858.2	3,285.7	1.2	83.5	0.9	62.6
3592	Carburetors, pistons, rings, valves.....	36.2	1,266.2	2,020.6	(S)	(S)	(S)	(S)
3599	Machinery, except electrical, n.e.c.....	276.5	6,428.7	10,503.6	23.6	842.3	6.5	230.3
36	Electrical and electronic equipment.....	1,579.9	51,637.5	90,600.5	259.3	13,090.1	166.0	8,691.2
3612	Transformers.....	49.1	1,515.2	2,989.9	(S)	(S)	(S)	(S)
3613	Switchgear and switchboard apparatus.....	78.7	2,704.1	4,527.6	3.7	112.8	1.0	31.5
3621	Motors and generators.....	105.2	3,223.1	5,861.9	5.9	244.9	1.6	67.6
3622	Industrial controls.....	70.9	2,277.6	3,807.1	1.3	66.8	0.2	7.8
3643	Current-carrying wiring devices.....	46.5	1,405.4	2,444.6	(S)	(S)	(S)	(S)
3644	Noncurrent-carrying wiring devices.....	31.9	1,072.5	2,063.3	(S)	(S)	(S)	(S)
3661	Telephone and telegraph apparatus.....	153.0	5,797.7	11,896.7	5.3	305.2	3.6	207.2
3662	Radio and TV communication equipment.....	393.0	13,122.9	20,625.3	195.4	10,249.5	145.6	7,640.7
3671	Electron tubes, receiving type.....	50.9	1,947.1	3,770.6	6.4	200.7	3.1	99.5
3672	Cathode ray television picture tubes.....							
3673	Electron tubes, transmitting.....							
3674	Semiconductors and related devices.....							
3675	Electronic capacitors.....	29.5	620.4	982.9	2.5	75.9	0.2	3.8
3676	Electronic resistors.....	20.5	530.6	669.7	0.9	25.9	0.1	1.7
3677	Electronic coils and transformers.....	26.1	441.7	727.9	(S)	(S)	(S)	(S)

See footnotes at end of table.

and Government Shipments, by Industry and Agency: 1979

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ¹	Code
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
307.1	15,804.5	719.8	43,047.4	46.2	3,002.6	39.6	3,065.9	192.9	9,597.3	2	
1.8	170.8	5.2	234.6	0.2	43.3	15.3	1,930.3	1.1	104.9	2	28
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	2813
1.1	130.7	0.4	48.1	(A)	0.1	15.3	1,930.3	0.6	78.3	1	2819
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	2873
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	2874
0.6	24.4	4.7	174.8	(A)	-	(A)	-	(B)	12.9	18	2892
0.5	361.6	1.1	1,636.6	(A)	2.4	-	0.3	0.7	555.2	1	29
0.4	350.3	1.1	1,636.6	(A)	2.4	-	0.3	0.6	543.9	1	2911
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	2992
3.2	138.2	3.3	170.3	(A)	(B)	(A)	(B)	2.6	112.5	14	30
0.2	9.4	0.3	12.1	-	-	-	-	0.3	11.9	6	3041
3.0	128.8	3.0	158.2	(A)	(B)	(A)	(B)	2.3	100.6	16	3069
0.7	22.4	0.2	6.6	-	-	-	-	0.6	20.2	19	3293
17.0	1,096.0	6.6	498.8	(A)	1.9	0.7	53.1	11.8	724.3	7	33
2.2	116.1	0.8	50.7	(A)	0.8	(A)	0.5	1.4	64.7	18	3324
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3325
0.7	59.1	0.2	16.7	(A)	0.2	0.5	42.6	(A)	4.3	1	3339
0.5	46.5	0.1	10.0	(A)	0.4	(A)	2.6	0.7	71.3	1	3351
0.5	111.7	0.6	121.7	-	-	-	-	(A)	2.0	1	3353
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3354
0.1	19.4	0.1	6.8	-	-	(A)	0.5	(A)	12.8	1	3355
1.5	203.3	(A)	0.1	-	(A)	-	(A)	1.5	206.7	2	3356
1.7	88.3	1.2	86.1	(A)	0.5	(A)	0.9	1.4	74.5	17	3357
5.3	200.1	2.0	89.5	(A)	(A)	0.2	5.4	3.8	149.1	19	3361
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3369
41.1	1,728.0	44.8	2,360.7	0.8	56.1	13.6	597.0	32.2	1,054.9	17	34
2.1	116.8	3.4	143.8	-	-	(C)	(I)	(F)	(K)	12	3441
10.7	276.4	1.4	135.6	0.2	14.3	2.1	122.4	8.8	107.8	19	3443
1.6	70.9	-	-	-	-	-	-	1.6	70.9	19	3451
3.7	254.0	1.1	63.3	(A)	1.9	-	-	3.0	219.2	(X)	3452
2.3	201.8	1.1	102.2	(A)	3.1	-	-	(E)	97.2	11	3462
1.3	172.7	1.3	152.4	(A)	0.4	(A)	0.3	0.1	19.8	5	3463
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3482
0.8	42.4	19.5	836.4	0.1	2.6	0.1	4.5	0.1	3.9	6	3483
1.2	59.6	3.8	197.8	-	-	-	-	(A)	1.2	11	3484
3.6	102.1	6.4	330.5	0.2	18.2	9.9	363.9	2.5	33.1	3	3489
3.8	203.8	2.4	140.8	0.3	15.6	0.1	5.7	2.5	140.1	18	3494
9.9	225.2	0.5	31.9	-	-	1.0	70.2	9.9	219.6	19	3499
37.7	1,694.8	32.3	1,944.6	1.5	86.8	2.2	115.3	36.4	1,733.2	6	35
1.5	80.8	2.3	153.6	(A)	(F)	(B)	(H)	1.0	53.7	1	3511
2.0	162.3	3.3	312.1	(A)	(B)	(B)	(G)	0.3	22.2	1	3519
2.2	121.1	2.3	168.9	-	(A)	(A)	0.7	1.2	54.0	6	3531
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3536
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3537
0.6	31.3	0.3	15.3	-	(A)	-	(A)	0.5	27.9	17	3541
1.9	12.8	0.8	8.4	-	-	-	-	1.3	13.7	14	3542
1.6	98.7	1.7	108.9	(A)	(B)	(B)	(G)	0.9	57.4	7	3561
2.2	92.6	0.7	34.0	-	(A)	(A)	(F)	2.1	81.3	15	3562
0.6	30.2	0.8	52.7	-	(A)	-	(A)	0.4	19.6	19	3563
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	8	3566
1.1	59.3	0.6	31.7	-	-	-	-	0.8	45.7	18	3568
0.6	36.2	0.4	26.6	-	-	(A)	1.0	0.7	39.6	17	3569
4.3	280.7	10.0	647.4	1.2	74.6	0.5	34.0	7.9	512.0	5	3573
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	16	3574
0.3	20.9	0.2	13.3	(A)	0.2	(A)	0.5	1.0	69.5	9	3579
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3592
17.1	612.0	7.2	257.6	0.3	9.2	1.0	35.2	15.1	540.3	16	3599
93.3	4,399.0	195.1	9,863.1	7.0	381.2	2.7	124.6	54.5	2,721.2	4	36
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3612
2.7	81.3	1.3	39.3	(A)	0.2	0.1	3.2	2.3	70.1	12	3613
4.3	177.3	4.1	171.6	0.6	24.4	0.1	5.7	1.1	43.2	18	3621
1.1	59.0	0.6	32.7	-	(A)	0.1	1.8	0.6	32.3	14	3622
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	19	3643
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3644
1.7	98.0	3.6	190.6	0.1	5.2	(A)	(A)	1.6	109.4	11	3661
49.8	2,608.8	161.5	8,476.1	5.4	281.5	0.3	13.5	28.2	1,478.4	5	3662
3.3	101.2	5.7	169.8	0.2	5.4	(A)	0.8	0.5	24.7	4	3671
5.1	286.4	2.1	118.8	0.1	4.7	0.1	3.2	3.2	180.3	6	3673
2.3	72.1	0.3	8.0	-	-	0.1	0.6	2.1	67.2	14	3674
0.8	24.2	0.1	3.1	(A)	0.2	(A)	0.1	0.8	22.5	9	3675
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3676
											3677

Table 3. Total Employment, Value Added, Value of Shipments,

(Employment figures in thousands;

Code	Industry	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
36	Electrical and electronic equipment--Continued							
3678	Electronic connectors.....	34.1	1,187.0	1,889.4	3.9	190.4	0.8	30.8
3679	Electronic components, n.e.c.....	179.4	4,840.2	9,102.3	15.7	609.7	5.0	207.1
3691	Storage batteries.....	27.2	1,232.8	2,769.2	(8)	(8)	(8)	(8)
3692	Primary batteries, dry and wet.....	12.2	455.1	904.6	1.9	91.9	0.9	48.0
3693	X-ray apparatus and tubes.....	40.6	1,406.0	2,592.0	(8)	(8)	(8)	(8)
3694	Engine electrical equipment.....	65.2	2,123.0	4,015.9	1.6	82.8	0.3	9.6
3699	Electrical equipment and supplies, n.e.c.....	26.4	639.0	1,164.3	(8)	(8)	(8)	(8)
37	Transportation equipment.....	941.5	32,405.4	63,803.1	462.0	28,249.3	377.9	23,269.9
3713	Truck and bus bodies.....	37.2	1,062.9	2,539.8	(8)	(8)	(8)	(8)
3715	Truck trailers.....	25.0	530.1	2,613.1	(8)	(8)	(8)	(8)
3721	Aircraft.....	262.9	9,480.2	21,600.2	114.8	7,932.5	108.5	7,500.0
3724	Aircraft engines and engine parts.....	137.0	5,618.2	11,121.5	53.6	4,649.3	25.8	2,749.8
3728	Aircraft equipment, n.e.c.....	126.2	3,952.3	6,896.3	43.6	2,344.6	22.7	1,232.6
3731	Shipbuilding and repairing.....	178.9	4,555.7	7,827.7	80.2	2,850.7	75.6	2,696.8
3761	Guided missiles and space vehicles.....	128.2	5,477.6	8,325.5	131.8	7,778.6	118.1	7,085.9
3764	Space propulsion units and parts.....	23.1	905.9	1,336.4	20.1	1,416.6	13.5	965.8
3769	Space vehicle equipment, n.e.c.....	9.2	322.0	459.6	6.1	372.3	5.1	317.0
3795	Tanks and tank components.....	13.8	500.5	1,083.0	10.4	815.0	8.2	685.0
38	Instruments and related products.....	537.7	22,054.8	34,917.5	50.4	2,571.6	23.9	1,526.8
3811	Engineering and scientific instruments.....	48.9	1,601.9	2,507.4	10.1	454.3	4.1	216.9
3823	Process control instruments.....	53.8	1,959.5	2,890.4	1.5	71.5	0.6	24.9
3824	Fluid meters and counting devices.....	16.7	428.1	742.1	(8)	(8)	(8)	(8)
3825	Instruments to measure electricity.....	87.6	2,777.8	4,146.6	12.3	616.4	5.7	319.1
3829	Measuring and controlling devices, n.e.c.....	35.7	771.4	1,371.1	5.2	205.1	2.0	102.6
3832	Optical instruments and lenses.....	43.6	1,514.0	2,367.0	7.6	381.8	4.6	243.4
3842	Surgical appliances and supplies.....	61.5	2,067.1	3,603.0	4.3	124.1	1.0	62.8
3843	Dental equipment and supplies.....	15.3	561.6	1,039.3	0.6	29.3	0.3	12.4
3851	Ophthalmic goods.....	29.4	851.2	1,372.5	(8)	(8)	(8)	(8)
3861	Photographic equipment and supplies.....	117.8	8,806.9	13,216.5	5.7	567.4	3.9	486.8
3873	Watches, clocks, and watchcases.....	27.4	715.3	1,661.6	1.8	76.7	1.3	47.3
88	Miscellaneous industries ²	36.8	1,872.0	2,012.8	13.6	758.1	12.4	588.6

Note: In some instances, data are withheld to avoid disclosing the operations of individual companies. The data withheld are expressed in terms of the symbols and ranges shown below. In all instances, where the data are less than 0.1, the symbol (A) is used.

Symbol	Range	Symbol	Range	Symbol	Range
(A).....	Less than 0.1	(G).....	5.0 to 9.9	(K).....	100.0 to 249.9
(B).....	0.1 to 0.4	(H).....	10.0 to 24.9	(L).....	250.0 to 499.9
(C).....	0.5 to 0.9	(I).....	25.0 to 49.9	(M).....	500.0 to 999.9
(E).....	1.0 to 1.9	(J).....	50.0 to 99.9	(N).....	1,000.0 and over
(F).....	2.0 to 4.9				

See text for a description of the methodology.

- Represents zero. N.e.c. Not elsewhere classified. (S) Data suppressed because they did not meet publication standards. This includes cells where the total value of Government shipments is less than \$20.0 million or the standard error is 20 or greater. (X) Not applicable.

¹The standard error estimates are those for the unadjusted (reciprocal) Government shipments that were reported on the MA-175.

²Represents nonmanufacturing facilities of the manufacturing companies canvassed, in addition to selected nonprofit research corporations working on Government contracts.

and Government Shipments, by Industry and Agency: 1979—Continued

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ¹	Code
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
3.1	159.6	2.0	93.7	(B)	(E)	(B)	(E)	1.7	93.0	19	3678
10.7	402.6	8.1	317.6	0.3	9.6	1.5	61.0	5.8	221.5	11	3679
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3691
1.0	43.9	1.5	76.3	(A)	(C)	0.2	(G)	0.2	(G)	19	3692
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3693
1.3	73.2	1.1	34.1	-	(A)	-	-	0.5	48.7	2	3694
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3699
84.1	4,979.4	394.3	24,324.7	35.2	2,344.9	3.9	195.4	28.6	1,384.3	1	37
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3713
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3715
6.3	432.5	107.7	7,541.5	2.0	110.6	0.1	6.9	5.0	273.5	1	3721
27.8	1,899.5	50.5	4,476.3	0.9	67.2	0.4	19.4	1.8	86.4	1	3724
20.9	1,112.0	35.7	1,923.8	2.2	117.0	1.7	89.1	4.0	214.7	4	3728
4.6	153.9	71.0	2,513.3	-	-	0.6	19.6	8.6	317.8	2	3731
13.7	692.7	102.7	5,906.9	20.8	1,436.5	0.4	21.3	7.9	413.9	1	3761
6.6	450.8	13.7	981.5	5.9	404.9	0.3	17.3	0.2	12.9	3	3764
1.0	55.3	2.2	136.7	3.4	208.6	0.4	21.8	0.1	5.2	8	3769
2.2	130.0	10.4	814.5	-	-	-	-	(A)	0.5	2	3795
26.5	1,044.8	28.9	1,612.6	1.3	75.8	0.6	24.6	19.6	858.6	3	38
6.0	237.4	6.6	301.4	0.1	5.3	0.1	5.6	3.3	142.0	9	3811
0.9	46.6	0.4	15.9	(B)	(G)	(A)	(C)	1.0	49.4	19	3823
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3824
6.6	297.3	7.7	427.6	0.5	27.6	0.1	2.8	4.0	158.4	6	3825
3.2	102.5	1.9	103.8	0.1	2.8	0.1	2.4	3.1	96.1	18	3829
3.0	138.4	6.0	292.2	(B)	(H)	(B)	(G)	1.0	56.4	9	3832
3.3	61.3	0.7	45.0	(A)	(E)	-	(B)	3.6	78.1	11	3842
0.3	16.9	0.1	3.7	-	-	-	-	0.5	25.6	13	3843
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3851
1.8	80.6	3.7	348.9	0.1	6.6	(A)	6.4	1.9	205.5	1	3861
0.5	29.4	1.5	64.5	(A)	(B)	-	(A)	0.3	12.1	19	3873
1.2	169.5	8.0	394.8	(B)	(H)	(C)	(I)	4.8	328.0	(X)	88

Table 4. Total Employment, Value Added, Value of Shipments, and

(Employment figures in thousands;

Code	Industry	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
	All industries.....	5,591.1	197,023.4	431,212.4	958.7	51,719.5	677.7	38,331.4
28	Chemicals and allied products.....	128.4	7,938.3	17,408.5	29.8	1,874.1	25.8	1,710.8
2813	Industrial gases.....	7.9	781.8	1,385.0	0.5	140.5	0.3	125.0
2819	Industrial inorganic chemicals, n.e.c.....	82.1	4,878.0	9,801.4	23.8	1,505.4	20.6	1,385.7
2873	Nitrogenous fertilizers.....	12.1	1,073.4	2,661.9	(S)	(S)	(S)	(S)
2874	Phosphatic fertilizers.....	14.5	771.4	2,863.7	(S)	(S)	(S)	(S)
2892	Explosives.....	11.8	433.7	696.5	5.4	220.4	4.8	194.9
29	Petroleum and coal products.....	111.9	14,409.2	98,671.3	1.8	1,993.0	1.5	1,845.0
2911	Petroleum refining.....	101.7	13,707.9	96,806.7	1.7	1,980.7	1.5	1,844.3
2992	Lubricating oils and greases.....	10.2	701.3	1,864.6	(S)	(S)	(S)	(S)
30	Rubber and miscellaneous plastics products.....	137.5	3,594.0	6,938.1	5.4	254.0	2.9	155.0
3041	Rubber and plastic hose and belting.....	38.2	1,060.6	2,007.8	1.0	30.9	0.7	21.6
3069	Fabricated rubber products, n.e.c.....	99.3	2,533.4	4,930.3	4.4	223.1	2.2	133.4
3293	Gaskets, packets, and sealing devices.....	34.3	907.1	1,481.0	(S)	(S)	(S)	(S)
33	Primary metal industries.....	438.5	11,562.8	32,644.6	14.6	1,001.3	1.0	140.5
3324	Steel investment foundries.....	12.0	325.3	487.3	0.9	39.9	(A)	0.1
3325	Steel foundries, n.e.c.....	57.3	1,608.6	2,592.2	4.0	168.2	0.3	11.4
3339	Primary nonferrous metals, n.e.c.....	8.9	461.1	1,044.2	0.9	64.5	(A)	3.3
3351	Copper rolling and drawing.....	33.3	1,169.3	4,090.5	0.7	76.6	0.2	51.1
3353	Aluminum sheet, plate, and foil.....	33.9	1,853.0	7,349.1	0.5	102.1	(A)	8.8
3354	Aluminum extruded products.....	28.5	830.9	2,414.0	0.9	70.3	(A)	2.4
3355	Aluminum rolling and drawing, n.e.c.....	5.0	239.3	1,152.5	(S)	(S)	(S)	(S)
3356	Nonferrous rolling and drawing, n.e.c.....	18.2	756.0	2,747.4	1.5	174.2	(A)	4.7
3357	Nonferrous wire drawing and insulating.....	68.0	2,421.6	7,060.4	2.0	136.7	0.5	56.1
3361	Aluminum foundries.....	55.5	1,425.6	2,825.5	2.4	123.6	(A)	0.1
3369	Nonferrous foundries, n.e.c.....	17.9	472.1	881.5	0.7	26.6	(A)	2.0
34	Fabricated metal products.....	648.5	19,959.3	37,317.8	76.4	3,469.9	42.8	1,739.8
3441	Fabricated structural metal.....	100.6	2,648.8	6,144.0	4.0	216.3	1.2	66.1
3443	Fabricated plate work (boiler shops).....	126.4	4,291.3	8,040.2	5.6	367.7	1.1	73.2
3451	Screw machine products.....	48.5	1,257.4	2,097.5	(S)	(S)	(S)	(S)
3452	Bolts, nuts, rivets, and washers.....	64.5	2,113.7	3,811.3	3.4	159.3	0.6	30.9
3462	Iron and steel forgings.....	41.4	1,474.7	3,191.3	3.6	245.1	0.6	42.2
3463	Nonferrous forgings.....	6.2	274.9	569.8	0.9	97.7	(A)	0.1
3482	Small arms ammunition.....	10.2	295.0	496.8	2.8	129.0	2.6	123.7
3483	Ammunition, except for small arms, n.e.c.....	21.3	556.6	873.7	16.0	566.8	13.2	460.7
3484	Small arms.....	19.2	558.2	875.1	3.4	182.6	2.5	134.8
3489	Ordnance and accessories, n.e.c.....	25.3	658.0	890.9	17.4	608.6	15.4	545.2
3494	Valves and pipe fittings.....	113.1	3,746.2	6,352.7	(S)	(S)	(S)	(S)
3499	Fabricated metal products, n.e.c.....	71.8	2,084.5	3,974.5	3.8	181.8	2.3	96.5
35	Machinery, except electrical.....	1,258.8	45,713.7	82,587.3	56.2	3,327.4	24.7	1,820.9
3511	Turbines and turbine generator sets.....	39.5	1,478.8	2,733.0	4.5	271.7	2.9	181.4
3519	Internal combustion engines, n.e.c.....	95.9	4,010.6	9,618.0	3.9	393.4	2.7	297.0
3531	Construction machinery.....	169.0	7,554.4	15,700.4	3.1	223.0	1.8	138.6
3536	Hoists, cranes, and monorails.....	16.4	522.6	962.6	(S)	(S)	(S)	(S)
3537	Industrial trucks and tractors.....	31.4	1,062.2	2,425.3	0.5	45.4	0.3	33.5
3541	Machine tools, metal cutting types.....	64.3	2,267.0	3,611.8	1.4	65.0	0.2	12.4
3542	Machine tools, metal forming types.....	25.2	841.3	1,366.0	(S)	(S)	(S)	(S)
3561	Pumps and pumping equipment.....	66.9	2,514.1	4,277.2	2.4	148.3	0.9	56.3
3562	Ball and roller bearings.....	52.7	1,663.0	2,946.3	2.2	89.7	0.6	25.1
3563	Air and gas compressors.....	32.9	1,347.5	2,341.7	0.7	52.3	0.3	18.7
3566	Speed changers, drives, and gears.....	25.9	861.2	1,345.8	0.7	30.5	(A)	0.4
3568	Power transmission equipment, n.e.c.....	34.0	1,154.5	1,839.0	(S)	(S)	(S)	(S)
3569	General industrial machinery, n.e.c.....	60.2	1,892.1	3,131.6	(S)	(S)	(S)	(S)
3573	Electronic computing equipment.....	232.1	9,627.8	16,557.6	16.0	1,095.1	12.4	899.5
3574	Calculating and accounting machines.....	18.6	485.7	1,063.5	0.4	23.0	0.2	14.9
3579	Office machines, n.e.c.....	46.1	1,935.3	3,002.8	2.1	102.0	1.1	59.7
3592	Carburetors, pistons, rings, valves.....	33.3	1,069.4	1,608.5	(S)	(S)	(S)	(S)
3599	Machinery, except electrical, n.e.c.....	214.4	5,426.2	8,056.2	14.6	625.4	0.5	42.1
36	Electrical and electronic equipment.....	1,414.4	43,181.8	72,025.5	268.6	11,685.0	165.6	7,591.0
3612	Transformers.....	44.6	1,280.7	2,451.6	2.4	101.7	0.9	47.3
3613	Switchgear and switchboard apparatus.....	75.1	2,455.1	4,054.6	2.7	109.5	0.9	41.5
3621	Motors and generators.....	106.1	2,963.4	5,185.5	8.3	387.2	4.1	205.9
3622	Industrial controls.....	62.7	1,944.5	3,117.3	1.8	64.1	0.4	10.6
3643	Current-carrying wiring devices.....	44.7	1,109.9	1,893.4	(S)	(S)	(S)	(S)
3644	Noncurrent-carrying wiring devices.....	27.3	896.0	1,719.8	(S)	(S)	(S)	(S)
3661	Telephone and telegraph apparatus.....	130.6	4,747.7	8,833.9	2.7	149.0	1.8	117.5
3662	Radio and TV communication equipment.....	372.9	11,426.9	16,863.0	200.7	9,030.5	142.1	6,534.1
3671	Electron tubes, receiving type.....							
3672	Cathode ray television picture tubes.....	36.2	984.4	1,698.1	4.5	147.8	2.3	81.7
3673	Electron tubes, transmitting.....							
3674	Semiconductors and related devices.....	130.8	4,203.1	6,435.4	13.1	572.0	4.2	236.0
3675	Electronic capacitors.....	30.9	523.9	830.1	2.1	54.7	0.2	4.3
3676	Electronic resistors.....	21.5	411.9	591.1	1.6	36.5	0.2	5.0
3677	Electronic coils and transformers.....	21.3	323.1	542.5	(S)	(S)	(S)	(S)

See footnotes at end of table.

Government Shipments, by Industry and Agency: 1978 Revised

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ¹	Code
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
281.0	13,388.1	718.3	39,382.8	38.2	2,441.0	58.8	2,492.4	143.4	7,403.3	1	
4.0	163.3	5.3	221.1	0.3	125.3	22.9	1,454.0	1.3	73.7	7	28
0.2	15.5	-	-	0.3	125.0	-	-	0.2	15.5	19	2813
3.2	119.7	0.2	8.6	-	(A)	22.9	1,453.8	0.7	43.0	1	2819
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	2873
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	2874
0.6	25.5	5.0	207.3	(A)	(B)	(A)	(B)	0.4	12.6	5	2892
0.3	148.0	1.2	1,520.3	(A)	8.3	-	0.1	0.6	464.3	16	29
0.2	136.4	1.2	1,519.6	(A)	(G)	-	(B)	0.5	452.7	17	2911
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	2992
2.5	99.0	3.6	191.6	(A)	(E)	-	(B)	1.8	61.2	5	30
0.3	9.3	0.5	14.8	-	-	-	-	0.5	16.1	4	3041
2.2	89.7	3.1	176.8	(A)	(E)	-	(B)	1.3	45.1	6	3069
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3293
13.6	860.8	6.3	405.4	(A)	3.2	0.8	54.9	7.5	537.8	5	33
0.9	39.8	0.4	29.8	(A)	0.2	-	-	0.5	9.9	17	3324
3.7	156.8	1.7	78.0	-	(A)	-	(A)	2.3	90.2	15	3325
0.9	61.2	0.2	11.7	(A)	0.2	0.7	45.6	(A)	7.0	4	3339
0.5	25.5	0.1	9.9	(A)	(B)	(A)	(F)	0.6	64.3	3	3351
0.5	93.3	0.5	97.5	-	-	-	-	(A)	4.6	3	3353
0.9	67.9	0.6	39.5	(A)	0.2	-	-	0.3	30.6	9	3354
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3355
1.5	169.5	(A)	0.2	-	(A)	-	(A)	1.5	174.0	1	3356
1.5	80.6	1.2	58.7	(A)	(E)	0.1	(F)	0.7	72.7	16	3357
2.4	123.5	1.1	53.4	-	0.1	(A)	1.1	1.3	69.0	19	3361
0.7	24.6	0.4	13.8	(A)	0.9	(A)	2.1	0.3	9.8	19	3369
33.6	1,730.1	42.4	1,899.9	1.3	60.4	10.7	397.0	22.0	1,112.6	7	34
2.8	150.2	1.5	60.7	-	-	(B)	(F)	(F)	(K)	19	3441
4.5	294.5	2.1	162.7	0.3	19.0	1.0	52.9	2.2	133.1	11	3443
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3451
2.8	128.4	1.3	56.0	(A)	1.9	-	-	2.1	101.4	3	3452
3.0	202.9	0.8	68.1	-	-	(B)	(G)	(F)	(K)	5	3462
0.9	97.6	0.8	85.5	(A)	0.6	(A)	0.2	0.1	11.4	12	3463
0.2	5.3	2.7	124.8	-	-	-	-	0.1	4.2	1	3482
2.8	106.1	14.9	529.8	0.7	25.2	(A)	0.7	0.4	11.1	3	3483
0.9	47.8	3.3	181.1	-	-	-	-	0.1	1.5	1	3484
2.0	63.4	7.9	290.4	(A)	0.1	9.2	312.7	(B)	5.4	3	3489
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3494
1.5	85.3	1.7	67.0	(A)	0.6	0.3	18.5	1.8	95.7	18	3499
31.5	1,506.5	26.0	1,700.2	0.6	54.1	2.4	138.6	27.2	1,434.5	4	35
1.6	90.3	3.4	208.9	(B)	(E)	(B)	(H)	0.8	39.0	1	3511
1.2	96.4	3.5	372.0	(A)	(B)	(B)	(G)	0.2	12.5	9	3519
1.3	84.4	2.2	167.1	-	(A)	0.1	0.3	0.8	55.6	9	3531
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3536
0.2	11.9	0.3	30.2	-	(A)	(A)	0.3	0.2	14.9	19	3537
1.2	52.6	0.3	14.6	-	(A)	0.2	7.5	0.9	42.9	19	3541
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3542
1.5	92.0	1.7	102.8	-	(A)	0.1	9.3	0.6	36.2	8	3561
1.6	64.6	0.6	23.3	(A)	0.1	-	-	1.6	66.3	8	3562
0.4	33.6	0.5	30.5	-	(A)	(A)	0.5	0.2	21.3	17	3563
0.7	30.1	(A)	2.0	(A)	0.4	-	-	0.7	27.1	19	3566
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3568
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3569
3.6	195.6	8.9	518.6	0.4	37.8	0.4	34.9	6.3	503.7	2	3573
0.2	8.1	0.2	14.2	(A)	0.3	(A)	0.1	0.2	8.4	7	3574
1.0	42.3	0.4	19.9	(A)	0.2	(A)	0.2	1.7	81.7	19	3579
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3	3592
14.1	583.3	2.5	124.0	0.2	12.4	1.1	54.1	10.8	434.9	16	3599
103.0	4,094.0	216.8	9,398.1	7.8	311.1	2.7	100.2	41.3	1,875.6	1	36
1.5	54.4	1.8	69.5	(A)	0.2	0.1	3.1	0.5	28.9	18	3612
1.8	68.0	1.6	61.9	(A)	0.4	0.1	1.6	1.0	45.6	16	3613
4.2	181.3	6.6	307.1	0.1	4.0	(A)	1.5	1.6	74.6	16	3621
1.4	53.5	0.9	28.2	0.1	1.2	(A)	1.5	0.8	33.2	15	3622
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3643
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3644
0.9	31.5	1.6	76.9	(A)	1.0	-	-	1.1	71.1	7	3661
58.6	2,496.4	178.1	7,820.2	5.9	249.8	0.3	12.0	16.4	948.5	1	3662
2.2	66.1	3.8	127.9	0.1	1.7	0.1	2.1	0.5	16.1	6	3671
8.9	336.0	7.7	338.9	0.9	27.4	0.2	4.1	4.3	201.6	7	3674
1.9	50.4	0.4	9.3	-	(A)	(A)	0.6	1.7	44.8	10	3675
1.4	31.5	0.4	10.0	0.1	1.8	(A)	0.2	1.1	24.5	6	3676
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	3677

Table 4. Total Employment, Value Added, Value of Shipments, and

(Employment figures in thousands;

Code	Industry	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
36	Electrical and electronic equipment--Continued							
3678	Electronic connectors.....	30.2	996.6	1,417.1	3.9	143.3	0.9	31.7
3679	Electronic components, n.e.c.....	141.4	3,538.1	6,397.4	13.7	519.4	3.5	144.5
3691	Storage batteries.....	27.2	1,043.7	2,269.6	1.3	64.7	0.8	40.2
3692	Primary batteries, dry and wet.....	11.4	337.1	677.2	0.9	37.9	0.4	21.4
3693	X-ray apparatus and tubes.....	34.1	1,286.1	2,066.3	2.5	72.8	1.9	44.3
3694	Engine electrical equipment.....	70.1	2,251.7	4,097.9	1.5	68.4	0.5	15.7
3699	Electrical equipment and supplies, n.e.c.....	22.3	457.9	883.7	(8)	(8)	(8)	(8)
37	Transportation equipment.....	842.8	28,717.1	50,341.0	439.1	25,613.5	367.0	21,731.5
3713	Truck and bus bodies.....	36.4	996.1	2,292.5	0.7	35.7	0.4	18.9
3715	Truck trailers.....	32.0	939.4	2,498.0	(8)	(8)	(8)	(8)
3721	Aircraft.....	237.7	9,120.5	17,052.1	121.9	8,224.2	114.7	7,708.4
3724	Aircraft engines and engine parts.....	115.7	4,438.9	7,510.1	49.4	3,535.6	25.1	2,181.0
3728	Aircraft equipment, n.e.c.....	110.2	3,540.2	5,414.5	45.6	2,321.6	23.8	1,262.3
3731	Shipbuilding and repairing.....	175.3	4,135.6	7,006.7	100.7	3,721.3	96.8	3,581.9
3761	Guided missiles and space vehicles.....	93.8	4,176.6	5,990.2	85.9	5,623.9	78.8	5,223.9
3764	Space propulsion units and parts.....	20.1	764.2	1,113.8	17.3	975.8	12.4	717.9
3769	Space vehicle equipment, n.e.c.....	8.2	225.7	370.6	6.7	320.6	5.2	255.1
3795	Tanks and tank components.....	13.4	379.9	1,092.5	10.6	839.1	9.8	781.8
38	Instruments and related products.....	514.3	19,561.0	30,178.8	53.4	1,936.9	34.5	1,092.6
3811	Engineering and scientific instruments.....	46.2	1,517.8	2,244.9	12.0	502.9	5.1	243.2
3823	Process control instruments.....	50.6	1,609.6	2,328.5	2.0	70.1	1.2	42.3
3824	Fluid meters and counting devices.....	17.0	489.4	749.9	(8)	(8)	(8)	(8)
3825	Instruments to measure electricity.....	76.6	2,162.1	3,368.6	18.2	363.9	16.5	230.9
3829	Measuring and controlling devices, n.e.c.....	35.6	865.4	1,369.4	5.3	170.9	2.7	91.4
3832	Optical instruments and lenses.....	34.3	1,226.2	1,802.4	4.8	236.8	2.9	178.2
3842	Surgical appliances and supplies.....	58.6	1,803.5	2,934.4	4.4	236.6	1.7	67.4
3843	Dental equipment and supplies.....	17.4	491.6	909.4	0.5	20.1	0.3	11.8
3851	Ophthalmic goods.....	31.1	769.6	1,132.5	0.9	22.3	0.8	18.7
3861	Photographic equipment and supplies.....	112.0	7,837.8	11,535.9	3.8	248.2	2.3	176.7
3873	Watches, clocks, and watchcases.....	34.9	788.0	1,802.9	1.4	59.9	1.0	32.0
88	Miscellaneous industries ²	34.7	1,479.1	1,618.5	12.5	530.7	11.7	495.1

Note: In some instances, data are withheld to avoid disclosing the operations of individual companies. The data withheld are expressed in terms of the symbols and ranges shown below. In all instances, where the data are less than 0.1, the symbol (A) is used.

Symbol	Range	Symbol	Range	Symbol	Range
(A).....	Less than 0.1	(G).....	5.0 to 9.9	(K).....	100.0 to 249.9
(B).....	0.2 to 0.4	(H).....	10.0 to 24.9	(L).....	250.0 to 499.9
(C).....	0.5 to 0.9	(I).....	25.0 to 49.9	(M).....	500.0 to 999.9
(E).....	1.0 to 1.9	(J).....	50.0 to 99.9	(N).....	1,000.0 and over
(F).....	2.0 to 4.9				

See text for a description of the methodology.

- Represents zero. N.e.c. Not elsewhere classified. (S) Data suppressed because they did not meet publication standards. This includes cells where the total value of Government shipments is less than \$20.0 million or the standard error is 20 or greater. (X) Not applicable.

¹The standard error estimates are those for the unadjusted (reciprocal) Government shipments that were reported on the MA-175. No adjustment has been made to the standard errors for the ratio estimation to ASM levels (See appendix C.)

²Represents nonmanufacturing facilities of the manufacturing companies canvassed, in addition to selected nonprofit research corporations working on Government contracts.

Government Shipments, by Industry and Agency: 1978 Revised—Continued

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ¹	Code
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
3.0	111.6	1.9	66.5	(B)	(F)	(B)	(F)	1.8	71.2	11	3678
10.2	374.9	6.9	280.2	0.3	14.1	1.6	62.7	4.9	162.4	10	3679
0.5	24.5	1.0	47.5	(A)	(C)	(B)	(F)	0.2	14.2	19	3691
0.5	16.5	0.6	24.2	(A)	(B)	(B)	(F)	0.2	(H)	18	3692
0.6	28.5	1.4	61.8	(B)	(F)	(A)	(E)	1.0	6.5	13	3693
1.0	52.7	0.9	40.1	0.1	3.3	(A)	0.2	0.5	24.8	5	3694
(8)	(8)	(8)	(8)	(8)	(8)	(S)	(S)	(S)	(8)	(X)	3699
72.1	3,882.0	383.3	22,509.9	25.6	1,788.6	4.7	175.9	25.5	1,139.1	1	37
0.3	16.8	0.4	34.2	-	(A)	-	-	0.3	1.5	12	3713
(8)	(8)	(8)	(8)	(8)	(8)	(S)	(S)	(8)	(8)	(X)	3715
7.2	515.8	116.6	7,937.5	1.3	128.8	1.0	0.7	3.0	157.2	1	3721
24.3	1,354.6	45.1	3,341.0	0.8	50.1	0.4	26.1	3.1	118.4	1	3724
21.8	1,059.3	39.7	2,055.4	2.1	100.4	1.2	64.9	2.6	100.9	3	3728
3.9	139.4	89.5	3,307.5	-	-	0.6	17.1	10.6	396.7	4	3731
7.1	400.0	63.9	4,081.3	16.2	1,179.2	0.2	9.9	5.6	353.5	1	3761
4.9	257.9	12.3	651.9	4.6	305.4	0.3	14.9	0.1	3.6	1	3764
1.5	65.5	5.0	249.8	0.6	24.7	1.0	42.3	0.1	3.8	1	3769
0.8	57.3	10.6	839.1	-	-	-	-	-	-	3	3795
8.9	844.3	25.5	1,194.7	2.4	81.6	1.4	147.2	11.5	513.4	3	38
6.9	259.7	8.4	366.0	0.3	14.8	0.5	29.6	2.8	92.5	9	3811
0.8	27.8	0.3	12.7	(B)	(E)	(B)	(F)	1.5	52.8	7	3823
(8)	(8)	(8)	(8)	(8)	(8)	(S)	(S)	(8)	(8)	(X)	3824
1.7	133.0	4.5	243.9	0.5	15.3	12.0	12.8	1.2	91.9	1	3825
2.6	79.5	3.0	99.9	1.2	34.8	0.2	5.5	0.9	30.7	3	3829
1.9	58.6	3.2	179.9	(B)	(G)	(A)	(C)	1.4	47.1	9	3832
2.7	169.2	1.4	56.5	(B)	(G)	(E)	(J)	1.7	80.3	4	3842
0.2	8.3	0.1	2.7	-	-	-	-	0.4	17.4	14	3843
0.1	3.6	0.8	17.8	(A)	0.1	(A)	0.1	0.1	4.3	19	3851
1.5	71.5	2.7	166.1	(A)	0.7	(A)	0.7	1.1	80.7	4	3861
0.4	27.9	1.1	49.2	-	(B)	(A)	(B)	0.3	10.5	3	3873
0.8	35.6	7.6	329.0	(B)	(J)	(C)	(I)	4.1	170.0	1	88

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Table 5. Total Employment, Value Added, Value of Shipments, and

(Employment figures in thousands;

Line no.	Division, State, and standard metropolitan statistical area ¹	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
1	United States.....	6,033.6	235,040.0	534,942.0	998.5	58,713.2	691.4	42,908.7
2	New England.....	578.2	20,527.0	36,273.8	122.9	6,718.1	77.0	4,099.0
3	Maine.....	15.5	467.3	828.5	4.9	236.5	4.3	216.0
4	New Hampshire.....	35.1	1,260.0	1,951.0	7.9	366.0	4.3	242.1
5	Nashua.....	10.7	324.4	571.9	(G)	(K)	(F)	(K)
6	Vermont.....	18.9	665.8	1,200.0	5.1	255.1	2.0	120.0
7	Massachusetts.....	256.4	9,839.5	16,949.7	45.8	2,724.7	29.0	1,803.9
8	Boston.....	130.9	4,811.5	8,361.1	28.2	1,644.5	17.0	1,092.4
9	Fall River, Mass.-R.I.....	2.8	105.3	193.3	(E)	(J)	(E)	(J)
10	Fitchburg-Leominster.....	2.4	550.1	621.4	0.4	36.8	0.3	(I)
11	Lawrence-Haverhill, Mass.-N.H.....	17.5	860.1	1,548.8	4.1	269.2	3.1	(K)
12	Lowell, Mass.-N.H.....	16.0	585.0	116.8	3.3	225.0	2.5	179.7
13	Pittsfield.....	(G)	(L)	(L)	(F)	(K)	(F)	(K)
14	Worcester.....	17.7	764.2	1,537.0	1.3	146.1	(B)	(H)
15	Rhode Island.....	42.2	1,371.0	2,451.1	5.8	263.7	5.3	236.2
16	Providence-Pawtucket-Warwick, R.I.-Mass.....	47.2	1,505.8	3,675.7	4.1	186.4	3.6	158.8
17	Connecticut.....	210.1	6,923.4	12,893.5	53.4	2,872.1	32.1	1,480.8
18	Bridgeport.....	34.5	1,224.6	2,324.2	8.7	461.5	7.5	405.7
19	Danbury.....	9.0	393.2	679.0	1.5	118.2	1.3	109.9
20	Hartford.....	53.4	1,924.5	3,918.1	14.2	958.6	2.7	141.2
21	New Haven-West Haven.....	20.4	616.8	1,240.0	2.5	160.0	0.3	8.5
22	New London-Groton-Norwich, Conn.-R.I.....	19.6	489.4	870.0	(H)	(M)	(H)	(M)
23	Norwalk.....	6.1	282.1	451.7	1.6	87.8	1.1	59.4
24	Middle Atlantic.....	1,038.8	42,044.2	82,269.8	138.5	8,663.8	88.4	6,047.1
25	New York.....	412.0	18,163.1	31,993.6	65.9	4,482.2	48.5	3,127.0
26	Albany-Schenectady-Troy.....	(H)	(M)	(N)	(C)	(J)	(C)	(I)
27	Binghamton, N.Y.-Pa.....	29.8	1,026.2	2,380.7	7.6	386.3	4.9	255.3
28	Buffalo.....	26.9	1,027.8	2,344.5	2.8	127.5	2.6	43.3
29	Elmira.....	4.5	163.8	247.2	0.5	19.1	0.3	8.9
30	Nassau-Suffolk.....	78.7	2,640.0	4,716.6	35.5	2,133.4	31.0	1,927.8
31	New York, N.Y.-N.J.....	94.1	2,662.5	5,822.4	10.6	557.7	6.2	316.0
32	Rochester.....	95.3	7,254.0	10,635.5	(F)	(M)	(F)	(L)
33	Syracuse.....	13.6	387.2	1,341.9	(F)	(K)	(E)	(J)
34	Utica-Rome.....	16.1	743.4	1,417.0	(F)	136.4	(E)	(J)
35	New Jersey.....	258.3	8,883.6	17,334.1	42.3	2,485.3	22.1	1,891.3
36	Paterson-Clifton-Passaic.....	70.1	1,303.6	2,023.7	14.1	233.8	4.3	126.0
37	Trenton.....	7.8	257.7	479.5	1.6	95.6	1.4	78.0
38	Pennsylvania.....	368.5	14,997.5	32,942.1	30.3	1,696.3	17.8	1,028.8
39	Erie.....	13.7	51.3	922.4	1.2	58.3	0.6	25.4
40	Harrisburg.....	6.5	247.4	537.5	0.6	38.5	0.2	12.1
41	Lancaster.....	12.5	398.9	923.4	1.6	63.9	0.7	25.9
42	Northeast Pennsylvania.....	17.3	534.5	1,232.5	1.9	106.9	1.3	83.3
43	Philadelphia, Pa.-N.J.....	147.3	6,658.2	18,321.7	20.7	1,296.4	14.8	964.2
44	Pittsburgh.....	70.0	2,632.4	5,351.6	2.4	113.4	0.7	39.4
45	East North Central.....	1,392.3	53,386.0	121,231.9	93.2	7,002.9	52.0	4,252.0
46	Ohio.....	356.6	13,820.1	32,671.1	31.0	2,732.0	18.7	1,904.2
47	Akron.....	21.8	569.9	1,195.1	2.5	137.5	1.8	100.5
48	Canton.....	28.6	834.9	2,212.2	1.0	47.8	0.2	14.0
49	Cincinnati, Ohio-Ky.-Ind.....	52.9	2,090.6	4,345.2	6.6	535.1	4.6	397.3
50	Cleveland.....	72.2	2,917.8	5,754.0	8.6	554.9	4.7	309.4
51	Dayton.....	28.4	784.4	1,572.3	3.5	123.2	2.0	77.3
52	Hamilton-Middletown.....	5.3	186.9	405.5	0.4	21.5	0.2	10.2
53	Lima.....	14.3	638.5	2,617.7	1.7	93.8	0.8	54.7
54	Toledo, Ohio-Mich.....	25.1	1,362.3	4,775.8	0.8	59.3	0.6	41.3
55	Youngstown-Warren.....	11.2	453.0	1,139.0	0.9	98.2	-	(A)
56	Indiana.....	198.8	7,809.5	19,114.4	18.5	1,220.4	10.3	674.2
57	Anderson.....	13.3	63.7	1,140.3	0.5	(I)	(F)	(A)
58	Fort Wayne.....	20.1	615.2	1,559.0	3.7	178.1	(F)	(K)
59	Gary-Hammond-East Chicago.....	13.6	1,091.7	4,647.7	1.5	133.0	(A)	(H)
60	Indianapolis.....	46.5	1,658.6	3,796.4	(F)	(L)	(F)	(L)
61	Lafayette-West Lafayette.....	5.0	205.2	447.9	0.3	21.0	(A)	(C)

See footnotes at end of table.

Government Shipments, by Geographic Area and Agency: 1979

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ²	Line no.
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
307.1	15,804.5	719.8	43,047.4	46.2	3,002.6	39.6	3,065.9	192.9	9,597.3	2	1
45.9	2,619.1	100.2	5,639.2	2.1	121.7	2.0	116.6	18.6	840.6	1	2
0.6	20.5	4.7	230.0	-	-	-	-	0.2	6.5	6	3
3.6	123.9	5.2	277.2	0.1	2.8	0.2	9.3	2.4	76.7	14	4
(E)	(I)	(F)	(K)	-	-	-	-	(C)	(H)	18	5
3.1	135.1	4.2	243.1	0.1	(E)	-	(A)	(C)	(H)	12	6
16.8	920.8	36.3	2,244.3	0.5	29.3	0.4	20.5	8.6	430.6	3	7
11.2	552.1	21.8	1,372.0	0.4	23.1	0.3	17.6	5.7	231.8	4	8
(B)	(F)	(E)	(J)	-	-	(A)	(B)	(A)	(C)	1	9
0.1	(F)	0.3	(H)	-	-	-	-	0.1	(H)	1	10
1.0	(J)	3.9	(K)	(A)	(F)	(A)	(G)	0.2	(H)	5	11
0.8	45.3	2.9	211.4	-	-	-	-	0.4	13.6	5	12
(C)	(I)	(F)	(K)	(A)	(A)	(A)	(E)	(B)	(F)	1	13
(E)	(K)	(C)	(J)	(A)	(E)	-	-	(B)	(J)	13	14
0.5	27.5	5.5	247.8	(A)	(B)	(A)	(B)	0.3	15.5	5	15
0.5	27.6	3.8	167.5	(A)	(B)	(A)	(E)	0.3	17.0	7	16
21.3	1,391.3	44.3	2,396.8	1.4	87.8	1.4	86.5	6.3	301.0	3	17
1.2	55.8	7.6	404.9	0.2	5.6	-	-	0.9	51.0	4	18
0.2	8.3	0.9	73.0	0.3	22.6	-	-	0.3	22.6	6	19
11.5	817.4	11.8	823.0	0.8	47.2	(A)	1.2	1.6	87.2	3	20
2.2	151.5	1.5	116.5	0.1	3.0	-	-	0.9	40.5	9	21
(E)	(J)	(H)	(M)	(A)	(C)	(E)	(J)	(B)	(I)	3	22
0.5	28.4	1.2	69.9	0.1	(F)	(A)	(B)	0.3	(H)	4	23
50.1	2,616.7	96.6	5,616.5	3.7	836.3	2.0	134.7	37.2	2,076.3	1	24
17.4	1,355.2	57.9	3,378.2	1.1	630.2	0.4	32.9	7.5	440.9	2	25
(B)	(H)	(B)	(G)	(A)	(B)	(B)	(H)	(C)	(I)	8	26
2.7	131.0	7.0	355.0	0.4	22.7	(A)	1.0	0.2	7.6	1	27
0.2	84.2	2.0	87.8	0.2	5.3	(A)	0.4	0.6	34.0	1	28
0.2	10.2	0.2	8.4	(A)	0.1	(A)	0.2	0.3	10.4	6	29
4.5	205.6	32.2	2,011.7	0.5	27.4	0.1	4.4	2.7	89.9	2	30
4.4	241.7	7.8	430.8	0.3	15.8	0.2	15.8	2.3	95.3	8	31
(E)	(J)	(F)	(L)	(A)	(F)	(A)	(G)	(C)	(K)	3	32
(E)	(J)	(F)	(K)	-	(A)	-	(B)	(B)	(G)	14	33
(E)	(J)	(F)	(K)	(A)	(B)	(A)	(B)	(B)	(H)	1	34
20.2	594.0	21.7	1,205.7	1.2	119.0	0.3	40.0	19.1	1,120.6	19	35
9.8	107.8	(F)	(K)	(B)	(F)	-	-	(G)	(I)	18	36
0.2	17.6	0.8	49.8	0.6	37.4	-	(A)	0.2	8.4	11	37
12.5	667.5	17.0	1,032.6	1.4	87.1	1.3	61.8	10.6	514.8	6	38
0.6	32.9	0.9	43.3	(A)	0.2	-	-	0.3	14.8	19	39
0.4	26.4	0.5	31.2	-	(A)	-	(A)	0.1	7.3	5	40
0.9	38.0	(C)	(I)	(A)	(B)	(B)	3.5	0.6	26.7	18	41
0.6	23.6	1.7	99.8	-	-	0.1	2.7	0.1	4.4	3	42
5.9	332.2	12.3	842.8	1.4	88.1	0.3	18.8	6.7	346.7	5	43
1.7	74.0	1.0	64.1	-	(A)	0.8	26.7	0.6	22.6	12	44
41.2	2,750.9	60.7	4,310.8	0.8	60.9	4.0	892.7	27.7	1,738.5	2	45
12.3	827.8	18.9	1,344.9	0.4	29.4	3.6	869.3	8.1	488.4	4	46
0.7	37.0	2.3	127.0	(A)	0.9	0.1	6.1	0.1	3.5	1	47
0.8	33.9	0.5	41.4	(A)	(A)	-	-	0.5	6.4	6	48
2.0	137.8	(G)	(L)	(B)	(H)	(B)	(I)	(C)	(I)	5	49
3.9	245.5	5.0	327.3	(A)	1.3	0.1	2.6	3.5	223.7	18	50
1.5	45.9	1.3	51.5	(A)	0.8	1.5	53.3	0.7	17.6	17	51
0.2	11.3	0.2	7.9	(A)	0.1	-	-	0.2	13.5	3	52
0.9	39.1	(E)	(J)	(A)	(E)	(A)	(C)	(C)	(G)	9	53
0.2	18.0	0.6	47.5	(A)	0.5	(A)	2.9	0.2	8.4	3	54
0.9	98.2	0.3	34.4	-	-	-	-	0.6	63.8	1	55
8.2	546.2	14.7	983.3	0.2	15.9	(A)	2.3	3.6	218.9	5	56
0.5	(I)	0.4	(H)	-	-	-	-	0.1	(F)	1	57
(C)	(H)	(F)	(K)	(B)	(F)	-	-	(B)	(H)	6	58
(E)	(K)	(E)	(J)	-	-	-	-	(B)	(I)	1	59
(C)	(J)	(F)	(L)	(B)	(H)	(A)	(E)	(B)	(H)	1	60
(B)	(H)	(B)	(H)	-	-	-	-	(B)	(G)	5	61

Table 5. Total Employment, Value Added, Value of Shipments, and

(Employment figures in thousands;

Line no.	Division, State, and standard metropolitan statistical area ¹	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
East North Central--Continued								
62	Illinois.....	413.8	17,332.1	41,607.1	16.9	1,302.3	7.8	538.0
63	Chicago.....	286.8	11,761.5	27,085.9	11.5	878.8	5.3	355.0
64	Davenport-Rock Island-Moline, Iowa-Ill.....	12.4	449.4	1,658.3	0.4	48.1	(A)	1.1
65	Peoria.....	(I)	(N)	(N)	(B)	(I)	(B)	(G)
66	Rockford.....	22.1	662.9	1,343.4	2.3	142.3	0.5	25.1
67	Michigan.....	257.3	8,981.4	19,112.5	18.2	1,289.2	9.7	824.6
68	Detroit.....	103.0	3,949.6	9,332.0	9.2	769.3	5.6	568.6
69	Grand Rapids.....	25.9	733.2	1,496.1	3.6	163.7	1.8	71.1
70	Jackson.....	5.4	188.9	375.7	0.9	61.3	0.7	49.6
71	Kalamazoo-Portage.....	18.7	544.1	1,122.7	(C)	41.3	(B)	(H)
72	Muskegon-Muskegon Heights.....	8.2	318.9	620.1	1.4	125.0	0.9	91.5
73	Wisconsin.....	165.8	5,442.9	10,824.0	8.6	459.0	5.5	311.0
74	Milwaukee.....	88.9	3,009.0	5,973.3	4.7	214.3	2.4	117.5
75	West North Central.....	492.8	16,434.8	36,281.2	73.3	5,023.9	59.2	4,323.5
76	Minnesota.....	159.4	4,169.4	7,836.4	19.9	1,020.7	13.4	766.0
77	Minneapolis-St. Paul, Minn.-Wisc.....	86.0	3,262.0	6,200.0	19.6	996.8	13.2	754.2
78	Iowa.....	82.7	3,397.1	7,134.2	6.4	322.7	4.4	195.9
79	Cedar Rapids.....	17.4	604.8	1,167.8	3.3	155.2	2.4	112.5
80	Waterloo-Cedar Falls.....	4.2	150.0	431.4	0.5	25.7	(C)	25.2
81	Missouri.....	151.7	5,562.1	11,848.1	38.1	3,189.9	34.7	2,995.1
82	Kansas City, Mo.-Kansas.....	62.2	2,384.0	6,053.1	8.0	391.7	7.7	374.0
83	St. Louis, Mo.-Ill.....	85.0	3,300.7	10,619.1	28.9	2,796.8	26.3	2,621.8
84	North Dakota.....	1.8	199.4	584.6	(S)	(S)	(S)	(S)
85	South Dakota.....	3.4	116.9	247.7	(S)	(S)	(S)	(S)
86	Nebraska.....	18.1	649.3	1,321.2	(S)	(S)	(S)	(S)
87	Kansas.....	75.7	2,340.6	7,309.0	7.3	392.1	6.3	339.4
88	Wichita.....	45.4	1,569.4	4,714.6	(G)	(L)	(G)	(L)
89	South Atlantic.....	503.4	17,071.5	35,857.0	116.6	6,415.3	89.8	5,197.6
90	Delaware.....	9.3	626.2	1,881.3	0.3	90.6	0.2	87.9
91	Wilmington, Del.-N.J.-Md.....	9.4	654.6	2,044.5	0.2	88.2	0.1	85.3
92	Maryland.....	73.0	2,308.2	4,132.4	25.9	1,208.8	18.9	907.9
93	Baltimore.....	47.7	1,490.8	2,903.2	19.5	886.0	14.6	658.2
94	District of Columbia.....	1.2	37.6	49.2	(S)	(S)	(S)	(S)
95	Washington, D.C.-Md.-Va.....	29.7	970.7	1,608.6	9.5	478.4	6.9	364.6
96	Virginia.....	88.5	2,806.5	5,545.8	33.6	1,349.0	30.4	1,185.0
97	Lynchburg.....	4.9	214.0	368.9	0.4	(H)	0.4	(H)
98	Newport News-Hampton.....	20.6	413.0	1,200.5	(H)	(M)	(H)	(M)
99	Norfolk-Virginia Beach-Portsmouth.....	6.9	213.2	382.5	2.1	99.7	2.1	99.2
100	Roanoke.....	4.7	213.4	344.0	0.5	34.3	0.4	31.4
101	West Virginia.....	12.9	585.4	1,818.0	1.1	88.7	0.2	11.4
102	Huntington-Ashland, W.Va.-Ky.-Ohio.....	(F)	(K)	(N)	(B)	(I)	(A)	(H)
103	Steubenville-Weirton, W.Va.-Ohio.....	1.3	116.8	414.4	(B)	(J)	-	-
104	Wheeling.....	0.9	34.0	52.4	0.7	35.3	-	-
105	North Carolina.....	86.5	3,603.1	7,168.4	6.4	255.5	2.3	173.2
106	Burlington.....	(F)	(K)	(L)	(B)	(I)	(B)	(I)
107	Wilmington.....	2.4	340.8	613.2	0.4	68.8	0.4	68.4
108	South Carolina.....	63.7	1,750.0	3,364.2	8.2	435.3	7.0	381.3
109	Georgia.....	58.0	1,826.1	4,769.6	5.9	355.5	4.7	294.1
110	Atlanta.....	27.4	989.6	2,610.8	(F)	(L)	(F)	(L)
111	Augusta, Ga.-S.C.....	(G)	(L)	(M)	(G)	(L)	(G)	(L)

See footnotes at end of table.

Government Shipments, by Geographic Area and Agency: 1979—Continued

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ²	Line no.
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
9.1	764.3	8.5	594.9	0.2	14.8	0.2	11.6	8.0	681.0	8	62
6.2	523.8	6.0	420.2	0.1	5.9	0.1	9.4	5.3	443.3	6	63
0.4	47.0	0.3	45.7	-	-	-	-	0.1	2.4	1	64
(B)	(H)	(B)	(I)	-	(A)	-	(A)	(B)	(G)	1	65
1.8	117.2	1.5	90.7	0.2	8.7	(A)	2.3	0.6	40.6	19	66
8.5	464.6	12.2	1,051.5	(A)	(C)	(A)	(B)	6.0	236.8	5	67
3.6	200.7	6.9	703.6	(A)	0.4	-	-	2.3	65.3	7	68
1.8	92.6	3.0	(K)	-	(A)	-	(A)	0.6	(I)	17	69
0.2	11.7	0.7	48.6	-	-	-	-	0.2	12.7	9	70
(B)	(I)	(C)	(I)	-	-	-	-	(A)	(C)	1	71
0.5	33.5	(C)	(J)	(A)	(B)	-	-	(C)	(I)	5	72
3.1	148.0	6.4	336.2	(A)	(B)	0.2	(G)	2.0	113.4	12	73
2.3	96.8	3.6	152.7	(A)	(B)	(A)	(B)	1.1	61.2	7	74
14.1	700.4	58.1	4,310.1	0.9	76.5	5.6	265.2	8.7	372.1	1	75
6.5	254.7	15.7	846.1	(B)	(I)	(B)	(H)	3.6	133.2	2	76
6.4	242.6	15.6	834.2	(B)	(I)	(B)	(H)	3.4	121.2	2	77
2.0	126.8	4.9	253.8	(A)	0.8	-	-	1.5	68.1	4	78
0.9	42.7	(F)	(K)	(A)	(C)	-	-	(C)	(I)	1	79
(A)	0.5	(C)	(I)	-	-	-	-	(A)	(C)	1	80
3.4	194.8	30.5	2,827.6	0.3	(I)	5.4	(L)	1.9	73.9	1	81
0.3	17.7	2.1	115.5	-	-	5.3	248.4	0.6	27.8	1	82
2.6	175.0	27.1	2,675.6	0.3	(I)	(A)	(F)	1.5	84.9	1	83
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	84
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	85
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	86
1.0	52.7	(G)	(L)	(B)	(G)	(A)	(B)	(C)	(I)	2	87
(C)	(I)	(G)	(L)	(B)	(G)	(A)	(B)	(B)	(H)	1	88
26.8	1,217.7	84.7	4,939.8	2.4	144.1	8.1	438.2	21.4	893.2	1	89
0.1	2.7	0.2	80.7	-	(B)	-	(B)	0.1	9.8	2	90
0.1	2.9	0.1	78.4	(A)	(B)	(A)	(B)	0.1	9.7	1	91
7.0	300.9	18.9	936.3	0.5	29.0	0.2	6.2	6.3	237.3	2	92
4.9	227.8	14.2	679.7	0.2	9.1	0.1	4.9	5.0	192.3	3	93
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	94
2.6	113.8	7.1	375.4	0.4	22.9	0.4	30.0	1.6	50.1	8	95
3.2	164.0	28.9	1,157.7	0.1	4.3	0.4	28.9	4.2	158.1	3	96
(A)	(F)	0.1	(G)	(A)	(B)	(A)	(B)	0.3	(H)	1	97
(B)	(H)	(H)	(M)	-	-	-	-	(F)	(J)	1	98
(A)	0.5	(F)	98.8	-	-	-	-	(A)	0.9	19	99
0.1	2.9	0.5	32.7	(A)	0.2	-	-	(A)	1.4	1	100
0.9	77.3	0.8	47.1	-	-	-	-	0.3	41.6	5	101
(B)	(I)	(A)	(H)	-	-	-	-	(B)	(I)	1	102
(B)	(J)	-	-	-	-	-	-	(B)	(J)	1	103
0.7	35.3	0.7	35.3	-	-	-	-	-	-	1	104
4.1	82.3	1.6	85.7	(A)	0.6	(A)	1.7	4.8	167.5	17	105
(A)	(B)	(B)	(I)	-	-	-	-	(A)	(B)	1	106
(A)	0.4	-	-	-	-	-	-	0.4	68.8	10	107
1.2	54.0	(C)	32.8	-	-	(G)	(L)	(F)	(J)	6	108
1.2	61.4	4.7	297.8	0.1	2.7	-	-	1.1	55.0	4	109
(B)	(I)	(F)	(L)	(B)	(F)	-	-	(C)	(I)	1	110
(A)	(E)	(A)	(F)	-	-	(G)	(L)	(A)	(C)	1	111

Table 5. Total Employment, Value Added, Value of Shipments, and

(Employment figures in thousands;

Line no.	Division, State, and standard metropolitan statistical area ¹	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
	South Atlantic--Continued							
112	Florida.....	110.3	3,528.4	7,128.1	35.1	2,631.9	26.1	2,156.8
113	Daytona Beach.....	1.2	45.7	62.3	1.0	45.2	0.4	14.9
114	Jacksonville.....	3.3	77.1	158.5	0.7	22.5	0.7	22.5
115	Melbourne-Titusville-Cocoa.....	13.8	405.6	643.4	6.4	314.3	3.8	192.1
116	Orlando.....	13.5	403.3	670.3	(G)	(L)	(G)	(L)
117	Tampa-St. Petersburg.....	22.3	610.5	1,117.0	5.9	278.5	3.7	186.2
118	West Palm Beach-Boca Raton.....	12.0	346.6	1,846.8	(G)	(N)	(G)	(N)
119	East South Central.....	250.2	8,902.8	22,277.8	26.6	1,570.2	18.3	1,049.6
120	Kentucky.....	46.5	2,020.0	5,932.1	2.9	466.5	2.1	307.2
121	Owensboro.....	3.2	99.4	263.6	0.3	20.2	0.2	12.5
122	Tennessee.....	87.3	2,589.5	5,830.3	15.5	704.6	10.7	490.1
123	Knoxville.....	11.7	459.5	1,136.2	(F)	(K)	(F)	(K)
124	Nashville-Davidson.....	10.6	325.7	674.5	0.8	32.5	0.4	13.9
125	Alabama.....	72.9	2,441.2	6,016.4	6.7	304.2	4.9	212.0
126	Birmingham.....	21.4	59.8	1,359.2	(E)	(I)	(E)	(I)
127	Huntsville.....	10.4	317.0	602.8	2.7	99.7	1.9	70.6
128	Mobile.....	11.2	446.8	1,244.8	(C)	(J)	(B)	(I)
129	Mississippi.....	43.5	1,852.1	4,499.0	1.5	94.9	0.6	40.3
130	Jackson.....	3.9	137.4	289.8	0.5	25.0	0.3	17.0
131	West South Central.....	504.5	25,759.0	92,672.5	66.5	4,368.1	51.4	3,654.3
132	Arkansas.....	39.2	1,505.4	3,316.3	0.4	23.2	0.1	11.0
133	Louisiana.....	55.9	4,789.9	20,531.8	6.2	529.3	6.0	493.2
134	Baton Rouge.....	6.2	951.6	4,839.8	(B)	(J)	(B)	(J)
135	Lake Charles.....	3.2	722.7	3,915.0	(A)	(I)	(A)	(I)
136	New Orleans.....	15.2	686.5	2,603.2	5.0	310.6	4.9	299.0
137	Shreveport.....	15.5	550.8	1,572.5	1.0	61.1	0.9	57.3
138	Oklahoma.....	79.8	3,170.1	9,328.1	5.3	260.6	2.0	144.5
139	Tulsa.....	29.7	847.0	3,026.5	4.0	174.8	2.0	79.6
140	Texas.....	329.6	16,293.6	59,496.3	54.6	3,555.0	43.3	3,005.6
141	Abilene.....	0.5	33.5	480.4	(A)	23.2	(A)	23.2
142	Austin.....	12.3	534.1	727.5	1.7	53.0	1.3	31.2
143	Beaumont-Port Arthur-Orange.....	22.1	2,600.5	13,109.7	(B)	(J)	(B)	(J)
144	Corpus Christi.....	5.2	788.3	4,383.0	0.1	198.3	0.1	195.4
145	Dallas-Fort Worth.....	114.2	3,456.5	7,556.9	42.6	2,598.1	34.6	2,286.9
146	Galveston-Texas City.....	4.4	317.0	5,080.3	(A)	67.7	(A)	40.1
147	Houston.....	90.8	5,454.4	21,732.9	0.8	101.1	0.1	42.3
148	Texarkana, Texas-Ark.....	(E)	(I)	(J)	(E)	(I)	(E)	(I)
149	Mountain.....	194.0	7,346.3	17,470.8	38.5	2,373.7	20.8	1,441.8
150	Montana.....	1.7	176.5	1,179.5	0.4	28.0	0.1	25.7
151	Idaho.....	7.2	393.4	691.9	(S)	(S)	(S)	(S)
152	Wyoming.....	1.3	26.6	1,437.5	(S)	(S)	(S)	(S)
153	Colorado.....	56.3	2,184.6	4,814.3	10.4	778.5	8.1	627.4
154	Denver-Boulder.....	36.7	1,310.3	3,305.2	8.2	647.9	(G)	(M)
155	New Mexico.....	17.8	489.2	1,624.5	3.2	132.4	0.1	0.5
156	Arizona.....	74.0	2,772.3	4,734.5	16.3	880.7	9.2	554.6
157	Phoenix.....	60.7	2,146.0	3,931.2	11.5	632.4	5.5	343.7
158	Tucson.....	(G)	(K)	(M)	(F)	(K)	(F)	(K)
159	Utah.....	29.9	1,116.8	2,546.4	7.5	489.8	3.2	224.7
160	Salt Lake City-Ogden.....	22.9	886.1	2,264.1	3.7	287.3	1.0	111.0
161	Nevada.....	5.8	186.9	442.2	(C)	(I)	(A)	(B)
162	Las Vegas.....	1.9	71.9	190.3	(C)	(I)	(A)	(B)

See footnotes at end of table.

Government Shipments, by Geographic Area and Agency: 1979—Continued

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ²	Line no.
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
9.0	475.1	29.0	2,301.7	1.7	107.5	1.2	58.5	3.2	164.2	4	112
0.6	30.3	0.9	43.8	(A)	0.2	-	-	0.1	1.2	1	113
-	-	0.6	19.3	-	-	-	-	0.1	3.2	1	114
2.6	122.2	4.3	200.0	1.1	78.2	(A)	1.0	1.0	35.1	19	115
(E)	(J)	(G)	(L)	-	(A)	-	(A)	(B)	(E)	15	116
2.2	92.3	4.0	192.1	0.6	24.6	1.2	56.9	0.1	4.9	1	117
(B)	(I)	(G)	(N)	(A)	(F)	-	-	(A)	(E)	2	118
8.3	520.6	13.6	707.7	0.9	48.6	9.1	595.9	4.0	218.0	1	119
0.8	159.3	0.7	(K)	(A)	7.5	1.8	266.9	0.4	48.5	19	120
0.1	7.7	0.2	14.2	-	(A)	0.1	5.9	-	0.1	19	121
4.8	214.5	6.0	284.4	0.1	6.1	7.3	328.6	2.1	85.5	6	122
(C)	(I)	(B)	(H)	(A)	(B)	(F)	(K)	(B)	(H)	4	123
0.4	18.6	0.6	26.9	0.1	2.6	-	-	0.1	3.0	19	124
1.8	92.2	5.2	230.9	0.8	35.6	(A)	0.1	0.7	38.2	8	125
(B)	(G)	(E)	(I)	(A)	(B)	-	-	(B)	(F)	7	126
0.8	29.1	1.9	70.1	0.7	28.1	(A)	0.1	0.1	1.4	19	127
(B)	(H)	(C)	(J)	(A)	(B)	-	-	(A)	(E)	10	128
0.9	54.6	0.7	48.8	-	-	(A)	0.3	0.8	45.8	19	129
0.2	8.0	0.5	23.9	-	-	(A)	0.3	(A)	0.8	1	130
15.1	713.8	49.1	3,544.0	3.2	193.2	1.8	64.7	12.4	566.2	1	131
0.3	12.2	0.1	10.6	-	-	-	-	0.3	12.6	18	132
0.2	36.1	3.3	343.7	2.4	153.6	(A)	1.6	0.5	30.4	2	133
(A)	(E)	(B)	(J)	-	-	-	-	-	(B)	1	134
-	(B)	(A)	(I)	-	-	-	-	-	(B)	1	135
0.1	11.6	(F)	143.6	(F)	153.6	-	-	(B)	13.4	2	136
0.1	3.8	0.9	57.1	-	-	(A)	1.1	0.1	2.9	1	137
3.3	116.1	3.1	196.6	0.1	2.8	(A)	0.1	2.1	61.1	9	138
2.0	95.2	3.1	134.5	0.1	2.8	(A)	0.1	0.8	37.4	13	139
11.3	549.4	42.6	2,993.1	0.7	36.8	1.8	63.0	9.5	462.1	3	140
-	-	(A)	23.2	-	-	-	-	-	-	1	141
0.4	21.8	1.1	27.9	-	(A)	-	(A)	0.6	25.1	16	142
(B)	(H)	(A)	(H)	-	(A)	-	(A)	(B)	(J)	1	143
(A)	2.9	0.1	194.3	-	-	-	-	(A)	4.0	1	144
8.0	311.2	36.5	2,419.3	0.7	36.3	(A)	1.2	5.4	141.3	3	145
(A)	27.6	(A)	31.7	-	-	-	-	(A)	36.0	1	146
0.7	58.8	0.2	58.3	(A)	0.1	0.1	3.7	0.7	39.0	7	147
-	(B)	-	(I)	-	-	-	-	(E)	(B)	1	148
17.7	931.9	22.5	1,542.8	5.2	349.6	0.6	22.7	10.2	458.6	1	149
0.3	2.3	(A)	25.6	-	-	-	-	0.4	2.4	3	150
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	152
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	152
2.3	151.1	6.0	441.3	(F)	(K)	(B)	(G)	1.5	113.2	8	153
(E)	(K)	(F)	(L)	(F)	(K)	(B)	(G)	(E)	(J)	6	154
3.1	131.9	0.9	74.1	-	-	0.3	6.8	2.0	51.5	19	155
7.1	326.1	10.3	626.9	0.9	50.2	0.2	9.2	4.9	194.4	4	156
6.0	288.7	6.6	421.6	0.8	47.9	0.2	7.9	3.9	155.0	5	157
(B)	(G)	(F)	(K)	(B)	(F)	(A)	(E)	(B)	(H)	3	158
4.3	265.1	5.2	364.8	1.5	80.4	(A)	1.2	0.8	43.4	4	159
2.7	176.3	3.1	253.9	0.1	4.9	-	-	0.5	28.5	4	160
(C)	(I)	(A)	(B)	-	-	-	-	(C)	(I)	2	161
(C)	(I)	(A)	(B)	-	-	-	-	(C)	(I)	2	162

Table 5. Total Employment, Value Added, Value of Shipments, and

(Employment figures in thousands;

Line no.	Division, State, and standard metropolitan statistical area ¹	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
163	Pacific.....	1,109.3	43,568.4	90,607.2	321.5	16,577.2	233.6	12,843.8
164	Washington.....	111.1	4,603.5	13,469.5	29.2	1,911.5	24.6	1,606.3
165	Richland-Kennewick.....	5.1	165.3	348.9	(E)	(K)	(C)	(K)
166	Seattle-Everett.....	91.9	3,462.0	9,939.9	(I)	(N)	(H)	(N)
167	Spokane.....	6.0	254.2	592.0	0.4	23.9	0.1	3.5
168	Tacoma.....	3.4	104.1	300.5	0.8	77.2	0.8	77.1
169	Oregon.....	56.7	1,994.0	3,372.7	4.9	275.7	2.6	133.9
170	Portland, Ore.-Wash.....	44.3	1,619.9	2,932.5	3.4	169.0	2.2	112.7
171	California.....	938.7	36,685.4	72,584.5	286.9	14,186.4	206.1	10,907.9
172	Anaheim-Santa Ana-Garden Grove.....	161.9	4,295.6	7,476.5	36.0	1,828.1	23.6	1,228.0
173	Los Angeles-Long Beach.....	399.9	16,529.3	38,581.7	90.6	7,805.0	68.6	5,836.3
174	Oxnard-Simi Valley-Ventura.....	7.8	286.3	492.5	2.8	161.5	1.9	113.6
175	Riverside-San Bernardino-Ontario.....	15.3	525.7	959.8	3.7	164.1	1.5	57.5
176	Sacramento.....	3.8	147.1	276.6	2.1	120.3	1.5	83.7
177	San Diego.....	59.7	1,738.0	3,126.3	21.8	1,084.4	16.2	854.0
178	San Francisco-Oakland.....	48.5	4,138.4	7,712.5	8.1	526.6	4.9	339.5
179	San Jose.....	202.9	7,594.6	14,137.2	37.4	2,640.8	27.9	2,134.5
180	Santa Barbara-Santa Maria-Lompoc.....	9.7	173.2	498.2	5.2	266.4	2.3	159.2
181	Santa Rosa.....	3.4	126.1	203.0	0.6	38.2	0.2	17.4
182	Alaska.....	1.7	38.7	200.0	(B)	(H)	(A)	(H)
183	Hawaii.....	1.1	246.8	980.5	(B)	(K)	(B)	(K)
184	Honolulu.....	1.1	246.8	980.5	(B)	(K)	(B)	(K)

Note: In some instances, data are withheld to avoid disclosing the operations of individual companies. The data withheld are expressed in terms of symbols and ranges shown below. In all instances, where the data are less than 0.1, the symbol (A) is used.

Symbol	Range	Symbol	Range	Symbol	Range
(A).....	Less than 0.1	(G).....	5.0 to 9.9	(K).....	100.0 to 249.9
(B).....	0.1 to 0.4	(H).....	10.0 to 24.9	(L).....	250.0 to 499.9
(C).....	0.5 to 0.9	(I).....	25.0 to 49.9	(M).....	500.0 to 999.9
(E).....	1.0 to 1.9	(J).....	50.0 to 99.9	(N).....	1,000.0 and over
(F).....	2.0 to 4.9				

See text for a description of the methodology.

- Represents zero. N.e.c. Not elsewhere classified. (S) Data suppressed because they did not meet publication standards. This includes cells where the total value of Government shipments is less than \$20.0 million or the standard error is 20 or greater. (X) Not applicable.

¹Standard metropolitan statistical areas in more than one State are listed only one time under their principal State. This total includes the activities in all States for that SMSA. See appendix A for a definition of the SMSA's.

²The standard error estimates are those for the unadjusted (reciprocal) Government shipments that were reported on the MA-175. No adjustment has been made to the standard errors for the ratio estimation to ASM levels (See appendix C.)

Government Shipments, by Geographic Area and Agency: 1979—Continued

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ²	Line no.
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
87.9	3,733.4	235.3	12,436.5	27.0	1,171.7	6.4	535.2	52.8	2,433.8	1	163
4.6	305.2	24.5	1,599.6	(C)	(I)	(C)	(K)	3.2	166.5	2	164
(B)	(G)	(A)	(E)	-	-	(C)	(K)	(B)	(H)	4	165
(F)	(K)	(I)	(N)	(C)	(I)	(B)	(F)	(F)	(C)	2	166
0.3	20.4	0.1	19.4	-	-	-	-	0.3	4.5	1	167
-	0.1	0.3	37.1	-	-	-	-	0.5	40.1	1	168
2.3	141.8	2.6	137.9	0.1	3.6	0.6	49.0	1.6	85.2	13	169
1.2	56.3	2.0	90.8	0.1	3.5	0.1	6.7	1.2	68.0	19	170
80.8	3,278.5	207.9	10,508.3	26.3	1,129.4	4.9	379.5	47.8	2,169.2	15	171
12.4	600.1	26.6	1,412.7	1.8	107.8	0.3	20.7	7.3	286.9	8	172
22.0	1,968.7	49.8	4,979.4	16.5	1,344.7	3.0	250.7	21.3	1,230.2	19	173
0.9	47.9	2.2	127.2	0.4	25.6	(A)	0.7	0.2	8.0	13	174
2.2	106.6	2.5	124.2	0.2	7.7	-	-	1.0	32.2	18	175
0.6	36.6	1.7	103.7	0.3	12.2	0.1	2.7	(A)	1.7	1	176
5.6	230.4	15.2	805.6	1.3	75.3	1.5	78.7	3.8	124.8	4	177
3.2	187.1	4.8	337.5	0.1	6.3	0.1	5.9	3.1	176.9	12	178
9.5	506.3	30.2	2,247.2	1.1	90.6	0.3	20.2	5.8	282.8	2	179
2.7	107.2	3.5	208.5	0.4	24.2	-	-	1.3	33.7	16	180
0.4	20.8	0.5	34.0	(A)	0.4	(A)	0.3	0.1	3.5	1	181
(B)	(G)	(A)	(H)	-	-	-	-	(B)	(H)	1	182
(A)	(C)	(B)	(K)	-	-	-	-	(A)	(E)	6	183
(A)	(C)	(B)	(K)	-	-	-	-	(A)	(E)	6	184

Table 6. Total Employment, Value Added, Value of Shipments, and Government

(Employment figures in thousands;

Line no.	Division, State, and standard metropolitan statistical area ¹	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
1	United States.....	5,591.1	197,023.4	431,212.4	958.7	51,719.5	677.7	38,331.4
2	New England.....	581.6	18,355.8	30,897.8	117.4	5,561.5	69.5	3,358.0
3	Maine.....	14.4	362.1	649.3	4.1	177.3	3.6	161.7
4	New Hampshire.....	34.4	1,356.5	2,002.3	5.1	216.4	2.5	132.6
5	Manchester.....	4.4	84.3	134.8	0.9	31.1	0.1	6.8
6	Nashua.....	5.7	178.2	259.2	(F)	(J)	(F)	(J)
7	Vermont.....	18.2	604.7	1,039.2	4.2	218.7	1.9	126.8
8	Massachusetts.....	271.1	8,787.6	14,446.9	42.8	2,201.8	26.1	1,486.3
9	Boston.....	121.0	4,064.3	6,207.4	26.6	1,312.6	15.2	854.1
10	Fall River, Mass.-R.I.....	3.1	98.3	143.0	(E)	(J)	(E)	(J)
11	Fitchburg-Leominster.....	5.1	677.0	688.5	0.5	38.5	0.4	(I)
12	Lawrence-Haverhill, Mass.-N.H.....	21.8	1,154.7	1,610.6	4.1	270.5	3.2	(K)
13	Lowell, Mass.-N.H.....	9.9	307.6	499.2	3.2	189.4	2.2	148.0
14	New Bedford.....	4.7	137.2	268.9	0.8	42.0	0.8	41.5
15	Pittsfield.....	(G)	(K)	(L)	3.9	160.1	3.3	136.2
16	Springfield, Chicopee-Holyoke, Mass.-Conn.....	20.5	525.4	931.9	(E)	(I)	(C)	(I)
17	Worcester.....	27.3	660.7	1,326.6	1.0	81.7	0.1	(E)
18	Rhode Island.....	29.4	713.3	1,440.4	2.4	98.0	2.0	81.9
19	Providence-Pawtucket-Warwick, R.I.-Mass.....	36.6	934.9	2,023.1	0.8	38.1	0.4	23.3
20	Connecticut.....	214.1	6,531.6	11,319.7	58.8	2,649.3	33.4	1,368.7
21	Bridgeport.....	36.8	1,184.3	2,012.2	6.3	318.5	5.7	287.5
22	Danbury.....	8.7	375.2	573.5	1.2	80.4	1.0	72.9
23	Hartford.....	60.3	1,896.5	3,183.4	17.0	933.8	2.0	164.3
24	New Britain.....	14.7	462.4	774.5	1.9	98.2	0.7	30.6
25	New Haven-West Haven.....	14.1	465.5	795.8	2.2	130.7	0.4	15.5
26	New London-Groton-Norwich, Conn.-R.I.....	30.8	747.0	1,038.8	(H)	(M)	(H)	(M)
27	Norwalk.....	7.4	332.8	443.1	1.6	79.5	1.3	64.0
28	Stamford.....	8.3	240.7	369.7	0.7	30.2	0.6	24.9
29	Waterbury.....	13.6	438.8	921.6	0.6	40.8	0.1	2.5
30	Middle Atlantic.....	910.7	34,804.3	67,590.7	132.0	6,692.5	80.4	4,620.4
31	New York.....	403.7	16,778.4	27,508.5	73.7	3,756.4	49.1	2,813.0
32	Albany-Schenectady-Troy.....	(G)	(L)	(M)	(E)	(J)	(C)	(I)
33	Binghamton, N.Y.-Pa.....	30.7	1,039.2	194.9	9.1	415.1	5.7	272.9
34	Buffalo.....	26.9	1,079.3	2,205.8	2.0	93.8	0.4	28.8
35	Nassau-Suffolk.....	75.2	2,665.5	3,840.6	39.6	2,218.1	31.6	1,889.0
36	New York, N.Y.-N.J.....	87.8	2,742.3	4,584.3	10.3	491.6	5.8	304.5
37	Rochester.....	88.8	6,897.6	8,270.7	(F)	(L)	(F)	(K)
38	Syracuse.....	21.0	600.0	1,370.5	(F)	(K)	(E)	(J)
39	Utica-Rome.....	14.1	542.6	893.6	3.3	(K)	(E)	(J)
40	New Jersey.....	198.3	6,609.6	16,679.2	28.0	1,285.9	14.6	793.5
41	Jersey City.....	19.9	818.3	2,383.9	0.8	53.9	0.3	22.5
42	Long Branch-Asbury Park.....	6.6	202.8	296.8	1.4	57.8	0.7	32.5
43	Newark.....	68.3	2,003.6	5,485.6	8.5	323.6	3.5	170.9
44	Paterson-Clifton-Passaic.....	17.1	407.6	609.4	4.5	154.8	2.6	94.1
45	Trenton.....	8.3	294.2	461.3	2.1	99.9	1.0	94.1
46	Pennsylvania.....	308.7	11,416.3	23,403.0	30.3	1,650.2	16.7	1,013.9
47	Allentown-Bethlehem-Easton, Pa.-N.J.....	33.8	1,721.3	2,595.6	0.7	53.6	0.3	27.9
48	Erie.....	15.1	517.3	851.6	3.2	172.6	0.4	17.8
49	Harrisburg.....	9.4	295.3	569.8	0.6	26.5	0.1	8.3
50	Lancaster.....	14.1	459.4	856.2	1.5	52.3	0.7	24.7
51	Northeast Pennsylvania.....	11.6	375.4	641.1	2.4	126.2	1.8	103.9
52	Philadelphia, Pa.-N.J.....	119.5	4,632.9	11,400.5	18.5	972.2	13.9	774.7
53	Pittsburgh.....	46.4	1,988.8	3,121.3	2.0	121.6	0.4	40.5
54	York.....	15.6	591.1	1,143.7	3.9	240.7	2.9	187.6
55	East North Central.....	1,384.7	49,304.2	106,457.7	88.4	5,892.9	46.8	3,806.3
56	Ohio.....	350.3	11,950.1	25,737.6	30.2	2,314.6	16.2	1,603.7
57	Akron.....	26.3	723.8	1,481.3	4.0	207.8	2.0	90.9
58	Canton.....	18.4	728.8	1,768.9	0.9	58.5	0.4	29.0
59	Cincinnati, Ohio-Ky.-Ind.....	57.5	1,895.4	3,008.1	4.9	412.8	4.1	360.8
60	Cleveland.....	79.2	2,925.5	5,129.3	6.6	353.9	2.1	139.5
61	Hamilton-Middletown.....	3.7	135.4	255.2	0.5	20.9	0.2	7.8
62	Lima.....	13.9	532.3	1,882.3	1.1	66.4	0.4	31.2
63	Toledo, Ohio-Mich.....	15.1	882.0	3,051.0	0.8	57.6	0.6	40.3
64	Youngstown-Warren.....	10.1	376.1	897.7	0.8	57.3	-	(A)
65	Indiana.....	207.7	7,317.4	16,213.4	19.7	1,069.8	11.8	680.6
66	Anderson.....	16.7	775.7	1,192.0	(C)	(I)	(A)	(B)
67	Fort Wayne.....	22.7	758.5	1,460.6	4.7	173.3	(F)	(K)
68	Gary-Hammond-East Chicago.....	14.5	781.2	2,843.2	2.2	135.8	(A)	(H)
69	Indianapolis.....	50.6	1,663.0	3,177.7	(G)	(L)	(F)	(L)
70	South Bend.....	9.5	314.9	520.7	1.9	95.3	0.5	30.6
71	Illinois.....	456.0	17,008.9	38,367.0	13.5	814.0	5.3	378.6
72	Chicago.....	324.4	12,129.2	24,059.6	9.5	573.3	3.9	270.5
73	Davenport-Rock Island-Moline, Iowa-Ill.....	15.4	542.4	1,466.5	0.6	50.4	0.3	15.6
74	Peoria.....	(I)	(N)	(N)	(B)	(H)	(B)	(H)
75	Rockford.....	31.1	946.2	1,510.0	2.2	104.0	0.3	21.9

See footnotes at end of table.

Shipments, by Geographic Area and Agency: 1978 Revised

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ²	Line no.
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
281.0	13,388.1	718.3	39,382.8	38.2	2,441.0	58.8	2,492.4	143.4	7,403.3	1	1
47.9	2,203.5	98.4	4,693.7	1.8	88.5	2.1	118.3	15.1	661.0	1	2
0.5	15.6	4.0	171.9	-	-	-	-	0.1	5.4	1	3
2.6	83.8	3.5	147.5	(B)	(F)	(B)	8.7	1.4	(J)	6	4
0.8	24.3	0.8	26.1	(A)	1.1	-	-	0.1	3.9	1	5
(B)	(G)	(F)	(J)	(A)	(B)	-	-	(B)	(F)	1	6
2.3	91.9	3.8	209.6	0.1	(E)	-	(A)	0.3	(G)	2	7
16.7	715.5	33.8	1,793.3	0.5	21.5	0.5	23.2	8.0	363.8	2	8
11.4	458.5	20.0	1,031.1	0.5	20.3	0.4	19.2	5.7	242.0	3	9
(B)	(F)	(E)	(J)	-	-	-	-	(A)	(E)	1	10
0.1	(F)	0.4	(H)	-	-	-	-	0.1	(H)	1	11
0.9	(I)	3.9	(K)	(A)	(F)	(A)	(G)	0.2	(H)	3	12
1.0	41.4	2.6	175.0	-	-	-	-	0.6	14.4	5	13
(A)	0.5	0.8	42.0	-	-	-	-	(A)	0.5	1	14
0.6	23.9	3.7	155.7	-	(A)	0.1	2.2	0.1	2.2	1	15
(C)	(H)	(C)	(I)	-	-	-	-	(B)	(G)	18	16
0.9	(J)	(C)	(J)	(A)	(C)	(A)	(B)	(B)	(H)	1	17
0.4	16.1	2.1	89.5	(A)	0.1	-	-	0.3	8.4	7	18
0.4	14.8	0.5	28.4	(A)	0.1	0.1	1.6	0.2	8.0	17	19
25.4	1,280.6	51.2	2,281.9	1.1	61.6	1.5	86.4	5.0	219.4	2	20
0.6	31.0	5.9	304.5	0.1	3.9	0.1	0.5	0.2	9.6	6	21
0.2	7.5	0.8	59.4	0.1	7.2	-	-	0.3	13.8	2	22
15.0	769.5	13.5	790.3	0.8	40.7	(A)	1.6	2.7	101.2	4	23
1.2	67.6	(E)	(J)	(A)	(E)	-	-	(B)	13.4	6	24
1.8	115.2	2.1	122.2	(A)	2.4	-	-	0.1	6.1	3	25
(F)	(J)	(H)	(M)	(A)	(B)	1.4	(J)	(B)	(H)	2	26
0.3	15.5	1.3	65.5	0.1	(F)	(A)	(B)	0.2	11.2	4	27
0.1	5.3	(C)	(H)	(A)	(C)	-	-	(B)	(G)	3	28
0.5	38.3	0.2	19.5	-	(A)	(A)	0.1	0.4	21.2	18	29
51.6	2,072.1	104.1	5,384.4	2.9	146.5	3.5	233.2	21.5	928.4	1	30
24.6	943.4	63.0	3,318.6	0.9	44.1	0.5	34.0	9.3	359.7	2	31
(B)	(H)	(C)	(I)	-	(B)	(B)	(G)	(B)	(G)	6	32
3.4	142.2	8.4	379.9	0.5	23.5	(A)	1.1	0.2	10.6	2	33
1.6	65.0	1.3	58.1	0.1	3.2	-	-	0.6	32.5	10	34
8.0	329.1	35.8	2,080.9	0.3	13.6	-	(A)	3.5	123.6	3	35
4.5	187.1	7.2	353.1	0.3	17.9	0.5	36.0	2.3	84.6	7	36
(E)	(J)	(F)	(K)	(A)	(B)	(A)	(B)	(E)	(J)	4	37
(F)	(J)	(F)	(K)	-	(A)	(A)	(C)	(B)	(G)	12	38
(E)	(J)	(F)	(K)	(A)	(B)	(A)	(B)	(B)	(H)	1	39
13.4	492.4	20.3	937.8	1.1	59.6	0.4	18.6	6.2	269.9	4	40
0.5	31.4	0.5	29.1	-	(A)	-	-	0.3	24.8	1	41
(C)	25.3	(E)	(I)	(A)	(E)	(A)	0.1	(B)	13.8	8	42
5.0	152.7	5.9	238.6	0.2	6.0	0.2	2.4	2.2	76.6	9	43
1.9	60.7	(F)	(K)	(B)	(G)	-	-	(B)	6.0	4	44
1.1	5.8	0.7	42.4	0.4	25.8	(A)	(A)	1.0	31.7	9	45
13.6	636.3	20.8	1,128.0	0.9	42.8	2.6	180.6	6.0	298.8	4	46
0.4	25.7	0.5	27.7	-	(A)	-	-	0.2	25.9	15	47
2.8	154.8	1.4	52.4	0.1	1.8	1.3	103.1	0.4	15.3	10	48
0.5	18.2	0.3	16.7	(A)	(B)	(A)	(B)	0.3	9.6	5	49
0.8	27.6	(E)	(I)	(A)	(C)	(B)	(E)	0.3	13.1	6	50
0.6	22.3	2.3	121.2	(A)	(A)	0.1	2.8	(A)	2.2	19	51
4.6	197.5	13.6	747.9	0.9	45.0	0.4	16.9	3.5	162.4	3	52
1.6	81.1	1.1	72.1	-	-	0.5	27.0	0.4	22.5	18	53
1.0	53.1	3.3	205.5	-	(A)	0.1	5.9	0.5	29.3	2	54
41.6	2,086.6	59.5	3,842.5	0.6	38.5	4.6	716.4	23.7	1,295.5	1	55
14.0	710.9	19.4	1,253.1	0.3	22.8	4.2	688.1	6.3	350.6	3	56
2.0	116.9	3.3	180.4	(A)	0.5	0.1	6.9	0.5	20.0	2	57
0.5	29.5	0.6	43.3	-	0.1	-	-	0.3	15.1	5	58
0.8	52.0	(F)	(L)	(B)	(H)	(C)	(J)	(B)	(H)	1	59
4.5	214.4	5.2	277.9	(A)	1.1	0.1	7.9	1.3	67.0	5	60
0.3	13.1	0.3	(H)	(A)	(B)	-	-	0.2	10.2	5	61
0.7	35.2	1.0	60.7	-	-	-	-	0.1	5.7	6	62
0.2	17.3	0.7	50.8	(A)	0.4	(A)	1.7	0.1	4.7	1	63
0.8	57.3	0.2	15.8	-	-	-	-	0.6	41.5	1	64
7.9	389.2	14.7	811.8	0.1	4.6	0.1	7.4	4.8	246.0	2	65
(C)	(I)	(B)	(H)	-	-	-	-	(B)	(G)	19	66
(C)	(I)	(F)	(K)	(B)	(F)	-	-	(C)	(H)	12	67
(F)	(K)	(B)	(H)	-	-	-	-	(F)	(K)	1	68
(E)	(J)	(G)	(L)	(A)	(C)	(B)	(G)	(C)	(I)	2	69
1.4	64.7	1.9	94.4	-	-	-	-	(A)	0.9	1	70
8.2	435.4	6.6	387.3	0.2	10.4	0.2	13.4	6.5	402.9	9	71
5.6	302.8	3.9	238.2	0.1	3.2	0.1	6.2	5.4	325.7	13	72
0.3	34.8	0.6	47.3	(A)	0.1	-	-	(A)	3.0	1	73
(A)	(G)	(B)	(H)	-	(A)	-	-	(B)	(G)	1	74
1.9	82.1	1.5	73.3	0.2	7.4	0.1	7.3	0.4	16.0	1	75

Table 6. Total Employment, Value Added, Value of Shipments, and Government

(Employment figures in thousands;

Line no.	Division, State, and standard metropolitan statistical area ¹	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
	East North Central--Continued							
76	Michigan.....	182.7	6,454.9	13,405.7	17.3	1,283.9	9.9	908.7
77	Detroit.....	78.0	3,189.2	6,723.4	9.3	807.6	5.7	601.7
78	Grand Rapids.....	15.3	479.9	850.5	3.0	112.4	2.1	74.3
79	Jackson.....	5.5	188.1	349.0	0.6	45.2	0.4	34.8
80	Kalamazoo-Portage.....	11.4	305.8	524.7	0.5	(I)	(B)	(H)
81	Muskegon-Muskegon Heights.....	10.5	380.9	643.0	1.9	183.9	1.2	150.5
82	Wisconsin.....	188.0	6,572.9	12,734.0	7.7	410.6	3.6	234.7
83	Appleton-Oshkosh.....	5.8	212.9	477.4	0.4	41.1	0.3	(I)
84	Milwaukee.....	98.7	3,320.8	5,448.7	4.9	233.4	1.8	102.8
85	West North Central.....	389.6	12,979.2	28,525.5	67.8	4,386.9	53.3	3,736.5
86	Minnesota.....	97.0	3,417.4	7,474.7	14.2	598.0	8.4	386.4
87	Minneapolis-St. Paul, Minn.-Wisc.....	76.4	2,966.3	6,031.5	14.0	577.2	8.3	371.2
88	Iowa.....	77.0	2,771.9	5,685.4	6.8	301.4	4.2	182.1
89	Cedar Rapids.....	16.0	573.1	907.9	3.0	136.4	(E)	87.5
90	Waterloo-Cedar Falls.....	2.9	69.7	98.7	0.8	35.6	(C)	(I)
91	Missouri.....	119.5	3,633.7	7,814.3	38.0	3,046.7	33.7	2,804.3
92	Kansas City, Mo.-Kansas.....	39.3	934.3	2,327.1	7.6	335.2	7.0	312.1
93	St. Louis, Mo.-Ill.....	79.2	3,085.2	8,705.8	30.1	2,734.7	26.8	2,508.9
94	North Dakota.....	3.0	212.3	699.4	(S)	(S)	(S)	(S)
95	South Dakota.....	3.6	81.5	140.0	(S)	(S)	(S)	(S)
96	Nebraska.....	23.2	743.9	1,396.5	1.0	30.4	0.3	7.9
97	Kansas.....	66.3	2,118.5	5,315.2	7.7	382.7	6.7	339.4
98	Wichita.....	40.1	1,397.3	3,032.2	(G)	(L)	(G)	(L)
99	South Atlantic.....	475.5	15,624.8	31,399.6	112.2	5,636.9	89.2	4,695.1
100	Delaware.....	10.0	584.9	1,759.5	0.5	62.9	0.3	51.8
101	Wilmington, Del.-N.J.-Md.....	8.4	555.2	1,468.3	0.5	63.5	0.2	50.8
102	Maryland.....	65.1	2,162.8	3,645.1	24.8	1,034.0	17.8	772.0
103	Baltimore.....	45.6	1,597.6	2,654.3	18.9	772.0	13.6	566.0
104	District of Columbia.....	1.3	39.2	51.9	(S)	(S)	(S)	(S)
105	Washington, D.C.-Md.-Va.....	20.0	688.2	873.4	10.3	496.4	8.3	415.8
106	Virginia.....	88.2	2,485.7	4,580.0	34.0	1,179.6	31.9	1,084.7
107	Lynchburg.....	8.0	357.2	643.5	(B)	(H)	(B)	(H)
108	Newport News-Hampton.....	25.5	500.1	769.5	(H)	(M)	(H)	(M)
109	Norfolk-Virginia Beach-Portsmouth.....	6.9	140.8	254.7	1.7	52.7	1.4	46.0
110	West Virginia.....	17.8	755.0	1,921.7	1.2	69.5	0.6	27.6
111	Huntington-Ashland, W.Va.-Ky.-Ohio.....	(F)	(K)	(N)	(B)	(I)	(B)	(H)
112	Steubenville-Weirton, W.Va.-Ohio.....	1.1	61.3	311.0	0.3	(I)	-	-
113	North Carolina.....	73.4	2,838.2	5,512.9	(S)	(S)	(S)	(S)
114	Burlington.....	(C)	(H)	(I)	(C)	(H)	(C)	(H)
115	South Carolina.....	55.5	1,606.9	2,852.5	7.4	378.6	7.0	359.7
116	Georgia.....	49.0	1,613.1	3,579.4	7.3	385.3	6.4	354.3
117	Atlanta.....	22.6	774.8	1,490.7	(G)	(L)	(G)	(L)
118	Augusta, Ga.-S.C.....	(G)	(L)	(L)	(G)	(L)	(G)	(L)
119	Florida.....	115.2	3,539.0	7,496.6	33.6	2,367.5	23.4	1,952.9
120	Daytona Beach.....	1.7	53.9	77.3	1.3	51.0	0.2	8.2
121	Fort Lauderdale-Hollywood.....	111.0	455.3	628.9	1.8	85.8	0.6	40.3
122	Jacksonville.....	5.9	137.8	247.5	1.0	39.6	0.8	34.7
123	Orlando.....	15.2	415.9	566.7	(G)	(L)	(G)	(L)
124	Tampa-St. Petersburg.....	21.5	707.9	1,329.0	6.9	251.1	4.3	171.3
125	West Palm Beach-Boca Raton.....	12.7	417.7	1,553.2	(G)	(N)	(G)	(N)
126	East South Central.....	258.9	8,604.2	20,890.0	46.2	2,008.7	38.3	1,650.2
127	Kentucky.....	54.4	2,018.6	4,950.5	2.5	289.6	2.3	270.5
128	Louisville, Ky.-Ind.....	18.7	457.6	1,248.6	(E)	(J)	(E)	(J)
129	Tennessee.....	85.0	2,479.1	5,653.4	14.8	667.1	9.5	437.6
130	Knoxville.....	12.9	362.7	919.5	(F)	(K)	(F)	(K)
131	Nashville-Davidson.....	10.0	276.8	538.0	0.8	42.2	(A)	2.4
132	Alabama.....	63.8	2,034.0	5,483.5	6.9	292.0	4.9	202.7
133	Birmingham.....	19.9	615.9	1,086.9	(E)	(J)	(E)	(I)
134	Gadsden.....	1.3	28.3	52.0	(B)	(H)	(B)	(H)
135	Huntsville.....	13.0	436.7	1,245.7	2.7	92.6	1.6	57.4
136	Mississippi.....	55.7	2,072.5	4,802.6	22.0	760.0	21.6	739.4
137	Jackson.....	3.3	98.6	214.0	0.6	24.9	0.4	15.1
138	West South Central.....	420.2	19,046.3	58,773.6	60.8	3,592.4	47.0	2,989.4
139	Arkansas.....	40.1	1,147.2	2,676.6	0.7	21.2	0.3	11.8
140	Louisiana.....	53.4	3,855.9	14,901.5	2.4	253.6	2.0	226.6
141	Baton Rouge.....	5.6	928.8	3,862.7	(B)	(J)	(B)	(I)
142	Lake Charles.....	5.0	567.9	3,062.1	(B)	(H)	(B)	(H)
143	New Orleans.....	12.1	477.3	1,934.5	2.0	96.2	1.8	89.4

See footnotes at end of table.

Shipments, by Geographic Area and Agency: 1978 Revised—Continued

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ²	Line no.
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
7.4	375.2	13.4	1,091.3	(A)	0.6	-	(A)	3.9	192.0	4	76
3.6	205.9	(G)	698.6	(A)	0.4	-	(A)	(F)	108.6	4	77
0.9	38.1	2.9	(K)	-	(A)	-	-	0.1	(E)	18	78
0.2	10.4	0.4	34.7	-	-	-	-	0.2	10.5	1	79
(B)	(H)	(B)	(I)	-	-	-	-	(B)	(F)	3	80
0.7	33.4	(E)	(K)	(A)	(B)	-	(A)	(C)	(I)	9	81
4.1	175.9	5.4	299.0	(A)	(B)	(B)	(G)	2.2	104.0	2	82
0.1	(F)	0.4	(I)	-	-	-	-	(A)	(C)	1	83
3.1	130.6	3.2	150.1	(A)	0.1	(A)	0.2	1.7	83.0	2	84
14.5	650.4	56.4	3,832.3	1.2	77.4	4.8	204.1	5.4	273.1	1	85
5.8	211.6	11.1	432.0	(C)	(I)	(B)	(G)	2.4	127.6	2	86
5.7	206.0	11.1	420.6	0.6	(I)	0.1	(G)	2.2	118.2	2	87
2.6	119.3	5.9	264.7	(A)	1.3	(A)	0.1	0.9	35.4	3	88
(E)	48.9	(F)	(K)	(A)	(C)	-	-	(B)	(H)	1	89
(B)	(F)	(C)	(H)	-	-	-	-	(B)	(H)	9	90
4.3	242.4	32.0	2,756.9	(B)	(I)	(F)	(K)	0.9	56.8	1	91
0.6	23.1	2.3	103.9	-	-	4.7	190.8	0.6	40.5	1	92
3.3	225.8	29.2	2,650.0	(B)	(I)	(A)	(E)	0.5	45.4	1	93
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	94
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	95
0.7	22.5	(B)	(H)	(A)	(B)	(A)	(A)	(C)	(H)	6	96
1.0	43.3	(G)	(L)	(B)	(G)	-	-	(C)	(I)	5	97
(C)	(I)	(G)	(L)	(B)	(G)	-	-	(B)	(H)	6	98
23.0	941.8	83.7	4,300.2	3.2	256.4	7.2	340.8	18.1	739.5	1	99
0.2	11.1	0.2	45.1	0.1	3.8	(A)	0.1	0.2	13.9	6	100
0.3	12.7	0.3	48.1	(A)	(E)	(A)	(B)	0.2	13.3	6	101
7.0	262.0	18.4	800.0	0.4	20.2	0.3	16.2	5.7	197.6	2	102
5.3	206.0	13.7	574.7	0.2	8.9	0.3	15.2	4.7	173.2	2	103
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	104
2.0	80.6	8.9	444.1	0.2	(G)	(A)	(F)	1.2	37.8	4	105
2.1	94.9	27.6	965.6	(A)	(C)	0.1	(F)	6.3	209.3	3	106
(B)	(G)	(B)	(G)	(A)	-	(A)	(B)	(B)	(H)	1	107
(B)	(G)	(H)	(M)	-	-	-	-	(F)	(K)	1	108
0.3	6.7	(E)	(I)	-	-	-	-	(B)	(G)	11	109
0.6	41.9	0.5	20.4	(A)	0.3	-	(A)	0.7	48.8	14	110
(B)	(I)	(A)	(H)	-	-	-	-	(B)	(I)	1	111
0.3	(I)	-	-	-	-	-	-	0.3	(I)	1	112
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	113
-	-	(C)	(H)	-	-	-	-	-	-	1	114
0.4	18.9	(E)	(J)	-	-	(G)	(L)	(B)	(I)	15	115
0.9	31.0	6.4	355.0	0.1	2.7	(A)	2.6	0.8	25.0	2	116
(B)	(H)	(G)	(L)	(B)	(F)	-	-	(B)	(H)	1	117
(A)	(F)	(A)	(E)	-	-	(G)	(L)	(A)	(F)	2	118
10.2	414.6	27.1	1,946.8	2.6	225.9	1.0	43.0	2.9	151.8	6	119
1.1	42.8	1.3	50.1	-	-	-	-	(A)	0.9	14	120
1.2	45.5	1.2	45.5	(A)	1.4	(A)	0.7	0.6	38.2	18	121
0.2	4.9	0.8	31.9	-	-	-	-	0.2	7.7	9	122
(E)	(J)	(G)	(L)	-	-	-	-	(B)	(H)	2	123
2.6	79.8	4.6	159.9	0.5	16.8	1.0	42.1	0.8	32.3	5	124
(B)	(J)	(G)	(N)	(A)	(F)	-	-	(B)	(H)	1	125
7.9	358.5	33.4	1,268.5	1.1	45.2	9.1	510.0	2.6	185.0	1	126
0.2	19.1	0.4	43.9	-	0.1	1.9	228.2	0.2	17.4	2	127
(B)	(G)	(E)	(J)	-	-	-	-	(B)	(F)	6	128
5.3	229.5	6.1	(L)	0.1	(G)	7.1	(L)	1.5	(K)	4	129
(C)	(I)	(B)	(H)	(A)	(B)	(F)	(K)	(B)	(G)	1	130
0.8	39.8	0.6	28.3	(A)	1.5	-	-	0.2	11.4	3	131
2.0	89.3	5.1	211.4	1.0	39.1	0.1	6.4	0.7	35.1	13	132
(B)	(G)	(E)	(I)	-	-	(A)	(G)	(A)	(E)	1	133
-	(G)	(B)	(H)	-	-	-	-	(A)	(G)	1	134
1.1	35.2	1.5	53.8	0.9	28.3	(A)	0.3	0.3	10.2	4	135
0.4	20.6	21.8	751.3	-	-	-	-	0.2	8.7	1	136
0.2	9.8	0.5	22.9	-	-	-	-	0.1	2.0	1	137
13.8	603.0	48.8	2,744.5	1.0	46.9	1.7	57.8	9.3	743.2	1	138
0.4	9.4	0.3	11.1	-	-	-	-	0.4	10.1	17	139
0.4	27.0	2.0	229.8	0.1	4.0	(A)	0.5	0.3	19.3	16	140
(A)	(F)	(B)	(J)	-	-	-	-	-	(B)	1	141
-	-	(B)	(H)	-	-	-	-	-	-	1	142
0.2	6.8	1.8	87.4	0.1	4.0	-	-	0.1	4.8	2	143

Table 6. Total Employment, Value Added, Value of Shipments, and Government

(Employment figures in thousands;

Line no.	Division, State, and standard metropolitan statistical area ¹	Number of employees	Value added by manufacture	Total value of shipments and receipts	Government shipments			
					Total		Prime contracts	
					Employees	Value of shipments	Employees	Value of shipments
	West South Central--Continued							
144	Oklahoma.....	56.9	2,187.7	623.0	(S)	(S)	(S)	(S)
145	Tulsa.....	25.4	894.0	2,208.6	2.4	116.0	0.9	53.4
146	Texas.....	269.8	11,855.5	40,572.5	51.0	3,025.5	41.6	2,583.2
147	Austin.....	6.9	208.9	443.6	2.5	61.3	2.4	57.7
148	Beaumont-Port Arthur-Orange.....	25.0	1,840.0	8,076.7	(B)	(J)	(B)	(J)
149	Corpus Christi.....	2.8	457.6	3,268.4	0.2	165.5	0.1	158.3
150	Dallas-Fort Worth.....	107.5	3,729.4	5,913.4	39.8	1,970.0	31.8	1,628.3
151	Galveston-Texas City.....	4.7	418.2	3,954.9	(A)	43.3	(A)	41.2
152	Houston.....	56.9	3,598.4	12,565.8	1.1	371.4	0.6	321.9
153	Texarkana, Texas-Ark.....	(F)	(I)	(J)	(E)	(I)	(E)	(I)
154	Mountain.....	174.1	6,179.9	13,790.6	30.5	1,886.5	16.7	1,262.0
155	Montana.....	1.7	86.2	1,119.4	(S)	(S)	(S)	(S)
156	Idaho.....	6.0	266.8	437.7	(A)	(B)	-	-
157	Wyoming.....	3.3	103.1	1,288.9	(S)	(S)	(S)	(S)
158	Colorado.....	54.7	1,975.3	4,316.1	7.7	569.2	5.6	478.0
159	Denver-Boulder.....	40.5	1,403.7	3,176.3	6.7	529.0	(G)	(L)
160	New Mexico.....	11.1	250.8	397.6	1.2	36.7	(A)	1.1
161	Albuquerque.....	9.7	202.8	307.4	1.2	36.7	(A)	1.1
162	Arizona.....	67.3	2,330.4	3,723.4	13.7	757.4	7.6	503.7
163	Phoenix.....	58.1	2,139.4	3,199.7	10.3	543.5	4.5	303.5
164	Tucson.....	(G)	(K)	(L)	(F)	(K)	(F)	(K)
165	Utah.....	28.1	1,118.9	2,409.6	7.2	437.1	3.3	229.0
166	Salt Lake City-Ogden.....	19.9	932.1	2,008.1	3.6	232.0	1.2	95.8
167	Nevada.....	1.9	48.4	97.9	(C)	(I)	(B)	(F)
168	Las Vegas.....	0.8	26.9	27.3	(B)	(I)	-	-
169	Pacific.....	995.8	32,124.7	72,886.9	303.4	16,061.2	236.5	12,213.5
170	Washington.....	99.2	3,580.3	9,857.8	27.8	1,791.0	23.2	1,511.2
171	Seattle-Everett.....	84.7	3,034.6	6,655.3	(I)	(N)	(H)	(N)
172	Tacoma.....	2.6	68.7	165.6	0.5	41.0	0.5	40.6
173	Oregon.....	40.0	1,181.1	2,141.0	4.0	212.2	1.6	125.7
174	Portland, Ore.-Wash.....	32.2	938.1	1,739.9	2.9	130.3	1.5	59.1
175	California.....	853.8	26,754.7	58,482.2	271.0	13,610.0	211.1	3,438.6
176	Anaheim-Santa Ana-Garden Grove.....	119.0	3,810.0	5,637.7	38.7	1,667.5	22.3	627.7
177	Los Angeles-Long Beach.....	336.2	13,328.9	24,982.5	128.2	7,459.0	88.7	1,795.1
178	Oxnard-Simi Valley-Ventura.....	8.5	286.2	428.9	3.2	165.8	1.5	76.9
179	Riverside-San Bernardino-Ontario.....	15.2	545.3	930.0	3.5	188.1	2.1	43.6
180	Sacramento.....	9.2	284.3	495.3	4.8	226.9	1.8	119.1
181	San Diego.....	55.5	2,196.5	3,295.9	19.2	966.0	13.6	234.3
182	San Francisco-Oakland.....	40.6	2,075.9	5,162.2	8.8	494.3	6.8	86.6
183	San Jose.....	241.2	4,559.0	8,004.5	62.6	2,282.4	53.5	386.0
184	Santa Barbara-Santa Maria-Lompoc.....	4.1	102.3	186.3	1.1	48.5	1.0	4.3
185	Santa Rosa.....	3.8	152.3	215.1	0.6	22.6	0.1	20.6
186	Vallejo-Fairfield-Napa.....	0.7	40.1	615.2	(A)	47.7	(A)	1.8
187	Alaska.....	1.2	408.3	1,447.1	(S)	(S)	(S)	(S)
188	Hawaii.....	1.6	200.3	958.5	(C)	(K)	(C)	(F)
189	Honolulu.....	1.6	200.3	958.5	(C)	(K)	(C)	(F)

Note: In some instances, data are withheld to avoid disclosing the operations of individual companies. The data withheld are expressed in terms of the symbols and ranges shown below. In all instances, where the data are less than 0.1, the symbol (A) is used.

Symbol	Range	Symbol	Range	Symbol	Range
(A).....	Less than 0.1	(G).....	5.0 to 9.9	(K).....	100.0 to 249.9
(B).....	0.1 to 0.4	(H).....	10.0 to 24.9	(L).....	250.0 to 499.9
(C).....	0.5 to 0.9	(I).....	25.0 to 49.9	(M).....	500.0 to 999.9
(E).....	1.0 to 1.9	(J).....	50.0 to 99.9	(N).....	1,000.0 and over
(F).....	2.0 to 4.9				

See text for a description of the methodology.

- Represents zero. N.e.c. Not elsewhere classified. (S) Data suppressed because they did not meet publication standards. This includes cells where the total value of Government shipments is less than \$20.0 million or the standard error is 20 or greater. (X) Not applicable.

¹Standard metropolitan statistical areas in more than one State are listed only one time under their principal State. This total includes the activities in all States for that SMSA. See appendix A for a description of the SMSA's.

²The standard error estimates are those for the unadjusted (reciprocal) Government shipments that were reported on the MA-175. No adjustment has been made to the standard errors for the ratio estimation to ASM levels. (See appendix C.)

Shipments, by Geographic Area and Agency: 1978 Revised—Continued

value figures in millions of dollars)

Government shipments--Continued										Standard error of estimate (percent) for total Government shipments ²	Line no.
Subcontracts		To DOD		To NASA		To DOE		To other agencies			
Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments	Employees	Value of shipments		
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	144
1.5	62.6	1.9	95.4	0.2	6.9	(A)	0.1	0.3	13.7	7	145
9.4	442.3	42.6	2,303.5	0.7	36.0	1.7	57.2	6.0	628.8	4	146
0.1	3.6	2.4	57.1	-	-	-	-	0.1	4.2	2	147
(A)	(G)	(A)	(F)	-	(A)	-	(A)	(B)	(J)	1	148
0.1	7.2	0.1	158.5	-	-	-	-	0.1	7.0	19	149
8.0	341.7	34.7	1,734.4	0.7	35.9	(A)	1.6	4.4	189.1	1	150
(A)	2.1	-	0.4	-	-	-	-	(A)	42.9	1	151
0.5	49.5	0.5	74.9	(A)	(B)	0.1	(G)	0.5	287.7	16	152
(A)	(B)	(E)	(I)	-	-	-	-	(A)	(B)	1	153
13.8	624.5	20.5	1,282.3	3.9	248.1	0.7	27.0	5.4	329.1	1	154
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	155
(A)	(B)	-	-	-	-	-	-	(A)	(B)	1	156
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	157
2.1	91.2	3.8	284.3	(F)	(K)	(B)	(F)	1.7	123.4	2	158
(E)	(J)	(F)	(L)	(F)	(K)	(A)	(F)	(E)	(K)	2	159
1.2	35.6	0.9	30.6	(B)	(E)	(B)	(F)	(A)	1.5	16	160
1.2	35.6	0.9	30.6	0.1	(E)	0.2	(F)	(A)	1.5	16	161
6.1	253.7	10.4	591.9	0.7	31.2	0.2	9.9	2.4	124.4	2	162
5.8	240.0	7.1	384.3	0.7	29.8	0.2	8.9	2.3	120.5	3	163
(B)	(G)	(F)	(K)	(B)	(E)	(A)	(C)	(B)	(F)	1	164
3.9	208.1	5.3	329.9	1.0	57.2	0.2	10.7	0.7	39.3	8	165
2.4	136.2	3.4	216.7	(A)	2.3	(A)	0.5	0.2	12.5	7	166
(B)	(I)	-	-	-	-	-	-	(C)	(I)	1	167
(B)	(I)	-	-	-	-	-	-	(B)	(I)	1	168
66.9	3,847.7	213.5	12,034.4	22.5	1,493.5	25.1	284.8	42.3	2,248.5	1	169
4.6	279.8	25.8	1,596.5	0.5	40.1	(A)	1.5	1.5	152.9	2	170
(F)	(L)	(I)	(N)	(C)	(I)	(A)	(E)	(C)	(J)	1	171
(A)	0.4	0.1	5.5	-	-	-	-	0.4	35.5	1	172
2.4	125.7	1.8	88.1	0.1	3.2	0.4	39.3	1.7	81.6	9	173
1.4	59.1	1.4	52.6	0.1	3.1	(A)	4.4	1.4	70.2	6	174
59.9	3,438.6	185.4	9,961.3	21.9	1,450.2	24.7	244.0	39.0	1,954.5	2	175
16.4	627.7	27.3	1,174.1	2.1	111.3	0.5	30.7	8.8	351.4	14	176
39.5	1,795.1	91.4	514.6	15.7	1,112.1	2.8	189.4	18.3	1,007.9	1	177
1.7	76.9	2.5	130.4	0.4	24.1	(A)	0.5	0.3	10.8	8	178
1.4	43.6	2.8	168.8	(A)	1.1	(A)	0.1	0.7	18.1	11	179
3.0	119.1	4.5	209.4	0.2	10.9	(A)	1.5	0.1	5.1	2	180
5.6	234.3	15.4	770.3	1.3	74.6	0.1	4.5	2.4	116.6	6	181
2.0	86.6	6.6	386.8	0.1	7.2	0.1	6.7	2.0	93.6	18	182
9.1	386.0	33.0	1,835.7	2.2	104.1	21.3	30.7	6.1	311.9	1	183
0.1	4.3	1.0	45.0	(A)	1.5	-	-	0.1	2.0	16	184
0.5	20.6	0.4	17.6	(A)	0.4	(A)	0.5	0.2	4.1	19	185
(A)	1.8	(A)	47.7	-	-	-	-	-	-	1	186
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	187
(A)	(F)	(B)	(K)	-	-	-	-	(B)	(F)	18	188
(A)	(F)	(B)	(K)	-	-	-	-	(B)	(F)	18	189

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Table 7. Employment, Costs, Value Added, and Value of Shipments, by

(In millions of dollars)

Line no.	Item	All employees (wage board and graded)		Production workers (wage board)			Costs	
		Number (1,000)	Payroll	Number (1,000)	Hours (millions)	Wages	Materials, supplies and parts used	Contractual services and other costs
1	United States.....	240.4	5,171.9	137.1	251.6	2,818.2	1,927.2	3,042.7
	INDUSTRY GROUP							
2	23 Apparel and other textile products.....	1.4	19.2	1.3	2.1	17.4	1.9	1.5
3	28 Chemicals and allied products.....	3.2	66.6	1.3	2.6	27.6	30.8	34.4
4	281 Industrial chemicals.....	0.3	7.5	0.1	0.2	2.1	1.0	3.8
5	286 Industrial organic chemicals.....	2.0	40.4	0.8	1.6	16.1	23.0	26.4
6	289 Miscellaneous chemical products.....	0.9	18.7	0.4	0.8	9.4	6.8	4.2
7	348 Small arms ammunition; ordnance and accessories.....	29.2	611.7	14.0	27.6	280.7	188.8	305.0
8	366 Communication equipment.....	14.5	335.5	5.2	9.3	106.4	85.4	137.9
9	37 Transportation equipment.....	140.0	2,932.5	93.5	171.5	1,922.4	1,161.8	1,254.4
10	372 Aircraft and parts.....	50.3	1,066.9	33.4	62.4	705.8	643.5	538.4
11	373 Ship and boat building and repairing.....	69.1	1,398.0	52.6	95.3	1,076.4	383.4	471.6
12	376 Space vehicles, missiles, etc.....	18.8	435.3	6.0	11.2	114.0	119.7	230.0
13	379 Miscellaneous transportation.....	1.9	32.3	1.5	2.6	26.2	15.2	14.4
14	--- Research and development.....	52.1	1,206.4	21.9	38.5	463.7	458.6	1,309.5
	GEOGRAPHIC DIVISION, STATE, AND STANDARD METROPOLITAN STATISTICAL AREA ¹							
15	New England Division.....	11.8	253.3	5.8	10.9	105.5	54.2	249.9
16	New Hampshire.....	7.8	142.5	5.5	10.3	98.3	24.3	39.8
17	Massachusetts.....	1.1	30.1	0.1	0.3	3.0	4.5	42.5
18	Boston SMSA.....	1.1	30.1	0.1	0.3	3.0	4.5	42.5
19	Rhode Island.....	2.9	80.8	0.2	0.3	4.2	25.5	167.6
20	Middle Atlantic Division.....	33.0	712.1	16.2	30.2	313.3	205.5	419.6
21	New York.....	3.3	71.3	1.6	4.1	32.5	40.2	5.5
22	Albany-Schenectady-Troy SMSA.....	2.2	46.4	1.5	4.0	31.3	38.4	4.6
23	New Jersey.....	10.4	252.9	1.7	3.2	33.7	38.6	166.0
24	Newark SMSA.....	7.8	193.8	1.0	1.8	20.2	26.9	104.6
25	Pennsylvania.....	19.3	387.9	13.0	22.9	247.0	126.8	248.1
26	Philadelphia, PA.-N.J. SMSA.....	13.8	279.4	8.5	15.2	158.5	76.9	226.2
27	East North Central Division.....	12.5	278.8	5.4	10.3	118.7	92.7	399.6
28	Ohio.....	4.0	100.8	1.2	2.1	26.2	25.1	323.2
29	Dayton SMSA.....	2.4	66.6	0.1	0.3	3.4	12.3	318.8
30	Indiana.....	5.8	121.3	2.5	5.0	52.6	47.2	64.1
31	Indianapolis SMSA.....	2.3	50.2	1.0	1.9	21.4	28.4	15.7
32	Illinois.....	2.7	56.7	1.8	3.1	39.8	20.4	12.3
33	Davenport-Rock Island-Moline, Iowa-Ill., SMSA.....	2.6	56.4	1.8	3.1	39.6	20.4	11.9
34	South Atlantic Division.....	65.5	1,376.8	36.9	67.9	732.1	564.0	718.6
35	Maryland.....	10.3	212.1	3.3	5.8	63.8	91.9	127.3
36	District of Columbia.....	4.6	119.6	0.7	1.3	14.7	18.8	136.8
37	Virginia.....	23.4	463.4	14.4	26.5	257.4	152.9	236.1
38	Norfolk-Virginia Beach-Portsmouth, SMSA.....	16.4	293.4	12.6	22.9	220.9	129.1	114.2
39	North Carolina.....	2.5	51.4	1.9	3.7	39.2	53.2	4.7
40	South Carolina.....	8.5	169.0	6.3	11.7	127.9	49.1	55.3
41	Georgia.....	6.2	138.6	5.0	8.2	112.1	76.0	17.7
42	Macon SMSA.....	6.2	138.6	5.0	8.2	112.1	76.0	17.7
43	Florida.....	10.0	222.7	5.2	10.8	117.0	122.2	140.9
44	Jacksonville SMSA.....	2.6	55.8	1.8	3.7	40.4	41.8	13.5
45	Pensacola SMSA.....	3.5	76.5	2.6	5.3	58.3	43.2	14.8
46	East South Central Division.....	13.5	307.8	5.0	9.4	92.9	105.5	237.5
47	Kentucky.....	2.4	46.1	1.7	3.5	31.9	12.1	14.6
48	Louisville, Ky.-Ind. SMSA.....	2.4	46.1	1.7	3.5	31.9	12.1	14.6
49	Tennessee.....	0.2	3.8	(Z)	(Z)	0.1	16.1	134.4
50	Alabama.....	10.7	252.3	3.3	5.8	60.9	75.4	63.4
51	Huntsville SMSA.....	7.6	195.5	0.6	1.0	10.8	16.9	57.4
52	Mississippi.....	0.2	5.5	-	-	-	2.0	25.0
53	West South Central Division.....	22.5	449.4	16.6	28.9	331.6	311.3	77.8
54	Arkansas.....	0.9	18.7	0.4	0.8	9.4	6.8	4.2
55	Oklahoma.....	8.4	172.3	6.4	11.1	134.0	115.9	21.4
56	Oklahoma City SMSA.....	7.6	157.4	5.9	10.2	124.4	113.0	17.8
57	Texas.....	13.1	258.4	9.7	17.0	188.3	188.6	52.1
58	San Antonio SMSA.....	7.8	151.1	5.6	10.0	108.7	113.0	26.7
59	Texarkana, Tex.-Texarkana, Ark. SMSA.....	2.2	40.8	1.9	3.3	33.2	24.5	14.8
60	Mountain Division.....	10.7	204.1	7.2	12.5	136.4	86.4	213.9
61	Colorado.....	0.5	11.8	0.2	0.4	4.8	3.1	8.0
62	New Mexico.....	0.5	9.7	(Z)	(Z)	0.1	4.3	154.0
63	Utah.....	9.1	169.5	6.5	11.4	123.3	75.5	48.3
64	Nevada.....	0.7	13.1	0.4	0.7	8.2	3.6	3.7
65	Pacific Division.....	71.0	1,589.6	44.0	81.5	987.6	507.4	725.8
66	Washington.....	13.5	287.7	9.4	17.6	207.4	97.0	85.7
67	California.....	51.4	1,161.7	30.0	55.4	669.7	372.2	602.0
68	Bakersfield SMSA.....	6.5	158.9	1.5	2.7	34.8	42.0	192.0
69	Los Angeles-Long Beach SMSA.....	7.2	144.9	5.8	10.2	118.2	49.0	58.6
70	San Diego SMSA.....	8.6	196.9	4.4	8.6	91.5	77.2	119.9
71	San Francisco-Oakland SMSA.....	5.8	135.5	4.2	8.3	104.2	65.0	33.6
72	Vallejo-Fairfield-Napa SMSA.....	9.1	210.1	6.8	12.5	161.9	34.6	62.8
73	Hawaii.....	6.1	140.1	4.7	8.5	110.5	38.2	38.1

Note: See appendix B, "Explanation of Terms for MA-171 Survey." Detail may not add to totals due to independent rounding. Value added A represents total revenue less cost of materials, while value added B is total revenue less cost of materials, contractual services, and other costs.

- Represents zero. (Z) Less than 0.05.

¹See appendix A for a description of each SMSA.

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except as otherwise noted)

Value of shipments or receipts for service by type of activity						Value added by manufacture		Line no.
Manufacture and assembly	Construction and conversion	Research and development	Other billings	Total billings	Total revenue	A	B	
423.8	103.7	2,936.3	6,087.5	9,551.2	9,860.4	7,933.2	4,890.5	1
22.0	-	0.4	0.1	22.6	23.7	21.8	20.3	2
47.0	-	4.9	82.3	134.2	133.8	103.0	68.6	3
0.2	-	1.0	10.2	11.4	11.6	10.6	6.8	4
29.5	-	3.9	58.8	92.2	90.7	67.7	41.3	5
17.3	-	(2)	13.3	30.6	31.5	24.7	20.5	6
193.8	5.8	299.9	576.1	1,075.5	1,103.7	914.9	609.9	7
86.3	0.3	220.2	247.0	553.6	563.9	478.5	340.6	8
70.2	88.7	723.6	4,082.0	4,964.5	5,221.3	4,059.5	2,805.1	9
56.1	3.8	362.9	1,663.6	2,086.3	2,108.7	1,465.3	926.8	10
3.3	71.6	46.1	1,889.0	2,010.0	2,245.6	1,862.2	1,390.6	11
9.9	12.9	314.5	468.9	806.3	805.0	685.3	455.3	12
0.9	0.4	-	60.5	61.9	61.9	46.7	32.3	13
4.5	8.9	1,687.3	1,100.0	2,800.7	2,814.1	2,355.5	1,046.0	14
3.0	-	237.6	370.1	610.7	579.5	525.3	275.4	15
0.3	-	0.6	260.1	261.0	227.9	203.7	163.9	16
2.7	-	69.1	5.9	77.7	77.7	73.2	30.7	17
2.7	-	69.1	5.9	77.7	77.7	73.2	30.7	18
-	-	167.9	104.2	272.1	273.9	248.4	80.8	19
126.0	8.9	492.6	616.5	1,244.0	1,335.4	1,129.9	710.2	20
71.4	-	26.1	19.8	117.3	120.4	80.2	74.7	21
71.4	-	0.2	14.0	85.6	88.6	50.2	45.6	22
1.9	-	285.1	176.3	463.3	462.5	423.9	257.9	23
1.3	-	187.3	146.7	335.4	335.4	308.5	203.8	24
52.7	8.9	181.4	420.4	663.4	752.5	625.7	377.6	25
34.2	-	181.4	269.9	485.4	574.7	497.8	271.7	26
127.7	1.9	343.2	284.9	757.6	770.9	678.2	278.6	27
0.4	0.1	320.3	126.3	447.2	448.1	422.9	99.7	28
0.2	0.1	320.3	77.1	397.7	397.7	385.5	66.6	29
83.8	0.2	22.9	120.8	227.6	234.9	187.7	123.6	30
57.2	-	18.8	10.2	86.2	95.6	67.2	51.5	31
43.4	1.6	0.1	37.8	82.9	88.0	67.6	55.3	32
43.4	1.6	0.1	37.5	82.6	87.9	67.5	55.7	33
48.1	38.7	887.6	1,482.0	2,456.3	2,589.8	2,025.8	1,307.1	34
36.2	-	242.0	163.2	441.3	443.9	352.0	224.7	35
-	-	252.6	15.7	268.3	266.6	247.8	111.0	36
6.9	38.7	260.2	403.7	709.4	866.8	714.0	477.9	37
4.5	38.7	5.9	341.0	390.0	545.3	416.2	302.0	38
0.5	-	3.0	111.7	115.2	109.0	55.9	51.2	39
0.7	-	-	307.4	308.0	288.0	238.9	183.6	40
-	-	-	230.4	230.4	236.5	160.6	142.8	41
-	-	-	230.4	230.4	236.5	160.6	142.8	42
3.9	-	129.9	249.9	383.7	378.9	256.7	115.8	43
1.4	-	-	110.3	111.7	109.4	67.6	54.1	44
2.5	-	(2)	129.5	132.1	129.5	86.3	71.5	45
27.4	12.9	145.6	374.3	560.2	562.7	457.2	219.7	46
20.7	-	0.2	51.3	72.2	74.7	62.6	48.0	47
20.7	-	0.2	51.3	72.2	74.7	62.6	48.0	48
-	-	39.3	-	39.3	39.3	23.2	-111.3	49
6.7	12.9	73.6	323.0	416.3	416.3	340.9	277.5	50
-	-	73.6	190.8	264.4	264.4	247.5	190.0	51
-	-	32.5	-	32.4	32.4	30.5	5.5	52
33.6	3.6	21.5	707.6	829.3	840.2	528.9	451.1	53
17.3	-	(2)	13.3	30.6	31.5	24.7	20.5	54
13.3	0.4	-	295.2	308.9	315.3	199.4	178.0	55
4.5	-	-	282.1	286.6	293.0	180.0	162.1	56
3.0	3.2	21.5	462.1	489.8	493.4	304.8	252.6	57
-	-	21.5	276.6	298.1	298.1	185.1	158.3	58
1.5	3.2	-	67.9	72.6	72.8	48.2	33.4	59
3.1	0.8	182.8	305.4	492.1	497.2	410.7	196.8	60
0.2	0.1	1.6	20.1	22.0	22.2	19.1	11.1	61
-	-	167.9	-	167.9	167.9	163.7	9.7	62
1.4	0.4	13.2	268.5	283.6	288.5	213.0	164.7	63
1.4	0.3	-	16.8	18.5	18.5	15.0	11.3	64
54.9	36.8	625.4	1,883.6	2,600.8	2,684.7	2,177.2	1,451.4	65
13.7	(2)	2.3	401.7	417.7	452.5	355.5	269.7	66
41.2	26.1	623.1	1,320.9	2,011.3	2,031.5	1,659.3	1,057.3	67
-	-	266.7	36.2	302.8	300.4	258.5	66.5	68
-	22.2	17.3	184.2	223.6	240.2	191.2	132.6	69
19.8	-	172.0	202.7	394.5	398.4	321.2	201.3	70
10.4	3.8	(2)	195.4	209.6	224.4	159.4	125.8	71
0.6	-	20.1	302.8	323.5	307.7	273.1	210.3	72
-	10.8	(2)	161.0	171.8	200.6	162.5	124.3	73

Table 8. Employment, Costs, Value Added, and Value of Shipments, by Industry

(In millions of dollars.)

Line no.	Item	All employees (wage board and graded)		Production workers (wage board)			Costs	
		Number (1,000)	Payroll	Number (1,000)	Hours (millions)	Wages	Materials, supplies, and parts used	Contractual services and other costs
1	United States.....	240.3	4,775.4	140.4	253.9	2,706.8	1,803.9	2,634.4
	INDUSTRY GROUP							
2	23 Apparel and other textile products.....	1.4	17.9	1.3	2.1	16.2	1.6	1.5
3	28 Chemicals and allied products.....	3.3	63.5	1.4	2.7	26.8	30.3	31.4
4	281 Industrial inorganic chemicals.....	0.4	7.8	0.1	0.2	2.0	1.0	2.9
5	286 Industrial organic chemicals.....	2.0	38.0	0.8	1.7	15.7	25.4	24.4
6	289 Miscellaneous chemical products.....	1.0	17.7	0.5	0.9	9.1	3.9	4.2
7	348 Small arms ammunition; ordnance and accessories.....	29.8	603.2	14.3	28.3	279.2	186.8	270.5
8	366 Communications equipment.....	14.5	293.1	5.3	9.6	103.1	76.6	130.2
9	37 Transportation equipment.....	137.1	2,653.2	95.2	170.5	1,831.0	1,085.6	971.1
10	372 Aircraft and parts.....	52.7	1,035.3	35.5	63.5	696.4	622.3	525.7
11	373 Ship and boat building and repairing.....	68.6	1,305.4	52.5	93.9	1,009.2	348.1	277.7
12	376 Space vehicles, missiles, etc.....	13.9	279.5	5.7	10.6	98.5	102.3	157.0
13	379 Miscellaneous transportation.....	1.9	33.0	1.5	2.6	26.9	12.9	10.8
14	--- Research and development.....	54.1	1,144.5	22.9	40.7	450.5	423.0	1,229.6
	GEOGRAPHIC DIVISION, STATE, AND STANDARD METROPOLITAN STATISTICAL AREA ¹							
15	New England Division.....	13.1	256.3	6.0	10.9	99.6	57.8	200.9
16	New Hampshire.....	7.7	130.3	5.4	9.8	89.7	31.7	22.7
17	Massachusetts.....	2.4	55.2	0.3	0.6	6.0	6.0	53.3
18	Boston SMSA.....	2.4	55.2	0.3	0.6	6.0	6.0	53.3
19	Rhode Island.....	3.0	70.8	0.2	0.4	3.9	20.2	124.9
20	Middle Atlantic Division.....	32.4	621.8	16.3	29.6	294.6	186.2	362.8
21	New York.....	3.4	69.8	1.6	3.9	33.0	41.5	4.7
22	Albany-Schenectady-Troy SMSA.....	2.3	46.2	1.6	3.8	31.8	38.6	3.9
23	New Jersey.....	9.9	193.9	1.8	3.5	32.5	25.4	161.3
24	Newark SMSA.....	7.7	157.1	1.1	2.1	19.0	15.8	95.0
25	Pennsylvania.....	19.2	358.1	12.8	22.3	229.1	119.2	196.8
26	Philadelphia, Pa.-N.J. SMSA.....	13.4	249.7	8.2	14.3	140.2	64.6	176.1
27	East North Central Division.....	12.8	267.3	5.8	10.7	116.7	89.6	376.0
28	Ohio.....	4.1	96.2	1.3	2.2	25.8	20.2	306.9
29	Dayton SMSA.....	2.5	62.8	0.2	0.3	3.5	8.8	303.2
30	Indiana.....	6.0	117.3	2.7	5.4	53.9	47.2	59.3
31	Indianapolis SMSA.....	2.4	49.4	1.1	2.0	21.7	28.8	19.8
32	Illinois.....	2.6	53.8	1.7	3.1	37.0	22.2	9.8
33	Davenport-Rock Island-Moline, Iowa-Ill., SMSA.....	2.6	53.8	1.7	3.1	37.0	22.2	9.8
34	South Atlantic Division.....	67.2	1,320.2	38.2	69.6	703.0	526.3	666.2
35	Maryland.....	10.8	231.1	3.4	6.6	67.0	102.8	144.0
36	District of Columbia.....	4.7	114.5	0.7	1.4	13.8	16.4	121.6
37	Virginia.....	23.7	422.7	14.8	26.6	243.4	140.1	191.5
38	Norfolk-Virginia Beach-Portsmouth, SMSA.....	16.6	276.2	12.9	22.8	210.1	119.0	78.6
39	North Carolina.....	2.5	49.3	1.9	3.6	38.6	45.1	9.8
40	South Carolina.....	8.5	159.4	6.4	11.8	120.5	38.8	38.6
41	Georgia.....	6.4	131.2	5.2	9.0	106.2	72.9	14.9
42	Macon SMSA.....	6.4	131.2	5.2	9.0	106.2	72.9	14.9
43	Florida.....	10.5	212.1	5.7	10.6	113.4	110.2	145.7
44	Jacksonville SMSA.....	3.0	59.4	2.2	4.0	44.9	42.5	17.1
45	Pensacola SMSA.....	3.7	69.4	2.7	4.8	51.7	43.5	22.1
46	East South Central Division.....	8.6	169.1	4.6	8.5	78.8	86.8	147.7
47	Kentucky.....	2.4	43.2	1.7	3.4	29.5	11.8	7.8
48	Louisville, Ky.-Ind. SMSA.....	2.4	43.2	1.7	3.4	29.5	11.8	7.8
49	Tennessee.....	0.2	3.5	(2)	(2)	0.1	11.0	107.3
50	Alabama.....	5.7	116.8	2.9	5.0	49.1	62.2	17.4
51	Huntsville SMSA.....	2.6	63.2	(2)	(2)	0.4	6.6	8.8
52	Mississippi.....	0.2	5.6	-	-	-	1.9	15.2
53	West South Central Division.....	23.1	438.3	17.3	29.9	328.7	296.8	65.8
54	Arkansas.....	1.0	17.7	0.5	0.9	9.1	3.9	4.2
55	Oklahoma.....	8.6	169.0	6.7	11.5	131.9	116.6	19.1
56	Oklahoma City SMSA.....	7.8	151.8	6.1	10.6	120.4	113.9	15.9
57	Texas.....	13.6	251.6	10.1	17.5	187.7	176.3	42.6
58	San Antonio SMSA.....	8.0	145.3	5.9	10.2	106.0	97.9	30.6
59	Texarkana, Tex.-Texarkana, Ark. SMSA.....	2.3	39.9	2.0	3.3	33.7	23.5	2.0
60	Mountain Division.....	11.0	201.8	7.4	13.0	135.0	78.5	184.3
61	Colorado.....	0.6	12.0	0.2	0.4	4.8	2.8	6.2
62	New Mexico.....	0.5	9.4	(2)	(2)	0.1	5.2	129.4
63	Utah.....	9.3	167.4	6.7	11.8	120.9	67.7	46.0
64	Nevada.....	0.7	13.1	0.5	0.8	9.2	2.8	2.7
65	Pacific Division.....	72.1	1,500.5	44.9	81.7	950.3	481.8	630.7
66	Washington.....	13.1	260.2	9.2	17.1	188.3	77.7	47.6
67	California.....	53.0	1,113.7	31.1	56.3	662.0	362.9	562.6
68	Bakersfield SMSA.....	6.6	139.7	1.5	2.7	31.2	45.2	158.7
69	Los Angeles-Long Beach SMSA.....	7.4	142.9	5.9	10.5	117.4	42.5	45.1
70	San Diego SMSA.....	9.0	186.0	4.6	8.5	90.8	80.9	145.5
71	San Francisco-Oakland SMSA.....	6.0	131.5	4.4	8.2	102.7	67.5	37.6
72	Vallejo-Fairfield-Napa SMSA.....	9.6	212.9	7.2	12.9	165.7	28.6	41.5
73	Hawaii.....	6.0	126.6	4.6	8.3	100.1	41.3	20.6

Note: See appendix B, "Explanation of Terms for MA-171 Survey." Detail may not add to totals due to independent rounding. Value added A represents total revenue less cost of materials, while value added B is total revenue less cost of materials, contractual services, and other costs.

- Represents zero. (2) Less than 0.5.

¹See appendix A for a description of each SMSA.

and Geographic Area for Department of Defense Facilities: 1978 Revised

except as otherwise noted)

Value of shipments or receipts for service by type of activity						Value added by manufacture		Line no.
Manufacture and assembly	Construction and conversion	Research and development	Other billings	Total billings	Total revenue	A	B	
407.9	86.0	2,692.8	5,921.7	9,108.4	9,140.6	7,336.8	4,702.4	1
21.8	-	(Z)	(Z)	21.8	21.5	19.9	18.4	2
40.9	-	6.5	82.2	129.6	126.2	95.9	64.4	3
0.3	-	0.9	10.5	11.7	11.7	10.7	7.7	4
29.2	-	5.6	56.7	91.4	88.4	63.0	38.6	5
11.5	-	-	15.0	26.5	26.2	22.3	18.1	6
196.0	1.6	318.2	569.9	1,085.7	1,078.4	891.6	621.1	7
90.0	0.5	163.8	238.7	492.9	504.0	427.4	297.2	8
55.3	79.4	657.8	3,962.6	4,755.2	4,782.9	3,697.3	2,726.2	9
45.9	0.9	323.1	1,741.8	2,113.8	2,209.3	1,587.1	1,061.4	10
1.4	60.6	27.1	1,911.4	2,000.5	1,925.6	1,577.5	1,299.8	11
7.2	17.5	305.6	253.7	584.1	591.3	489.0	332.0	12
0.7	0.3	-	55.6	56.7	56.7	43.8	33.2	13
3.9	4.5	1,546.5	1,068.3	2,623.2	2,627.2	2,204.7	975.1	14
1.9	1.7	225.6	266.6	495.8	504.7	446.8	245.9	15
0.1	1.7	0.4	198.7	200.9	207.8	176.1	153.5	16
1.7	-	66.7	4.6	73.1	73.1	67.1	13.8	17
1.7	-	66.7	4.6	73.1	73.1	67.1	13.8	18
-	-	158.5	63.3	221.8	223.8	203.6	78.6	19
120.4	4.7	417.9	575.4	1,118.4	1,028.5	842.4	479.6	20
70.3	-	28.1	22.7	121.1	116.4	74.9	70.2	21
70.3	-	2.5	17.0	89.9	85.2	46.7	42.8	22
4.3	-	227.6	163.3	395.2	394.2	368.8	207.4	23
3.5	-	134.0	133.3	270.9	270.9	255.1	160.2	24
45.8	4.7	162.2	389.4	602.1	517.9	398.7	201.9	25
30.9	-	162.2	223.1	416.1	326.4	261.9	85.7	26
127.1	0.8	299.6	295.4	723.0	735.1	645.5	269.5	27
0.6	(Z)	281.6	143.0	425.2	404.8	404.8	97.9	28
0.2	(Z)	281.6	93.0	374.8	374.8	366.0	62.8	29
89.1	0.1	17.8	115.3	222.3	225.5	178.3	119.0	30
65.4	-	15.1	11.0	91.5	98.2	69.4	49.6	31
37.4	0.8	0.3	37.1	75.5	84.7	62.5	52.7	32
37.4	0.8	0.3	37.1	75.5	84.7	62.5	52.7	33
47.9	29.3	861.7	1,558.6	2,497.5	2,524.4	1,998.0	1,331.8	34
37.4	-	277.7	167.0	482.1	478.0	375.1	231.1	35
-	-	240.1	13.5	253.6	254.4	238.0	116.4	36
7.4	29.1	236.9	551.2	824.6	838.3	698.2	506.8	37
3.9	29.1	3.7	486.8	523.5	537.4	418.5	339.9	38
0.7	-	3.0	85.5	89.2	106.3	61.2	51.4	39
0.5	0.2	(Z)	241.4	242.1	226.8	188.0	149.4	40
-	-	-	227.4	227.4	224.5	151.5	136.6	41
-	-	-	227.4	227.4	224.5	151.5	136.6	42
2.0	-	104.0	272.6	378.6	396.1	285.9	140.2	43
1.4	-	-	129.6	131.1	133.7	91.2	74.1	44
0.6	-	-	132.0	132.6	147.2	103.7	81.6	45
17.9	17.5	123.4	172.0	330.7	329.6	242.8	95.1	46
15.3	-	1.0	53.3	69.5	68.4	56.6	48.8	47
15.3	-	1.0	53.3	69.5	68.4	56.6	48.8	48
-	-	27.1	-	27.1	27.1	16.2	-91.1	49
2.6	17.5	72.5	118.7	211.3	211.3	149.1	131.7	50
-	-	72.5	-	72.5	72.5	65.9	57.1	51
-	-	22.8	-	22.8	22.8	20.9	5.6	52
31.7	0.1	23.2	774.2	829.2	834.8	538.0	472.2	53
11.5	-	-	15.0	26.5	26.2	22.3	18.1	54
11.0	0.1	-	314.0	325.1	328.5	211.9	192.8	55
3.7	-	-	298.5	302.3	305.6	191.7	175.8	56
9.2	(Z)	23.2	445.2	477.6	480.1	303.8	261.2	57
-	-	23.1	256.7	279.8	279.8	181.9	151.3	58
5.3	-	0.1	62.8	68.2	65.4	41.9	39.9	59
5.7	1.0	145.6	318.6	470.8	467.8	389.3	205.1	60
0.4	0.1	1.6	18.9	21.0	21.0	18.2	12.0	61
-	-	143.9	-	143.9	143.9	138.7	9.4	62
2.3	0.3	-	283.7	286.3	283.4	215.7	169.7	63
3.0	0.6	-	16.0	19.6	19.5	16.7	14.0	64
55.4	30.8	595.9	1,961.0	2,643.2	2,715.9	2,234.1	1,603.3	65
25.1	-	3.5	339.0	367.6	310.2	232.5	185.0	66
30.3	30.8	592.4	1,382.5	2,036.1	2,131.1	1,765.4	1,205.6	67
-	-	248.0	28.0	276.0	281.6	236.4	77.7	68
-	29.7	3.1	239.9	272.7	305.4	262.9	217.8	69
14.8	-	188.5	229.7	433.1	459.5	378.6	233.0	70
8.2	0.9	(Z)	202.0	211.2	239.9	172.5	134.9	71
(Z)	-	18.4	285.5	303.8	303.8	275.2	233.7	72
-	-	(Z)	239.5	239.5	274.6	233.2	212.7	73

Appendix A. Standard Consolidated Statistical Areas and Standard Metropolitan Statistical Areas

(Titles and definitions of the SMSA's in the State established by the Department of Commerce, Office of Federal Statistical Policy and Standards, as of December 1979)

Standard Consolidated Statistical Areas

Boston-Lawrence-Lowell, Mass.-N.H.	Consists of Boston, Mass., SMSA; Lawrence-Haverhill, Mass.-N.H., SMSA; Lowell, Mass.-N.H., SMSA; and Brockton, Mass., SMSA
Chicago-Gary, Ill.-Ind.	Consists of Chicago, Ill., SMSA, and Gary-Hammond-East Chicago, Ind., SMSA
Cincinnati-Hamilton, Ohio-Ky.-Ind.	Consists of Cincinnati, Ohio-Ky.-Ind., SMSA, and Hamilton-Middletown, Ohio, SMSA
Cleveland-Akron-Lorain, Ohio	Consists of Cleveland, Ohio, SMSA; Akron, Ohio, SMSA; and Lorain-Elyria, Ohio, SMSA
Detroit-Ann Arbor, Mich.	Consists of Detroit, Mich., SMSA, and Ann Arbor, Mich., SMSA
Houston-Galveston, Tex.	Consists of Houston, Tex., SMSA, and Galveston-Texas City, Tex., SMSA
Los Angeles-Long Beach-Anaheim, Calif.	Consists of Los Angeles-Long Beach, Calif., SMSA; Anaheim-Santa Ana-Garden Grove, Calif., SMSA; Riverside-San Bernardino-Ontario, Calif., SMSA; and Oxnard-Simi Valley-Ventura, Calif., SMSA
Miami-Fort Lauderdale, Fla.	Consists of Miami, Fla., SMSA, and Fort Lauderdale-Hollywood, Fla., SMSA
Milwaukee-Racine, Wis.	Consists of Milwaukee, Wis., SMSA, and Racine, Wis., SMSA
New York-Newark-Jersey City, N.Y.-N.J.-Conn.	Consists of New York, N.Y.-N.J., SMSA; Nassau-Suffolk, N.Y., SMSA; Newark, N.J., SMSA; Jersey City, N.J., SMSA; New Brunswick-Perth Amboy-Sayreville, N.J., SMSA; Paterson-Clifton-Passaic, N.J., SMSA; Long Branch-Asbury Park, N.J., SMSA; Stamford, Conn., SMSA; and Norwalk, Conn., SMSA
Philadelphia-Wilmington-Trenton, Pa.-Del.-N.J.-Md.	Consists of Philadelphia, Pa.-N.J., SMSA; Wilmington, Del.-N.J.-Md., SMSA; and Trenton, N.J., SMSA
San Francisco-Oakland-San Jose, Calif.	Consists of San Francisco-Oakland, Calif., SMSA; San Jose, Calif., SMSA; and Vallejo-Fairfield-Napa, Calif., SMSA
Seattle-Tacoma, Wash.	Consists of Seattle-Everett, Wash., SMSA, and Tacoma, Wash., SMSA

Standard Metropolitan Statistical Areas

Abilene, Tex.	Consists of Callahan, Jones, and Taylor Counties, Tex.
Akron, Ohio	Consists of Portage and Summit Counties, Ohio
Albany, Ga.	Consists of Dougherty and Lee Counties, Ga.
Albany-Schenectady-Troy, N.Y.	Consists of Albany, Montgomery, Rensselaer, Saratoga, and Schenectady Counties, N.Y.
Albuquerque, N. Mex.	Consists of Bernalillo and Sandoval Counties, N. Mex.
Alexandria, La.	Consists of Grant and Rapides Parishes, La.
Allentown-Bethlehem-Easton, Pa.-N.J.	Consists of Carbon, Lehigh, and Northampton Counties, Pa.; and Warren County, N.J.
Altoona, Pa.	Coextensive with Blair County, Pa.
Amarillo, Tex.	Consists of Potter and Randall Counties, Tex.
Anaheim-Santa Ana-Garden Grove, Calif.	Coextensive with Orange County, Calif.
Anchorage, Alaska	Coextensive with Anchorage Division, Alaska
Anderson, Ind.	Coextensive with Madison County, Ind.

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APPENDIX A

Ann Arbor, Mich.	Coextensive with Washtenaw County, Mich.
Anniston, Ala.	Coextensive with Calhoun County, Ala.
Appleton-Oshkosh, Wis.	Consists of Calumet, Outagamie, and Winnebago Counties, Wis.
Asheville, N.C.	Consists of Buncombe and Madison Counties, N.C.
Atlanta, Ga.	Consists of Butts, Cherokee, Clayton, Cobb, De Kalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, Rockdale, and Walton Counties, Ga.
Atlantic City, N.J.	Coextensive with Atlantic County, N.J.
Augusta, Ga.-S.C.	Consists of Columbia and Richmond Counties, Ga., and Aiken County, S.C.
Austin, Tex.	Consists of Hays, Travis, and Williamson Counties, Tex.
Bakersfield, Calif.	Coextensive with Kern County, Calif.
Baltimore, Md.	Consists of Baltimore city and Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties, Md.
Baton Rouge, La.	Consists of Ascension, East Baton Rouge, Livingston, and West Baton Rouge Parishes, La.
Battle Creek, Mich.	Consists of Barry and Calhoun Counties, Mich.
Bay City, Mich.	Coextensive with Bay County, Mich.
Beaumont-Port Arthur-Orange, Tex.	Consists of Hardin, Jefferson, and Orange Counties, Tex.
Billings, Mont.	Coextensive with Yellowstone County, Mont.
Biloxi-Gulfport, Miss.	Consists of Hancock, Harrison, and Stone Counties, Miss.
Binghamton, N.Y.-Pa.	Consists of Broome and Tioga Counties, N.Y., and Susquehanna County, Pa.
Birmingham, Ala.	Consists of Jefferson, St. Clair, Shelby, and Walker Counties, Ala.
Bismarck, N. Dak.	Consists of Burleigh and Morton Counties, N.Dak.
Bloomington, Ind.	Coextensive with Monroe County, Ind.
Bloomington-Normal, Ill.	Coextensive with McLean County, Ill.
Boise City, Idaho	Coextensive with Ada County, Idaho
Boston, Mass.	Consists of Beverly, Lynn, Peabody, and Salem cities, and Boxford, Danvers, Hamilton, Lynnfield, Manchester, Marblehead, Middleton, Nahant, Saugus, Swampscott, Topsfield, and Wenham towns in Essex County; Cambridge, Everett, Malden, Medford, Melrose, Newton, Somerville, Waltham, and Woburn cities, and Acton, Arlington, Ashland, Bedford, Belmont, Boxborough; Burlington, Carlisle, Concord, Framingham, Holliston, Lexington, Lincoln, Natick, North Reading, Reading, Sherborn, Stoneham, Sudbury, Wakefield, Watertown, Wayland, Weston, Wilmington, and Winchester towns in Middlesex County; Quincy city, and Bellingham, Braintree, Brookline, Canton, Cohasset, Dedham, Dover, Foxborough, Franklin, Holbrook, Medfield, Medway, Millis, Milton, Needham, Norfolk, Norwood, Randolph, Sharon, Stoughton, Walpole, Wellesley, Westwood, Weymouth, and Wrentham towns in Norfolk County; Abington, Duxbury, Hanover, Hanson, Hingham, Hull, Kingston, Marshfield, Norwell, Pembroke, Rockland, Scituate towns in Plymouth County; and Boston, Chelsea, and Revere cities, and Winthrop town in Suffolk County, Mass.
Bradenton, Fla.	Coextensive with Manatee County, Fla.
Bridgeport, Conn.	Consists of Bridgeport and Shelton cities, and Easton, Fairfield, Monroe, Stratford, and Trumbull towns in Fairfield County; and Derby and Milford cities in New Haven County, Conn.
Bristol, Conn.	Consists of Bristol city and Burlington town in Hartford County, and Plymouth town in Litchfield County, Conn.
Brockton, Mass.	Consists of Easton town in Bristol County; Avon town in Norfolk County; and Brockton city, and Bridgewater, East Bridgewater, Halifax, West Bridgewater, and Whitman towns in Plymouth County, Mass.
Brownsville-Harlingen-San Benito, Tex.	Coextensive with Cameron County, Tex.
Bryan-College Station, Tex.	Coextensive with Brazos County, Tex.
Buffalo, N.Y.	Consists of Erie and Niagara Counties, N.Y.
Burlington, N.C.	Coextensive with Alamance County, N.C.
Caguas, P. R.	Consists of Caguas, Guarabo, and San Lorenzo Municipios, P.R.
Canton, Ohio	Consists of Carroll and Stark Counties, Ohio
Cedar Rapids, Iowa	Coextensive with Linn County, Iowa
Champaign-Urbana-Rantoul, Ill.	Coextensive with Champaign County, Ill.

APPENDIX A

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Charleston-North Charleston, S.C.	Consists of Berkeley, Charleston, and Dorchester Counties, S.C.
Charleston, W. Va.	Consists of Kanawha and Putnam Counties, W. Va.
Charlotte-Gastonia, N.C.	Consists of Gaston, Mecklenburg, and Union Counties, N.C.
Chattanooga, Tenn.-Ga.	Consists of Hamilton, Marion, and Sequatchie Counties, Tenn.; and Catoosa, Dade, and Walker Counties, Ga.
Chicago, Ill.	Consists of Cook, Du Page, Kane, Lake, McHenry, and Will Counties, Ill.
Cincinnati, Ohio-Ky.-Ind.	Consists of Clermont, Hamilton, and Warren Counties, Ohio; Boone, Campbell, and Kenton Counties, Ky.; and Dearborn County, Ind.
Clarksville-Hopkinsville, Tenn.-Ky.	Consists of Montgomery County, Tenn. and Christian County, Ky.
Cleveland, Ohio	Consists of Cuyahoga, Geauga, Lake, and Medina Counties, Ohio
Colorado Springs, Colo.	Consists of El Paso and Teller Counties, Colo.
Columbia, Mo.	Coextensive with Boone County, Mo.
Columbia, S.C.	Consists of Lexington and Richland Counties, S.C.
Columbus, Ga.-Ala.	Consists of Chattahoochee County and Columbus (consolidated government), Ga., and Russell County, Ala.
Columbus, Ohio	Consists of Delaware, Fairfield, Franklin, Madison, and Pickaway Counties, Ohio
Corpus Christi, Tex.	Consists of Nueces and San Patricio Counties, Tex.
Dallas-Fort Worth, Tex.	Consists of Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties, Tex.
Danbury, Conn.	Consists of Danbury city and Bethel, Brookfield, New Fairfield, Newtown, and Redding towns in Fairfield County; and New Milford town in Litchfield County, Conn.
Davenport-Rock Island-Moline, Iowa-Ill.	Consists of Scott County, Iowa and Henry and Rock Island Counties, Ill.
Dayton, Ohio	Consists of Greene, Miami, Montgomery, and Preble Counties, Ohio
Daytona Beach, Fla.	Coextensive with Volusia County, Fla.
Decatur, Ill.	Coextensive with Macon County, Ill.
Denver-Boulder, Colo.	Consists of Adams, Arapahoe, Boulder, Denver, Douglas, Gilpin, and Jefferson Counties, Colo.
Des Moines, Iowa	Consists of Polk and Warren Counties, Iowa
Detroit, Mich.	Consists of Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne Counties, Mich.
Dubuque, Iowa	Coextensive with Dubuque County, Iowa
Duluth-Superior, Minn.-Wis.	Consists of St. Louis County, Minn. and Douglas County, Wis.
Eau Claire, Wis.	Consists of Chippewa and Eau Claire Counties, Wis.
El Paso, Tex.	Coextensive with El Paso County, Tex.
Elkhart, Ind.	Coextensive with Elkhart County, Ind.
Elmira, N.Y.	Coextensive with Chemung County, N.Y.
Enid, Okla.	Coextensive with Garfield County, Okla.
Erie, Pa.	Coextensive with Erie County, Pa.
Eugene-Springfield, Oreg.	Coextensive with Lane County, Oreg.
Evansville, Ind.-Ky.	Consists of Gibson, Posey, Vanderburgh, and Warrick Counties, Ind. and Henderson County, Ky.
Fall River, Mass.-R.I.	Consists of Fall River city and Dighton, Somerset, Swansea, and Westport towns in Bristol County, Mass.; and Little Compton, Portsmouth, and Tiverton towns in Newport County, R.I.
Fargo-Moorhead, N. Dak.-Minn.	Consists of Cass County, N. Dak. and Clay County, Minn.
Fayetteville, N.C.	Coextensive with Cumberland County, N.C.
Fayetteville-Springdale, Ark.	Consists of Benton and Washington Counties, Ark.
Fitchburg-Leominster, Mass.	Consists of Shirley and Townsend towns in Middlesex County, and Fitchburg and Leominster cities and Lunenburg and Westminster towns in Worcester County, Mass.
Flint, Mich.	Consists of Genesee and Shiawassee Counties, Mich.
Florence, Ala.	Consists of Colbert and Lauderdale Counties, Ala.
Fort Collins, Colo.	Coextensive with Larimer County, Colo.
Fort Lauderdale-Hollywood, Fla.	Coextensive with Broward County, Fla.
Fort Myers-Cape Coral, Fla.	Coextensive with Lee County, Fla.

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Fort Smith, Ark.-Okla.	Consists of Crawford and Sebastian Counties, Ark. and Le Flore and Sequoyah Counties, Okla.
Fort Wayne, Ind.	Consists of Adams, Allen, De Kalb, and Wells Counties, Ind.
Fresno, Calif.	Coextensive with Fresno County, Calif.
Gadsden, Ala.	Coextensive with Etowah County, Ala.
Gainesville, Fla.	Coextensive with Alachua County, Fla.
Galveston-Texas City, Tex.	Coextensive with Galveston County, Tex.
Gary-Hammond-East Chicago, Ind.	Consists of Lake and Porter Counties, Ind.
Grand Forks, N. Dak.-Minn.	Consists of Grand Forks County, N. Dak. and Polk County, Minn.
Grand Rapids, Mich.	Consists of Kent and Ottawa Counties, Mich.
Great Falls, Mont.	Coextensive with Cascade County, Mont.
Greeley, Colo.	Coextensive with Weld County, Colo.
Green Bay, Wis.	Coextensive with Brown County, Wis.
Greensboro-Winston-Salem-High Point, N.C. .	Consists of Davidson, Forsyth, Guilford, Randolph, Stokes, and Yadkin Counties, N.C.
Greenville-Spartanburg, S.C.	Consists of Greenville, Pickens, and Spartanburg Counties, S.C.
Hamilton-Middletown, Ohio	Coextensive with Butler County, Ohio
Harrisburg, Pa.	Consists of Cumberland, Dauphin, and Perry Counties, Pa.
Hartford, Conn.	Consists of Hartford city and Avon, Bloomfield, Canton, East Granby, East Hartford, East Windsor, Enfield, Farmington, Glastonbury, Granby, Manchester, Marlborough, Newington, Rocky Hill, Simsbury, South Windsor, Suffield, West Hartford, Wethersfield, Windsor, and Windsor Locks towns in Hartford County; New Hartford town in Litchfield County; Cromwell, East Hampton, and Portland towns in Middlesex County; Colchester town in New London County; and Andover, Bolton, Columbia, Coventry, Ellington, Hebron, Stafford, Tolland, Vernon, and Willington towns in Tolland County, Conn.
Honolulu, Hawaii	Coextensive with Honolulu County, Hawaii
Houston, Tex.	Consists of Brazoria, Fort Bend, Harris, Liberty, Montgomery, and Waller Counties, Tex.
Huntington-Ashland, W. Va.-Ky.-Ohio	Consists of Cabell and Wayne Counties, W. Va.; Boyd and Greenup Counties, Ky.; and Lawrence County, Ohio
Huntsville, Ala.	Consists of Limestone, Madison, and Marshall Counties, Ala.
Indianapolis, Ind.	Consists of Boone, Hamilton, Hancock, Hendricks, Johnson, Marion, Morgan, and Shelby Counties, Ind.
Iowa City, Iowa	Coextensive with Johnson County, Iowa
Jackson, Mich.	Coextensive with Jackson County, Mich.
Jackson, Miss.	Consists of Hinds and Rankin Counties, Miss.
Jacksonville, Fla.	Consists of Baker, Clay, Duval, Nassau, and St. Johns Counties, Fla.
Janesville-Beloit, Wis.	Coextensive with Rock County, Wis.
Jersey City, N.J.	Coextensive with Hudson County, N.J.
Johnson City-Kingsport-Bristol, Tenn.-Va.	Consists of Carter, Hawkins, Sullivan, Unicoi, and Washington Counties, Tenn., and Bristol city and Scott and Washington Counties, Va.
Johnstown, Pa.	Consists of Cambria and Somerset Counties, Pa.
Kalamazoo-Portage, Mich.	Consists of Kalamazoo and Van Buren Counties, Mich.
Kankakee, Ill.	Coextensive with Kankakee County, Ill.
Kansas City, Mo.-Kans.	Consists of Cass, Clay, Jackson, Platte, and Ray Counties, Mo., and Johnson and Wyandotte Counties, Kans.
Kenosha, Wis.	Coextensive with Kenosha County, Wis.
Killeen-Temple, Tex.	Consists of Bell and Coryell Counties, Tex.
Knoxville, Tenn.	Consists of Anderson, Blount, Knox, and Union Counties, Tenn.
Kokomo, Ind.	Consists of Howard and Tipton Counties, Ind.
La Crosse, Wis.	Coextensive with La Crosse County, Wisc.
Lafayette, La.	Coextensive with Lafayette Parish, La.
Lafayette-West Lafayette, Ind.	Coextensive with Tippecanoe County, Ind.
Lake Charles, La.	Coextensive with Calcasieu Parish, La.
Lakeland-Winter Haven, Fla.	Coextensive with Polk County, Fla.

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Lancaster, Pa.	Coextensive with Lancaster County, Pa.
Lansing-East Lansing, Mich.	Consists of Clinton, Eaton, Ingham, and Ionia Counties, Mich.
Laredo, Tex..	Coextensive with Webb County, Tex.
Las Cruces, N. Mex.	Coextensive with Dona Ana County, N.Mex.
Las Vegas, Nev.	Coextensive with Clark County, Nev.
Lawrence, Kans.	Coextensive with Douglas County, Kans.
Lawrence-Haverhill, Mass.-N.H.	Consists of Haverhill and Lawrence cities and Amesbury, Andover, Georgetown, Groveland, Merrimac, Methuen, North Andover, Salisbury, and West Newbury towns in Essex County, Mass. and Atkinson, Hampstead, Kingston, Newton, Plaistow, Salem, and Windham towns in Rockingham County, N.H.
Lawton, Okla.	Coextensive with Comanche County, Okla.
Lewiston-Auburn, Maine	Consists of Auburn and Lewiston cities and Lisbon town in Androscoggin County, Maine
Lexington-Fayette, Ky.	Consists of Bourbon, Clark, Fayette, Jessamine, Scott, and Woodford Counties, Ky.
Lima, Ohio	Consists of Allen, Auglaize, Putnam, and Van Wert Counties, Ohio
Lincoln, Nebr.	Coextensive with Lancaster County, Nebr.
Little Rock-North Little Rock, Ark.	Consists of Pulaski and Saline Counties, Ark.
Long Branch-Asbury Park, N.J.	Coextensive with Monmouth County, N.J.
Longview-Marshall, Tex.	Consists of Gregg and Harrison Counties, Tex.
Lorain-Elyria, Ohio	Coextensive with Lorain County, Ohio
Los Angeles-Long Beach, Calif.	Coextensive with Los Angeles County, Calif.
Louisville, Ky-Ind.	Consists of Bullitt, Jefferson, and Oldham Counties, Ky. and Clark and Floyd Counties, Ind.
Lowell, Mass.-N.H.	Consists of Lowell city and Billerica, Chelmsford, Dracut, Tewksbury, Tyngsborough, and Westford towns in Middlesex County, Mass.; and Pelham town in Hillsborough County, N.H.
Lubbock, Tex.	Coextensive with Lubbock County, Tex.
Lynchburg, Va.	Consists of Lynchburg city and Amherst, Appomattox, and Campbell Counties, Va.
Macon, Ga.	Consists of Bibb, Houston, Jones, and Twiggs Counties, Ga.
Madison, Wis.	Coextensive with Dane County, Wis.
Manchester, N.H.	Consists of Manchester city and Bedford and Goffstown towns in Hillsborough County; Allenstown, Hooksett, and Pembroke towns in Merrimack County; and Derry and Londonderry towns in Rockingham County, N.H.
Mansfield, Ohio	Coextensive with Richland County, Ohio
Mayaguez, P. R.	Consists of Anasco, Hormigueros, and Mayaguez Municipios, P.R.
McAllen-Pharr-Edinburg, Tex.	Coextensive with Hidalgo County, Tex.
Melbourne-Titusville-Cocoa, Fla.	Coextensive with Brevard County, Fla.
Memphis, Tenn.-Ark.-Miss.	Consists of Shelby and Tipton Counties, Tenn.; Crittenden County, Ark.; and De Soto County, Miss.
Meriden, Conn.	Coextensive with Meriden city in New Haven County, Conn.
Miami, Fla.	Coextensive with Dade County, Fla.
Midland, Tex.	Coextensive with Midland County, Tex.
Milwaukee, Wis.	Consists of Milwaukee, Ozaukee, Washington, and Waukesha Counties, Wis.
Minneapolis-St. Paul, Minn.-Wis.	Consists of Anoka, Carver, Chisago, Dakota, Hennepin, Ramsey, Scott, Washington, and Wright Counties, Minn. and St. Croix County, Wis.
Mobile, Ala.	Consists of Baldwin and Mobile Counties, Ala.
Modesto, Calif.	Coextensive with Stanislaus County, Calif.
Monroe, La.	Coextensive with Ouachita Parish, La.
Montgomery, Ala.	Consists of Autauga, Elmore, and Montgomery Counties, Ala.
Muncie, Ind.	Coextensive with Delaware County, Ind.
Muskegon-Norton Shores-Muskegon Heights, Mich.	Consists of Muskegon and Oceana Counties, Mich.
Nashua, N.H.	Consists of Nashua city and Amherst, Hudson, Merrimack, and Milford towns in Hillsborough County, N.H.
Nashville-Davidson, Tenn.	Consists of Cheatham, Davidson, Dickson, Robertson, Rutherford, Sumner, Williamson, and Wilson Counties, Tenn.

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Nassau-Suffolk, N.Y.	Consists of Nassau and Suffolk Counties, N.Y.
New Bedford, Mass.	Consists of New Bedford city and Acushnet, Dartmouth, Fairhaven, and Freetown towns in Bristol County; and Lakeville, Marion, and Mattapoisett towns in Plymouth County, Mass.
New Britain, Conn.	Consists of New Britain city and Berlin, Plainville, and Southington towns in Hartford County, Conn.
New Brunswick-Perth Amboy-Sayreville, N.J. .	Coextensive with Middlesex County, N.J.
New Haven-West Haven, Conn.	Consists of Clinton town in Middlesex County; and New Haven and West Haven cities and Bethany, Branford, East Haven, Guilford, Hamden, Madison, North Branford, North Haven, Orange, Wallingford, and Woodbridge towns in New Haven County, Conn.
New London-Norwich, Conn.-R.I.	Consists of Old Saybrook town in Middlesex County; New London and Norwich cities and Bozrah, East Lyme, Griswold, Groton, Ledyard, Lisbon, Montville, Old Lyme, Preston, Sprague, Stonington, and Waterford towns in New London County, Conn.; and Hopkinton and Westerly towns in Washington County, R.I.
New Orleans, La.	Consists of Jefferson, Orleans, St. Bernard, and St. Tammany Parishes, La.
New York, N.Y.-N.J.	Consists of Bronx, Kings, New York, Putnam, Queens, Richmond, Rockland, and Westchester Counties, N.Y. and Bergen County, N.J.
Newark, N.J.	Consists of Essex, Morris, Somerset, and Union Counties, N.J.
Newport News-Hampton, Va.	Consists of Hampton, Newport News, Poquoson, and Williamsburg cities and Gloucester, James City, and York Counties, Va.
Norfolk-Virginia Beach-Portsmouth, Va.-N.C. .	Consists of Chesapeake, Norfolk, Portsmouth, Suffolk, and Virginia Beach cities, Va. and Currituck County, N.C.
Northeast Pennsylvania	Consists of Lackawanna, Luzerne, and Monroe Counties, Pa.
Norwalk, Conn.	Consists of Norwalk city and Weston, Westport, and Wilton towns in Fairfield County, Conn.
Odessa, Tex.	Coextensive with Ector County, Tex.
Oklahoma City, Okla.	Consists of Canadian, Cleveland, McClain, Oklahoma, and Pottawatomie Counties, Okla.
Omaha, Nebr.-Iowa	Consists of Douglas and Sarpy Counties, Nebr. and Pottawattamie County, Iowa
Orlando, Fla.	Consists of Orange, Osceola, and Seminole Counties, Fla.
Owensboro, Ky.	Coextensive with Daviess County, Ky.
Oxnard-Simi Valley-Ventura, Calif.	Coextensive with Ventura County, Calif.
Panama City, Fla.	Coextensive with Bay County, Fla.
Parkersburg-Marietta, W. Va.-Ohio	Consists of Wirt and Wood Counties, W. Va. and Washington County, Ohio
Pascagoula-Moss Point, Miss.	Coextensive with Jackson County, Miss.
Paterson-Clifton-Passaic, N.J.	Coextensive with Passaic County, N.J.
Pensacola, Fla.	Consists of Escambia and Santa Rosa Counties, Fla.
Peoria, Ill.	Consists of Peoria, Tazewell, and Woodford Counties, Ill.
Petersburg-Colonial Heights-Hopewell, Va. . . .	Consists of Colonial Heights, Hopewell, and Petersburg cities and Dinwiddie and Prince George Counties, Va.
Philadelphia, Pa.-N.J.	Consists of Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties, Pa.; and Burlington, Camden, and Gloucester Counties, N.J.
Phoenix, Ariz.	Coextensive with Maricopa County, Ariz.
Pine Bluff, Ark.	Coextensive with Jefferson County, Ark.
Pittsburgh, Pa.	Consists of Allegheny, Beaver, Washington, and Westmoreland Counties, Pa.
Pittsfield, Mass.	Consists of Pittsfield city and Adams, Cheshire, Dalton, Lanesborough, Lee, Lenox, and Stockbridge towns in Berkshire County, Mass.
Ponce, P.R.	Consists of Juan Diaz, Ponce, and Villaba Municipios, P.R.
Portland, Maine	Consists of Portland, South Portland, and Westbrook cities and Cape Elizabeth, Cumberland, Falmouth, Freeport, Gorham, Scarborough, Windham, and Yarmouth towns in Cumberland County; and Saco city and Old Orchard Beach town in York County, Maine
Portland, Oreg.-Wash.	Consists of Clackamas, Multnomah, and Washington Counties, Oreg. and Clark County, Wash.
Poughkeepsie, N.Y.	Coextensive with Dutchess County, N.Y.

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Providence-Warwick-Pawtucket, R.I.-Mass. . . .	Consists of Barrington, Bristol, and Warren towns in Bristol County; Warwick city and Coventry, East Greenwich, and West Warwick towns in Kent County; Jamestown town in Newport County; Central Falls, Cranston, East Providence, Pawtucket, Providence, and Woonsocket cities and Burrillville, Cumberland, Johnston, Lincoln, North Providence, North Smithfield, Scituate, and Smithfield towns in Providence County; and Narragansett, North Kingstown, and South Kingstown towns in Washington County, R.I.; Attleboro city and North Attleborough, Norton, Rehoboth, and Seekonk towns in Bristol County; Plainville town in Norfolk County; and Blackstone and Millville towns in Worcester County, Mass.
Provo-Orem, Utah	Coextensive with Utah County, Utah
Pueblo, Colo.	Coextensive with Pueblo County, Colo.
Racine, Wis.	Coextensive with Racine County, Wis.
Raleigh-Durham, N.C.	Consists of Durham, Orange, and Wake Counties, N.C.
Rapid City, S. Dak.	Consists of Pennington and Meade Counties, S. Dak.
Reading, Pa.	Coextensive with Berks County, Pa.
Reno, Nev.	Coextensive with Washoe County, Nev.
Richland-Kennewick-Pasco, Wash.	Consists of Benton and Franklin Counties, Wash.
Richmond, Va.	Consists of Richmond city and Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, and Powhatan Counties, Va.
Riverside-San Bernardino-Ontario, Calif.	Consists of Riverside and San Bernardino Counties, Calif.
Roanoke, Va.	Consists of Roanoke and Salem cities and Botetourt, Craig, and Roanoke Counties, Va.
Rochester, Minn.	Coextensive with Olmsted County, Minn.
Rochester, N.Y.	Consists of Livingston, Monroe, Ontario, Orleans, and Wayne Counties, N.Y.
Rockford, Ill.	Consists of Boone and Winnebago Counties, Ill.
Sacramento, Calif.	Consists of Placer, Sacramento, and Yolo Counties, Calif.
Saginaw, Mich.	Coextensive with Saginaw County, Mich.
St. Cloud, Minn.	Consists of Benton, Sherburne, and Stearns Counties, Minn.
St. Joseph, Mo.	Consists of Andrew and Buchanan Counties, Mo.
St. Louis, Mo.-Ill.	Consists of St. Louis city and Franklin, Jefferson, St. Charles, and St. Louis Counties, Mo.; and Clinton, Madison, Monroe, and St. Clair Counties, Ill.
Salem, Oreg.	Consists of Marion and Polk Counties, Oreg.
Salinas-Seaside-Monterey, Calif.	Coextensive with Monterey County, Calif.
Salt Lake City-Ogden, Utah.	Consists of Davis, Salt Lake, Tooele, and Weber Counties, Utah
San Angelo, Tex.	Coextensive with Tom Green County, Tex.
San Antonio, Tex.	Consists of Bexar, Comal, and Guadalupe Counties, Tex.
San Diego, Calif.	Coextensive with San Diego County, Calif.
San Francisco-Oakland, Calif.	Consists of Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties, Calif.
San Jose, Calif.	Coextensive with Santa Clara County, Calif.
San Juan, P.R.	Consists of Bayamon, Canovanas, Carolina, Catano, Guaynabo, Loiza, San Juan, Toa Baja, and Trujillo Alto Municipios, P.R.
Santa Barbara-Santa Maria-Lompoc, Calif.	Coextensive with Santa Barbara County, Calif.
Santa Cruz, Calif.	Coextensive with Santa Cruz County, Calif.
Santa Rosa, Calif.	Coextensive with Sonoma County, Calif.
Sarasota, Fla.	Coextensive with Sarasota County, Fla.
Savannah, Ga.	Consists of Bryan, Chatham, and Effingham Counties, Ga.
Seattle-Everett, Wash.	Consists of King and Snohomish Counties, Wash.
Sherman-Denison, Tex.	Coextensive with Grayson County, Tex.
Shreveport, La.	Consists of Bossier, Caddo, and Webster Parishes, La.
Sioux City, Iowa-Nebr.	Consists of Woodbury County, Iowa and Dakota County, Nebr.
Sioux Falls, S. Dak.	Coextensive with Minnehaha County, S.D.
South Bend, Ind.	Consists of Marshall and St. Joseph Counties, Ind.
Spokane, Wash.	Coextensive with Spokane County, Wash.
Springfield, Ill.	Consists of Menard and Sangamon Counties, Ill.

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Springfield, Mo.	Consists of Christian and Greene Counties, Mo.
Springfield, Ohio	Consists of Champaign and Clark Counties, Ohio
Springfield-Chicopee-Holyoke, Mass.-Conn.	Consists of Chicopee, Holyoke, Springfield, and Westfield cities and Agawam, East Longmeadow, Hampden, Longmeadow, Ludlow, Monson, Palmer, Southwick, West Springfield, and Wilbraham towns in Hampden County; Northampton city and Belchertown, Easthampton, Granby, Hadley, Hatfield, Southampton, and South Hadley towns in Hampshire County; Warren town in Worcester County, Mass.; and Somers town in Tolland County, Conn.
Stamford, Conn.	Consists of Stamford city and Darien, Greenwich, and New Canaan towns in Fairfield County, Conn.
Steubenville-Weirton, Ohio-W. Va.	Consists of Jefferson County, Ohio and Brooke and Hancock Counties, W. Va.
Stockton, Calif.	Coextensive with San Joaquin County, Calif.
Syracuse, N.Y.	Consists of Madison, Onondaga, and Oswego Counties, N.Y.
Tacoma, Wash.	Coextensive with Pierce County, Wash.
Tallahassee, Fla.	Consists of Leon and Wakulla Counties, Fla.
Tampa-St. Petersburg, Fla.	Consists of Hillsborough, Pasco, and Pinellas Counties, Fla.
Terre Haute, Ind.	Consists of Clay, Sullivan, Vermillion, and Vigo Counties, Ind.
Texarkana, Tex.-Texarkana, Ark.	Consists of Bowie County, Tex. and Little River and Miller Counties, Ark.
Toledo, Ohio-Mich.	Consists of Fulton, Lucas, Ottawa, and Wood Counties, Ohio and Monroe County, Mich.
Topeka, Kans.	Consists of Jefferson, Osage, and Shawnee Counties, Kans.
Trenton, N.J.	Coextensive with Mercer County, N.J.
Tucson, Ariz.	Coextensive with Pima County, Ariz.
Tulsa, Okla.	Consists of Creek, Mayes, Osage, Rogers, Tulsa, and Wagoner Counties, Okla.
Tuscaloosa, Ala.	Coextensive with Tuscaloosa County, Ala.
Tyler, Tex.	Coextensive with Smith County, Tex.
Utica-Rome, N.Y.	Consists of Herkimer and Oneida Counties, N.Y.
Vallejo-Fairfield-Napa, Calif.	Consists of Napa and Solano Counties, Calif.
Vineland-Millville-Bridgeton, N.J.	Coextensive with Cumberland County, N.J.
Waco, Tex.	Coextensive with McLennan County, Tex.
Washington, D.C.-Md.-Va.	Consists of District of Columbia; Charles, Montgomery, and Prince Georges Counties, Md; and Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park cities and Arlington, Fairfax, Loudoun, and Prince William Counties, Va.
Waterbury, Conn.	Consists of Thomaston, Watertown, and Woodbury towns in Litchfield County; and Waterbury city, Naugatuck borough, and Beacon Falls, Cheshire, Middlebury, Prospect, Southbury, and Wolcott towns in New Haven County, Conn.
Waterloo-Cedar Falls, Iowa	Coextensive with Black Hawk County, Iowa
West Palm Beach-Boca Raton, Fla.	Coextensive with Palm Beach County, Fla.
Wheeling, W. Va.-Ohio	Consists of Marshall and Ohio Counties, W. Va. and Belmont County, Ohio
Wichita, Kans.	Consists of Butler and Sedgwick Counties, Kans.
Wichita Falls, Tex.	Consists of Clay and Wichita Counties, Tex.
Williamsport, Pa.	Coextensive with Lycoming County, Pa.
Wilmington, Del.-N.J.-Md.	Consists of New Castle County, Del.; Salem County, N.J.; and Cecil County, Md.
Wilmington, N.C.	Consists of Brunswick and New Hanover Counties, N.C.
Worcester, Mass.	Consists of Worcester city and Auburn, Berlin, Boylston, Brookfield, Charlton, East Brookfield, Grafton, Holden, Leicester, Millbury, Northborough, Northbridge, North Brookfield, Oxford, Paxton, Shrewsbury, Spencer, Sterling, Sutton, Upton, Uxbridge, Webster, Westborough, and West Boylston towns in Worcester County, Mass.
Yakima, Wash.	Coextensive with Yakima County, Wash.
York, Pa.	Consists of Adams and York Counties, Pa.
Youngstown-Warren, Ohio	Consists of Mahoning and Trumbull Counties, Ohio

Appendix B. Limitations of the Data and Explanation of Terms

LIMITATION OF THE DATA

The MA-175 survey was conducted to measure the impact of Government procurement upon the manufacturing economy and upon geographic areas in terms of 92 Government-oriented industries. Similar data for other manufacturing industries which may have made shipments to the Federal Government are not available. Therefore, the data at the U.S. level do not represent all Federal Government procurement, only that of the 92 industries selected for the sample. It is believed these industries constitute the vast bulk of Federal procurement. For the most part, shipments to the Federal Government represented by the data shown in this report consist of finished goods or components produced to military specifications. With the exception of the machinery industries, the major portion of Government business of these industries is subject to renegotiation and, therefore, is separately identified in the records of the respondents. The respondents, in fact, were advised that they could base their subcontract shipments and receipts on those transactions.

Government shipments consist of products shipped to (or receipts for work done for) Federal agencies, their contractors, subcontractors, and suppliers. The Government total is further subdivided into shipments or receipts (1) on Government prime contracts and (2) to or from other manufacturers in ultimate performance of Federal Government contracts (subcontracts).

The prime contract of shipments figures for the industries surveyed account for the great bulk of all such Government contracts in manufacturing, while the subcontract data represent a much smaller proportion of the total subcontracts for all manufacturing. The survey was designed primarily to measure the volume of shipments to the Federal Government made by prime contracting industries and was not intended to include all manufacturing industries that may have been engaged in subcontracting activities related to Government contracts. In interpreting the figures for subcontract work, it should be noted that these industries do not represent all "basic materials" and "other components" industries that are usually important in subcontracts. Shipments of materials and companies purchased by the Government and furnished to contractors supplying finished equipment were reported as prime contracts.

Furthermore, there is no indication of the level of subcontracting (e.g., first tier, second tier, etc.). Because of the nature of the industries surveyed, it is likely that, except for a few industries such as electronic components, most of the subcontracting is first tier only, and the pyramiding of shipments values from one tier to another is not large.

In addition to data shown for the 92 selected industries, this report includes separate data on "miscellaneous industries." Respondents were instructed that if their company has significant research, development, test, evaluation, or production contracts in the fields of aerospace, atomic energy, electronics, instrumentation, ordnance, or shipbuilding, which were assigned by the company to establishments that were not covered in the MA-100 survey, they were to complete a Form MA-175 for each such location. These nonmanufacturing facilities of the manufacturing companies reporting on this survey are classified in this category, which also includes a small number of nonprofit research corporations working on defense contracts.

The particular sample selected for this survey is one of a large number of similar probability samples of the same size that could have been selected, by chance, using the same sample design. Each of the possible samples would yield somewhat different sets of results. The sampling errors—the differences between the estimates obtained and the results theoretically obtainable from a comparable complete canvas of the same target universe—are unknown. Guides to the potential size of the sampling errors, however, are provided by the estimated relative standard errors of the estimates. These are shown for a few key data items in the report. On the average, relative standard errors tend to be somewhat higher for detailed figures than for larger aggregates.

In conjunction with its associated estimates, the relative standard error (computed as the estimated standard error of estimate divided by the value of the estimate itself) may be used to define confidence intervals, ranges which could be expected to include comparable complete coverage values for specified percentages of all possible samples. The complete coverage value would be included in the range:

1. From one standard error below to one standard error above the derived estimate for about two-thirds of all samples.
2. From two standard errors below to two standard errors above the derived estimate for about 19 out of 20 of all possible samples.
3. From three standard errors below to three standard errors above the derived estimate for nearly all samples.

An inference that the comparable complete coverage results would be within the indicated ranges would be correct in approximately the relative frequencies shown. Those propor-

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tions, therefore, may be interpreted as defining the confidence that the estimates shown would differ from complete-coverage results by as much as one, two, or three standard errors, respectively.

For example, if an estimated total is shown as \$20.0 million with an associated relative standard error of 2 percent, the standard error is \$0.4 million. Then there is approximately 67 percent confidence that the interval \$19.6 to \$20.4 million includes the complete coverage total, about 95 percent confidence that the interval \$19.2 to \$20.8 million includes the complete coverage total, and almost certain confidence that the interval \$18.8 to \$21.2 million includes the complete coverage total.

In addition to the sampling errors, the estimates are subject to various response and operational errors: errors of collection, reporting, transcription, etc. These operational errors would also occur if a complete canvass were to be conducted under the same conditions as this survey. Explicit measures of their effects generally are not available. However, it is believed that most of the important operational errors were detected and corrected in the course of the Census Bureau's review of the data for reasonableness and consistency.

EXPLANATION OF TERMS FOR MA-175 SURVEY

NOTE: Respondents in both the MA-100 and the MA-175 surveys were asked to copy onto their MA-175 reports the figures on employment, cost of materials, and value of shipments as reported on the corresponding Form MA-100. The following definitions of these terms are based on the reporting instructions for Form MA-100.

All employees. This category includes all full-time and part-time employees on the payrolls of operating manufacturing establishments who worked or received pay for any part of the pay period ended nearest the 12th of the month specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during this pay period. Excluded are members of the Armed Forces and pensioners carried on the active rolls but not working during the period. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are, however, excluded from the total.

Production and related workers. This category includes workers (up through the working foreman level) engaged in fabricating, processing, assembling, inspecting, receiving, storage, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial and watchman services, product development, auxiliary production for plants' own use (e.g., power plant), recordkeeping, and other closely associated services. Excludes proprietors and partners.

All other employees. Nonproduction personnel, including those engaged in the following activities: supervision above working foreman level, sales (including driver salesmen), sales delivery (truck drivers and helpers), advertising, credit, collection, installation and servicing of own product, clerical and routine office functions, executive, purchasing, finance, legal, per-

sonnel (including cafeteria, etc.), professional, and technical. Excludes proprietors and partners.

Average employment. The annual survey report forms requested employment figures for "production and related workers" for four selected pay periods (i.e., production workers' midmonth employment in March, May, August, and November). For "all other employees" only a mid-March figure was requested. Thus, the "annual average" is composed of an average of the four monthly figures for the "production workers" plus the March figure for "all other employees."

Value added by manufacture. This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments (or value of production) plus receipts for services rendered. This figure is then adjusted by the addition of value added by merchandising operations (that is the difference between the sales value and cost of merchandise sold without further manufacture, processing, or assembly) plus the net change in finished goods and work-in-process inventories between the beginning and end of the year. However, value added for 1974 through 1979 for SIC 3731 was not adjusted for inventory changes between the beginning and ending of the year.

Value added avoids the duplication in the value of shipments figure which results from the use of products of some establishments as materials by others. Consequently, it is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

Cost of materials. This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. Manufacturers included the cost of materials or fuel consumed regardless of whether these items were purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

To arrive at the industry total cost of materials, separate figures were obtained for (a) the total delivered cost of all raw materials, semifinished goods, parts, components, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during that year; (b) the amount paid for electric energy purchased; (c) the amount paid for all fuels consumed for heat, power, or the generation of electricity; (d) the cost of work done by others on materials or parts furnished by manufacturing establishments (contract work); and (e) cost of products bought and resold in the same condition. The total excludes the cost of services used, such as advertising, insurance, telephone, etc., and research, developmental, and consulting services of other establishments; it also excludes overhead costs, such as depreciation charges, rent, interest, royalties, etc. It excludes materials, machinery, and equipment used in plant expansion or capitalized repairs which are chargeable to fixed assets accounts.

APPENDIX B

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Value of shipments. The amounts under value of shipments are the received or receivable net selling values, f.o.b. plant, after discounts and allowances, and excluding freight charges and excise taxes. Under the general heading of shipments, manufacturers were asked to include all items made by or for each establishment from materials owned by it, whether sold, transferred to other plants of the same company, or shipped on consignment. Also included were receipts for contract work and for such miscellaneous activities as sale of scrap and refuse, installation work by manufacturing plant employees, research and development work, and repair work. The net selling value of products made in one plant on a contract basis from materials owned by others was reported by the plant providing the materials. The value of products bought and resold without further processing (merchandising) was reported separately and is included in the value of shipments totals for each industry.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company (i.e., other manufacturing plants, separate sales branches, or retail stores) as though the establishments were separate economic units. The company was requested to include in "value of interplant transfers within the company" not only the direct costs of production but also a reasonable proportion of "all other costs" (including company overhead) and profit.

Value of production. Although establishments in most industries reported value of shipments (as defined above), establishments in SIC 3731 reported value of production for 1979 and earlier years since value of production was considered to be a more appropriate measure of output in these industries for that period.

EXPLANATION OF TERMS FOR MA-171 SURVEY

Wage board and graded employees. These classifications refer to those nonmilitary personnel employed by Department of Defense-owned and -operated establishments. The Department of Defense categories of "wage board" and "graded" correspond to "production and related workers" and "all other employees," respectively, for industrial manufacturing facilities.

Costs. Represents the cost of materials, supplies, and parts used; the cost of contractual services; and other costs directly related to the manufacturing activities of the installation.

Value of shipments or receipts for services. Represents total billings (including progress billings) based on the Industrial Fund accounting system of the Department of Defense, including receipts for construction and conversion, manufacture and assembly, and research and development. Unbilled costs of work in progress are reported separately.

Total revenue. Represents total billings adjusted by the increase or decrease in the unbilled costs of work in progress.

Value added by manufacture. Value added A represents total revenue less cost of materials. Value added B represents total revenue less cost of materials, contractual services, and other costs.

Appendix C. Description of Survey Sample and Estimating Procedure

The estimates presented in this report are derived from a probability sample of approximately 6,500 manufacturing establishments which were selected from the 1977 Census of Manufactures. The sample included only plants in 92 of the approximately 450 four-digit SIC manufacturing industries, which on the basis of earlier, more detailed studies had been shown to be engaged most extensively in business with the Federal Government.

A certainty cutoff level of 500 employees was arbitrarily defined for the survey; that is, all in-scope establishments with employment of 500 or more were included in the sample with certainty. The smaller establishments were subsequently assigned sampling probabilities that were proportional to their total value of shipments. No establishment, regardless of its shipments, was assigned a probability less than 0.005. Establishments chosen for the survey were assigned weights equal to the reciprocal of their probabilities of selection. Individual establishment data were inflated by their sampling weights to develop industry or geographic reciprocal estimates that are used in the final estimation procedure.

All establishments included in the MA-175 survey were instructed to report total employment, cost of materials, and value of shipments. These data were to be identical to the data reported for these items on the 1979 MA-100 form filed with the Census Bureau for that plant, providing the establishment reported on the MA-100. In addition, the establishments were instructed to indicate by means of a check box inquiry the range of value of shipments made by the establishment to the Federal Government in 1979. Those establishments indicating shipments of \$1 million or more to the Federal Government were asked to report the value of such shipments classified by the specific Government agency to which the products were billed, while the remaining plants (those indicating value of shipments of less than \$1 million to the Federal Government) were not required to complete this portion of the inquiry. In order to estimate for the latter respondents, a linear approximation to the mean value of the range (which the respondent checked) was employed. The following values were used to estimate shipments for establishments that shipped less than \$1 million to the Federal Government:

Up to \$100,000, estimated at \$42,000
 \$100,000 to \$249,999, estimated at \$150,000
 \$250,000 to \$499,999, estimated at \$350,000
 \$500,000 to \$999,999, estimated at \$700,000

These estimates are included in the "other Government agency not specifically known" category.

A Government employment figure is shown in the various tables. This also is an estimated figure derived as a straight proration of the employment of the plant by the ratio of the Government shipments data reported by agency as a percentage of the total shipments of that establishment.

There was a major change in 1978 from past publications in the estimation procedures. Government shipments totals in the 1978 report were ratio-estimated based on data from the ASM. This was done by first developing reciprocal estimates (individual plant data multiplied by its sample weight) for each industry or geographical area as mentioned above for all data items on the MA-175 survey form. Total employment (TE) and total value of shipments (TVS) are collected both on the MA-175 and ASM (MA-100) survey forms. The reciprocal estimates at each U.S. four-digit industry cell for total employment and total value of shipments from the MA-175 were compared to the ASM estimate for the corresponding four-digit industry. These resulting ratios were multiplied by the MA-175 reciprocal estimates of Government shipments or Government employment to adjust the original estimates; that is, the revised Government shipments estimate for industry "i" is defined as:

$$X'_i = \left(\frac{MA-100_i}{MA-175_i} \right) X_i$$

Where

X'_i is the revised estimate of Government shipments for industry i.

MA-100_i is the estimate of total value of shipments for industry "i" obtained from the ASM.

MA-175_i is the reciprocal estimate of total value of shipments for industry "i" obtained from the MA-175.

X_i is the reciprocal estimate of Government shipments for industry "i" obtained from the MA-175.

Data at the State and area level for Government shipments and employment were obtained by a ratio of $\frac{X'}{X}$ multiplied by the area estimate X_a , i.e.,

$$Xa' = \frac{X'}{X} (Xa)$$

Where

Xa' is the adjusted Government shipments for area "a."

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APPENDIX C

X' is the sum of the adjusted Government shipments summed over all 92 four-digit industries within the scope of the MA-175 survey.

X is the sum of the unadjusted Government shipments summed over all 92 four-digit industries within the scope of the MA-175 survey.

X_a is the unadjusted Government shipments for geographic area "a."

Similar adjustments were made to the area estimates for total Government employment. The ratios $\frac{X'}{X}$ actually computed were 1.06 and 1.05 for shipments and employment respectively.

All Government-related data for 1977 and 1978 in this report have been adjusted in this fashion. For 1977, however, the link was to the 1977 Census of Manufactures data (complete enumeration). As the 1979 ASM totals have yet to be published, this methodology cannot be directly employed for the 1979 survey data. As an interim procedure, it was initially planned to estimate 1979 ASM level numbers by adjusting the 1978 ASM estimates by the year-to-year movement indicated by the 1979 to 1978 MA-175 reciprocals, i.e.,

$$Y'_i = Y_i \left(\frac{'79 \text{ MA-175}_i}{'78 \text{ MA-175}_i} \right)$$

Where

Y'_i is the estimated 1979 ASM value for industry "i."

Y_i is the 1978 ASM value for industry "i."

'79 MA-175 is the 1979 MA-175 reciprocal estimate for industry "i."

'78 MA-175 is the 1978 MA-175 reciprocal estimate for industry "i."

Y'_i could then replace MA-100_i in the methodology described above. However, as a new MA-175 survey panel was selected for 1979, the estimated year-to-year change was found to be very unreliable. In part, this was due to the coverage deterioration of the prior MA-175 panel and in part due to the independence of the two panels. Accordingly, the decision was made only for 1979 to publish MA-175 reciprocal estimates for employment, value added, and total shipments. When 1979 ASM estimates become available, future publications will show 1979 data adjusted by the methodology previously described. In future years, when the current ASM data are not available, the procedure for obtaining Y'_i can be performed since the identical panel will be estimating both current and prior year MA-175 values.

The statistics for the MA-171 survey (tables 7 and 8) are obtained from a complete census of all defense-owned and -operated manufacturing facilities and hence are universe estimates.

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Appendix D. Survey Forms and Instructions

RETURN THIS FORM WITHIN **90** DAYS AFTER RECEIPT **90** U.M.B. No. **101000000** **NOVEMBER 1990 1990**

REPORT FOR CALENDAR YEAR 1979

FORM **MA-575** U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS

CURRENT INDUSTRIAL REPORTS

REPORT ON SHIPMENTS TO FEDERAL GOVERNMENT AGENCIES

INSTRUCTIONS - Please refer to the Instruction Manual before filing this form. Complete and return this form in the envelope provided to: Bureau of the Census 1201 East Tenth Street Jeffersonville, Indiana 47132

EMPLOYER IDENTIFICATION (EI) NUMBER Identification number used on Employer's Quarterly Federal Tax Return (U.S. Treasury Department Form 941) (Enter if not shown) (Correct number if wrong)

PERSON TO BE CONTACTED (Enter name and telephone number if not shown - Correct if wrong)

Name Area code Number

PART I Section A CURRENT REPORT

For each item listed below, enter figures for current period or mark "None" in column (d).

Item (a)	Unit of measure (b)	Item code (c)	Amount for this period in unit of measure shown in column (b) (Enter figure or mark None)			THE FIGURES SHOWN BELOW WERE REPORTED FOR THE PREVIOUS TWO PERIODS	
			1979 (d)	1978 (e)	1977 (f)		
1. AVERAGE TOTAL EMPLOYMENT OF THIS PLANT (SAME AS ITEM 20, CENSUS FORM MA-100)	NUMBER	1200					
2. TOTAL COST OF MATERIALS OF THIS PLANT (SAME AS ITEM 21, CENSUS FORM MA-100)	\$1,000	1200					
3. TOTAL VALUE OF SHIPMENTS AND/OR DELIVERIES (SAME AS ITEM 14A, CENSUS FORM MA-100)	\$1,000	1200					
4. CIRCLE CODE BELOW WHICH INCLUDES SHIPMENTS TO FEDERAL GOVT. AGENCIES:							
NONE							
UP TO \$999,999							
\$1,000,000-\$499,999							
\$500,000-\$999,999							
\$1,000,000-\$4,999,999							
\$5,000,000-\$9,999,999							
\$10,000,000 OR MORE							
5. IF YOU CIRCLED CODE 1000, COMPLETE ITEMS 5012-5042. IF NOT, COMPLETE PART II.							
VALUE OF SHIPMENTS TO FEDERAL GOVT. AGENCIES:							
(A) DIRECT (AS A PRIME CONTRACTOR):							
000	\$1,000	1200					
INASA	\$1,000	1200					
DEPT. OF ENERGY	\$1,000	1200					
OTHER FEDERAL AGENCIES	\$1,000	1200					
(B) INDIRECT (AS A SUBCONTRACTOR OR SUPPLIER) INCLUDE TRANSFERRED TO OTHER PLANTS OF THE SAME COMPANY:							
(1) GOVT. AGENCY SPECIFICALLY KNOWN							
000	\$1,000	1200					
INASA	\$1,000	1200					
DEPT. OF ENERGY	\$1,000	1200					
OTHER FEDERAL AGENCIES	\$1,000	1200					
(2) GOVT. AGENCY NOT KNOWN							
(C) OTHER SHIPMENTS (ITEM CODES 5001-5004)							
MANUFACTURING CODES 5001-5004	\$1,000	1200					

Continuation sheets are included, if all of your items could not be listed on this page. If additional space is needed, use reverse side of page 1.

* Figures not received when form was prepared. PLEASE ENTER, if not already submitted.

CIR-5M (8-78) (Over)

[illegible]

APPENDIX D

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ITEM 5 BILLINGS BY THIS ESTABLISH- MENT DURING CALENDAR YEAR 1979	Enter below the specified classes of billings of this establishment for calendar year 1979		
	Billings for products and services (including progress billings)	Item code	Value (Thousands of dollars)
	Manufacture and assembly	61	\$
	Construction and conversion	62	
	Overhaul, repair, and renovation	63	
	Alteration and modification	64	
	Research and development	65	
	Other billings	66	
	Total billings for products and services	67	
	Increase or decrease in unbilled costs of work in progress	68	
TOTAL EARNED REVENUE →		69	
ITEM 6 COSTS DURING CALENDAR YEAR 1979	Types of costs incurred	Item code	Cost (Thousands of dollars)
	Materials, supplies, and parts used	71	\$
	Wages and salaries (same as item 3, code 49, col. G)	72	
	Contractual services and other costs	73	
	TOTAL COSTS INCURRED →	79	
VALUE ADDED (Census use only)		81	
ITEM 7 CHECKS TO ASSURE A COMPLETE AND ACCURATE REPORT (Please complete this item after you have answered all items on this report.)	The Census Bureau reviews your report for omissions, inconsistencies, and unusual ratios. To save you future correspondence about these problems, please make the following checks before returning your report: a. Review this report carefully to see that no items are omitted. b. Calculate and enter the four "reasonableness" checks (described below), then review the resulting figures. c. Correct your report for any errors you find; explain unusual figures in "Remarks" section.		
	"Reasonableness" checks	Calculation required for each check	Resulting figures for 1979
	(1) Average hourly wages per Wage Board employee	Item code 41, column G (Wages paid Wage Board employees) + item code 59, column B (Total estimated man-hours)	\$
	(2) Work days per year per Wage Board employee	Item code 59, column A (Wage Board work days in thousands) × 1,000 + item code 41, column F (Average number of Wage Board employees)	Work days
	(3) Wages and salaries per dollar of earned revenue	Item code 72, (Wages and salaries of civilian employees) + item code 69 (Total earned revenue)	\$
	(4) Is the total earned revenue (item code 69, total) greater than total costs incurred (item code 79, total)? <input type="checkbox"/> Yes <input type="checkbox"/> No - If "No," please explain in "Remarks" section.		
ITEM 8 REMARKS PERTAIN- ING TO THIS REPORT			
PERIOD OF REPORT	This report covers the period from _____ to _____		
ITEM 9	Name of person to contact regarding this report	Address - Number and street, city, State, ZIP code	Telephone - Area code, number, extension
ITEM 10	CERTIFICATION - This report is substantially accurate and has been prepared in accordance with instructions.		
	Name of establishment	Address - Number and street, city, State, ZIP code	
	Signature of authorized official	Title	Date

FORM MA-171 (12-18-78)

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APPENDIX D

Form Approved: Interagency Control No. 1077-DOC-AN

FORM MA-171 (12-18-78)		U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS		NOTICE - Response to this inquiry is required by law (title 13, U.S. Code). By the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.													
DEPARTMENT OF DEFENSE-OWNED AND OPERATED ESTABLISHMENTS PRIMARILY ENGAGED IN MANUFACTURING AND ASSEMBLY, AND/OR RESEARCH AND DEVELOPMENT - 1979 (Includes shipyards)				(Please correct if any error in name and address, including ZIP code)													
INSTRUCTIONS - This report is to be prepared by those Department of Defense establishments whose primary activities are manufacture and assembly and/or research and development. All shipyards are included. The information requested is based upon reports now regularly prepared by most such establishments.				PLEASE RETURN THIS COPY													
ITEM 1 - NAME AND PHYSICAL LOCATION OF ESTABLISHMENT ON DECEMBER 31, 1979																	
a. Name of establishment			d. Is this establishment physically located within the legal boundaries of the place named in "c"? <input type="checkbox"/> Yes <input type="checkbox"/> No														
Your answers to parts b, c, d, e, and f of this item should relate to the ACTUAL PHYSICAL LOCATION of this establishment which may be different from the mailing address.																	
b. Street and number of establishment location*			e. County in which located														
* If establishment location cannot be described by street and number, give name and number, if any, of road or highway and sufficient information to locate establishment, e.g., Rt. 25, 3 miles south of Charlesville.			f. State ZIP code														
c. Type and name of place in which located - Mark (X) first applicable type and enter name of place.			g. Telephone number of establishment (Include area code)														
<table border="1"> <thead> <tr> <th>Type</th> <th>Name of place</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> City</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Village or borough</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Town</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Township</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other - Specify</td> <td></td> </tr> </tbody> </table>			Type	Name of place	<input type="checkbox"/> City		<input type="checkbox"/> Village or borough		<input type="checkbox"/> Town		<input type="checkbox"/> Township		<input type="checkbox"/> Other - Specify		ITEM 2 - NATURE OF ACTIVITY Describe briefly the kind of activity of this establishment. If a manufacturing plant, list the three most important products.		
Type	Name of place																
<input type="checkbox"/> City																	
<input type="checkbox"/> Village or borough																	
<input type="checkbox"/> Town																	
<input type="checkbox"/> Township																	
<input type="checkbox"/> Other - Specify																	

ITEM 3 EMPLOYMENT PAYROLLS IN CALENDAR YEAR 1979 (Civilian employees only)	Class of employee	Item code	Number of civilian employees in 1979					Total wages and salaries of civilian employees (Thousands of dollars) (G)	
			At end of quarter (As reported on Civil Service Form SF-113-A)**				Sum of columns A, B, C, and D (E)		Average number of employees (Col. E divided by 4) (F)
			March (A)	June (B)	September (C)	December (D)			
a. Wage Board employees		41							\$
b. All others		42							\$
c. TOTAL CIVILIAN EMPLOYEES (Sum of lines a and b)		49							\$
** The number of Wage Board employees (line a) should be the same as reported on line 5 of SF-113-A. The total (line c) should be the same as reported on line 1 of SF-113-A.									
ITEM 4 WORK DAYS OF WAGE BOARD EMPLOYEES BY CALENDAR QUARTER 1979	Enter the total number of work days of Wage Board employees for each calendar quarter of 1978. Do not include days paid for vacations, holidays, or sick leave.	Item code	1979 Quarterly period	Work days (Thousands) (A)	Estimated number of work hours*** (Thousands) (B)				
		51	a. January through March						
		52	b. April through June						
		53	c. July through September						
		54	d. October through December						
		59	e. TOTAL, 1979 (Sum of lines a, b, c, and d)						
*** Obtain figure for column (B) by multiplying column (A) by average number of hours per day per Wage Board employee in this establishment.									

Please continue on page 2



U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

Current Industrial Reports

INSTRUCTION MANUAL

FOR REPORTING ON FORM MA-175 FOR 1979
REPORT ON SHIPMENTS TO
FEDERAL GOVERNMENT AGENCIES
ANNUAL REPORT

MA-175 (1-3-80)

INTRODUCTION

This manual provides the instructions for completing your report. Please complete and return the white copy of the report form and retain the completed yellow copy for your files.

- Part A below gives general instructions about your report.
- Part B explains the format of the report form and how to report the items.
- Part C gives definitions and special instructions you should use in preparing your report.
- Part D contains the reference list of items covered in this survey.

This instruction manual has been modified slightly in part C to clarify shipments for the Aerospace Industry.

Part A - GENERAL INSTRUCTIONS

► 1. Filing the report

Return your completed form to the Bureau of the Census, 1201 East Tenth Street, Jeffersonville, Indiana 47132, Attn: CIR, within 30 days after receipt. We will accept reasonable estimates if your figures are not available within this time period. Please use the preaddressed return envelope that is sent with each report.

We have designed your report form for automatic processing by electronic computers. We would appreciate your using a typewriter to enter all your figures.

If this survey is not applicable to your establishment's operations, please note this fact under the "REMARKS" section of the report form together with a brief description of the principal products manufactured at this establishment and RETURN THE REPORT.

► 2. Correspondence about your report

In any correspondence with the Census Bureau about your report, please include the title of the survey and the 11-digit file number shown in the address box of your report form.

► 3. Legal authority and confidentiality of data

Response to this inquiry is required by law (title 13, United States Code, sections 182, 224, and 225). By section 9 of the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

► 4. Publication of results of this survey

The Census Bureau will publish industry totals in the Current Industrial Reports, Series MA-175, as soon as possible after the necessary reports are received. Companies reporting in this survey can obtain copies of this publication without charge upon request to the Bureau of the Census, Industry Division, Washington, D.C. 20233.

► 5. Companies using blank report forms

The Reference List included in the Instruction Manual should be reviewed carefully to determine which of the items are applicable to your company. The descriptions and item codes should then be transcribed to the report form along with the respective current and previous period data. Please review part B of the Instruction Manual on "How to Report" for correct entry of your data.

Part B – HOW TO REPORT

- [illegible]

APPENDIX D

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Part C - DEFINITIONS AND SPECIAL INSTRUCTIONS - Continued**Total Employment, Cost of Materials, and Value of Shipments**

Item codes 2100, 2200, 3001 - All establishments should report total employment, total cost of materials, and total value of shipments. These figures should correspond to the respective items (employment-2h, cost of materials-5f, and value of shipment-14a) as reported in the Annual Survey of Manufactures Form MA-100. **Some establishments included in this survey may not receive form MA-100.** These establishments should report these three items in accordance with the instructions provided below. **Please complete these three items even if your plant has no shipments to the Federal Government.** Although reporting these items on both survey forms represents a duplication of reporting, it is very helpful in the accurate processing of this report, since the MA-175 form is processed before the larger MA-100 survey.

Total Employment

Item code 2100 - **All establishments should report total employment.** (You may follow the definition of employees specified by your State Employment Security Agency.)

Report the average number of employees at the establishment who worked or received pay for the four pay periods including the 12th of the following months: March, May, August, and November. Include all persons on paid sick leave, paid holidays, and paid vacation during these pay periods; exclude members of Armed Forces and pensioners carried on your active rolls. Include officers at this establishment, if a corporation; if an unincorporated concern, exclude proprietor or partners. This figure should correspond to item 2h on the Annual Survey of Manufactures Form MA-100.

Cost of Materials

Item code 2200 - **All establishments should report total cost of materials.** Report the delivered cost figures which should cover all raw materials, containers, scrap, and supplies, etc., which were: (1) put into production, (2) used as operating supplies, or (3) used in repair and maintenance. **INCLUDE** only physical goods. Report total cost materials actually consumed or put into production during the year.

Cost is delivered cost, i.e., the amount paid or payable after discounts and including freight and other direct charges incurred by the establishment in acquiring the materials.

Include all materials received for consumption, i.e., purchases from other companies, transfers from other establishments of your own company, and withdrawals from inventories.

If the establishment produces items subsequently consumed in further production, report cost of original materials consumed only.

EXCLUDE services used or overhead charges, such as advertising, telephone, telegram and cable, insurance, research and development; services of engineering, management, marketing and other professional consultants, etc., unless charges for such services are included in the prices paid for materials.

EXCLUDE also overhead items such as depreciation charges against plant and equipment; rent and rental allowances; interest payments, royalties, and patent fees.

EXCLUDE materials, supplies, machinery, and equipment which were used in the construction of new structures, additions to plant, or new machinery and equipment, and which are chargeable to fixed assets accounts. Exclude products purchased and resold without further manufacture of processing or assembly.

This figure should correspond to item 5f, on the Annual Survey of Manufactures Form MA-100.

Value of Shipments

Item code 3001 - **All establishments should report value of shipments.** Report the total value of products shipped and other receipts.

Include products made elsewhere for this establishment on a contract basis from materials supplied by this establishment. (The cost of these materials should be reported in item code 2200.)

Value should be net selling value f.o.b. plant after discounts and allowances. Exclude freight charges and excise taxes.

Sale of products bought and resold without further processing should also be included.

This figure should correspond to item 14a, on the Annual Survey of Manufactures Form MA-100.

Special Reporting Instructions

a. **Long-term contracts other than shipbuilding and aircraft** - Sales that are associated with long-term contracts should normally be reported on a "delivery" rather than a "percentage-of-completion" basis.

b. **Special reporting instructions for shipbuilding and aircraft and aerospace industries** - Because of the importance of long-term contracts in the shipbuilding and aircraft and aerospace industries, special instructions have been developed. These instructions are believed to be consistent with usual accounting practices for these industries:

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APPENDIX D

Part C - DEFINITIONS AND SPECIAL INSTRUCTIONS - Continued

Special Reporting Instructions - Continued

1. Include all sales from production, and receipts for research development, performed for other companies, individuals, U.S. Government agencies, and foreign governments. However, exclude research and development financed by your company. Sales by foreign subsidiaries should be excluded. Transfers within the reporting unit should also be excluded. Transfers to other reporting units should be included.
2. *Shipbuilding and repairing* - For ships under construction, report the value of work done during the year as shipments. For vessels begun earlier than the beginning of the year or not completed during the year, report only the value of work done during the year. Value of work done during the year may be based on (a) multiplying the estimated percentage of work completed during the year by the contract price of the vessel, or (b) net billings for work done during the year.
3. *Producers of complete aircraft and missiles* - For items produced under a **fixed price contract**, report as shipments the value of deliveries during the year of complete aircraft, missiles, space vehicles, and missile or space vehicle engines.

Work done on a **cost-plus-contract** should reflect the value of work done during the year. Value of work done during the year may be based on (a) multiplying the estimated percentage of work completed during the year by the contract price of aircraft or missile, or (b) net billings for work done during the year.

Government Shipments

Government shipments are defined broadly as transactions (including services performed) between your establishment or firm and the Federal Government. They may be either prime (direct) or sub (indirect). Circle the code which represents the dollar volume of your Government shipments. If code 1006 is circled, report these shipments by Federal Government agency (item codes 3012 through 3042). If one of the codes 1001-1005 is circled, do not complete the remaining codes; sign the form and return it.

Shipments to Foreign Governments

Government shipments should include shipments to foreign governments that are made based upon contracts with the U.S. Government, such as sales under the Foreign Military Assistance Program. Do not include as government shipments, shipments to foreign governments where the contract is between your firm and the foreign government even though the sale may have been subject to approval by an agency of the Federal Government.

Prime (Direct) Contracts

Prime or direct contracts are defined as those where the manufacturing establishment or firm has entered into a contract directly with a Federal Government agency. Distribute the amount of shipments by the Federal agencies listed in codes 3012 to 3015. Do not reduce the amount of prime contracts by that which is subcontracted to another company or to another plant of your firm.

Include only those amounts which you have shipped to the Federal Government during 1979 (see "Reporting Period") even though the overall contract may extend for several years. The only exceptions to this principle of reporting value of shipments (f.o.b. plant) during 1979 are the shipbuilding industry (SIC 3731), and the complete aircraft and missile industry (SIC 3721) which should report value of work done. In both instances, these definitions correspond to those used on the Annual Survey of Manufactures Form MA-100.

Subcontracts

Item codes 3026 through 3030 - Subcontracts are defined as shipments from your establishment to another firm or to another establishment of your own company which, in turn, ships the product to the Federal Government. Distribute the amount of shipments by the Federal agency (if known) in item codes 3026 through 3029. If the ultimate Federal agency is unknown, use item code 3030. Only include those amounts which you have actually shipped to another firm or establishment during 1979 (see "Reporting Period") even though the overall contract may extend for several years. Examples include shipments of raw and semi-fabricated materials, "standard" parts, assemblies, equipment, and components; work done by you in supplying "special" parts, components, or assemblies in accordance with a prime or subcontractor's designs, specifications, or directions; and services performed.

Note that the value of transfers to other plants of the same company is to be reported in these subcontract columns.

It is recognized that indirect government work is not always identified as such. In view of this, estimates will be acceptable in those instances where work is not subject to the Renegotiation Act of 1951, as amended.

Other Shipments

Item Code 3041 - Data reported here should represent the difference between the total values of shipments and/or receipts, item code 3001, and the sum of entries in item codes 3012 through 3030.

APPENDIX D

D-9

Part D - REFERENCE LIST		
Item description	Unit of measure	Item code
Total employment of this plant (average) (Same as item 2h, Census Form MA-100)	Number	2100
Total cost of materials by this plant (Same as item 5f, Census Form MA-100)	\$1,000	2200
Total value of shipments and/or receipts (Corresponds to item 14a, Census Form MA-100)	\$1,000	3001
<p>Circle the code which includes the shipments for the Federal Government</p> <p>1001 - None 1002 - Up to \$99,999 1003 - \$100,000 to \$249,999 1004 - \$250,000 to \$499,999 1005 - \$500,000 to \$999,999 1006 - \$1,000,000 or more</p> <p>If you circled code 1006 (\$1,000,000 or more), complete item codes 3012-3042.</p>		
<p>Shipments to Federal Government agencies</p> <p>Direct (as a prime contractor)</p> <p>DOD. \$1,000 3012</p> <p>NASA. \$1,000 3013</p> <p>Department of Energy \$1,000 3014</p> <p>Other Federal agencies \$1,000 3015</p> <p>Indirect (as a subcontractor or supplier) (Include transfers to other plants of the same company)</p> <p>Government agency specifically known</p> <p>DOD. \$1,000 3026</p> <p>NASA \$1,000 3027</p> <p>Department of Energy \$1,000 3028</p> <p>Other Federal agencies \$1,000 3029</p> <p>Government agency not specifically known. \$1,000 3030</p> <p>Other shipments (Item code 3001 minus item codes 3012-3030) \$1,000 3042</p>		

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