

Section 18

Communications

This section presents statistics on usage, finances, and operations of the various communications media: Postal service, telephone, telegraph, radio, television, newspapers, and books. Data on the postal service are included in the *Annual Report of the Postmaster General*. Statistics on revenues, volume of mail, and distribution of expenditures are presented in the U.S. Postal Service's annual *Revenue and Cost Analysis Report*. Principal sources of wire, radio, and television data are the Federal Communications Commission's *Annual Report*, its annual *Statistics of Communications Common Carriers*, and its annual releases of financial data reported by radio and television stations and networks. Statistics on number and circulation of newspapers and periodicals and on sales of books and pamphlets are issued by the Bureau of the Census in reports of the Census of Manufactures. Annual data on number and circulation of daily and Sunday newspapers appear in *International Yearbook Number*, issued by Editor and Publisher, New York. Monthly data on new books and new editions of books are presented by R. R. Bowker Company, New York, in *Publishers' Weekly*.

Postal Service.—"Revenue and cost analysis" is the term used by the Postal Service to describe its system of attributing revenues and costs to classes of mail and service. This system draws primarily upon probability sampling techniques to develop estimates of revenues, volumes, and weights as well as costs by class of mail and special service. The costs attributed to classes of mail and special services are primarily incremental costs which vary in response to changes in volume; they account for roughly one-half of the total costs of the Postal Service. Postal rates are set sufficiently above these incremental cost levels to recover all costs of the Postal Service.

Telephone and telegraph systems.—Statistical coverage of wire and radio communications has been concentrated in the Federal Communications Commission since its establishment in 1934. According to the Communications Act of 1934, as amended, the Commission has jurisdiction over carriers engaged in interstate or foreign communications service by means of wire or radio. The Commission requires all except the smallest of these carriers to file annual and monthly reports and requires the companies controlling any but the smallest to file annual reports. Full jurisdiction applies to practically all domestic and overseas telegraph carriers and to the Communications Satellite Corporation but not to a large number of telephone carriers which are engaged in interstate or foreign service only by connection with the facilities of another unaffiliated carrier. However, the gross operating revenues of the telephone carriers reporting annually to the Commission are estimated to cover over 90 percent of the revenues of all telephone carriers in the United States.

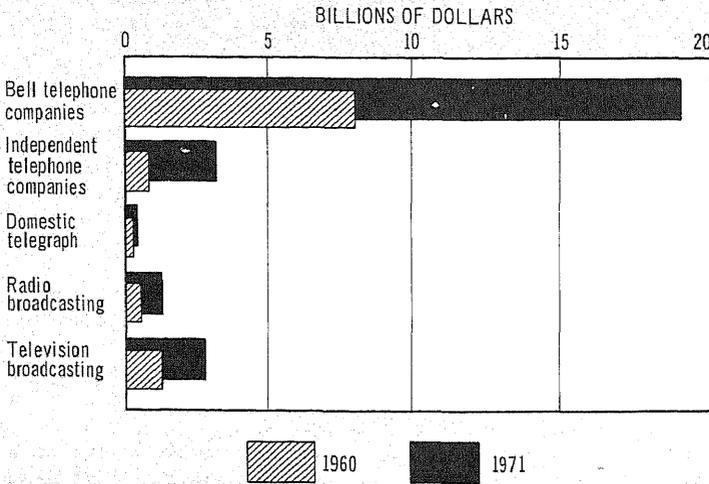
Broadcast.—The number of broadcast stations authorized refers to the number licensed or holding construction permits. Total broadcast revenues are defined as total sales of time, talent, programs, and services of all networks and stations, less commissions to agencies. Reports filed with the Federal Communications Commission by broadcast stations and networks cover substantially all units operating in the United States and its outlying areas.

Nonbroadcast radio.—Most of the nonbroadcast radio services are grouped together as the safety and special radio services, which constitute the greatest number of radio stations licensed by the Federal Communications Commission. Utilization of these services by individuals, industry, commerce, and State and local government covers broad fields of operations in connection with protection of life and property, industrial and agricultural production, transportation, disaster, and civil defense.

Historical statistics.—Tabular headnotes provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

FIG. XXXII. OPERATING REVENUES OF SELECTED COMMUNICATIONS MEDIA: 1960 AND 1971

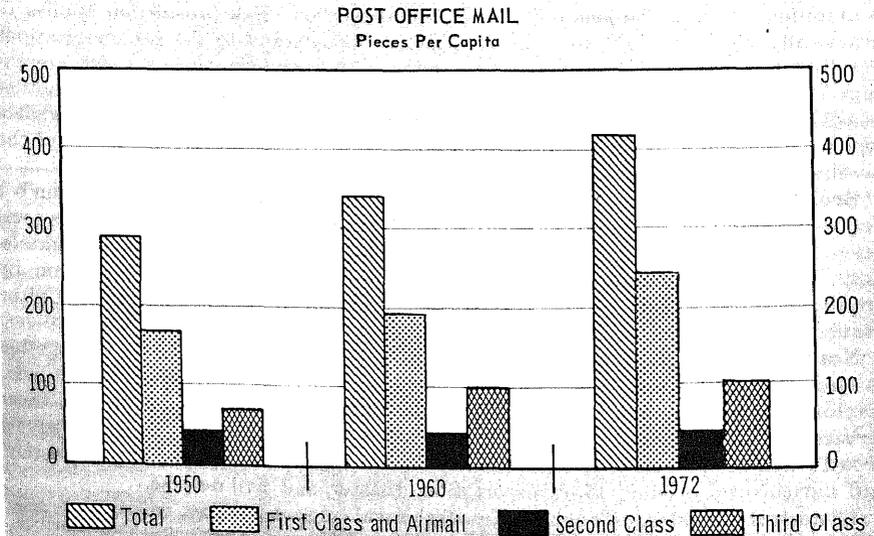
[See tables 802, 803, 805, 815, and 816]



Source: Chart prepared by U.S. Bureau of the Census. Data from American Telephone and Telegraph Company, United States Independent Telephone Association, and U.S. Federal Communications Commission.

FIG. XXXIII. PIECES OF MAIL RECEIVED PER CAPITA: 1950, 1960, AND 1972

[See table 800]



Source: Chart prepared by U.S. Bureau of the Census. Data from U.S. Postal Service.

No. 796. UNITED STATES POSTAL SERVICE—SUMMARY: 1900 TO 1972

[For years ending June 30. Includes Puerto Rico and all outlying areas except Canal Zone; see table 801. See text, p. 489. See also *Historical Statistics, Colonial Times to 1957*, series R 139-141 and R 145]

YEAR	Number of post offices	FINANCES ¹			Revenue per capita ³	MONEY ORDERS ISSUED		Sales of postage stamps and other stamped paper	Postage paid under permit (1st, 2d, 3d, and 4th class)	Pieces of mail handled (est.)
		Revenues	Expenditures ²	Surplus (+) or deficit (-)		Domes-tic	Inter-national			
		<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Dollars</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Millions</i>
1900-----	76, 688	102	108	-5	1.34	239	17	94	(4)	7, 130
1910-----	59, 580	224	230	-6	2.43	548	90	202	4	14, 850
1920-----	52, 641	437	454	-17	4.11	1, 333	23	330	13	(NA)
1930-----	49, 063	705	804	-98	5.75	1, 715	52	575	74	27, 888
1935-----	45, 686	631	697	-66	4.94	1, 821	22	473	96	22, 332
1940-----	44, 024	767	808	-41	5.84	2, 095	13	522	177	27, 749
1945-----	41, 792	1, 314	1, 145	+169	9.44	4, 849	21	954	252	37, 912
1950-----	41, 464	1, 677	2, 223	-545	11.14	5, 122	16	862	678	45, 064
1955-----	38, 316	2, 349	2, 712	-363	14.33	5, 852	31	909	1, 136	55, 234
1960-----	35, 238	3, 277	3, 874	-597	18.27	5, 031	27	1, 245	1, 099	63, 675
1965-----	33, 624	4, 483	5, 276	-793	23.17	4, 520	20	1, 528	2, 529	71, 873
1968-----	32, 260	6, 424	6, 544	-120	27.61	4, 682	16	1, 799	3, 265	79, 517
1969-----	32, 064	7, 026	7, 168	-142	30.36	4, 708	15	1, 937	3, 706	82, 005
1970-----	32, 002	7, 702	7, 867	-165	31.05	4, 695	14	1, 936	3, 883	84, 882
1971-----	31, 947	8, 751	8, 955	-204	32.24	4, 714	14	1, 999	4, 126	86, 983
1972-----	36, 686	9, 347	9, 522	-175	37.89	4, 704	13	2, 371	4, 861	87, 156

NA Not available.

¹ After allowance for reimbursements, embossed envelope purchases, indemnity claims, and miscellaneous revenue and expenditure offsets. Revenues, expenditures, and deficits through 1950 include payments and receipts in a year applicable to prior years; beginning 1955, expenditures are shown in year in which obligation was incurred, and revenues in year which gave rise to the earnings, whether collected or accrued. During fiscal 1954, the Postal Service began receiving reimbursement for penalty and franked mail, and discontinued payment of subsidies to airlines. Revenues for 1960 include \$37.4 million reimbursement from the Treasury General Fund for statutory public services. These and other changes affect comparability of figures.

² Includes capital expenditures for plant and equipment and cost of materials and supplies, but no provision for depreciation. Also includes costs of certain services rendered to other agencies without reimbursement but excludes costs of certain services rendered to the Postal Service by other agencies. Beginning 1955, represents obligations incurred. Beginning 1965, represents accrued expense including depreciation on fixed assets, reimbursable work for others, and expenses paid by certain other agencies without reimbursement by the Postal Service.

³ Operating revenue only; based on Bureau of the Census estimated total population as of Jan. 1, including Armed Forces abroad. ⁴ Service not inaugurated. ⁵ Includes postal notes issued under act of Congress.

No. 797. POSTAL SERVICE REVENUES, BY SOURCE: 1930 TO 1972

[In millions of dollars. For years ending June 30. Includes Puerto Rico and all outlying areas except Canal Zone; see table 801. See text, p. 489]

REVENUE SOURCE	1930	1940	1950	1955	1960	1965	1969	1970	1971	1972 ¹
Total ² -----	705	767	1, 677	2, 349	3, 277	4, 483	7, 026	7, 702	8, 751	9, 347
Operating postal revenue ¹ -----	686	732	1, 606	2, 266	3, 206	4, 376	6, 142	6, 347	6, 665	7, 884
Stamps, postal cards, etc.-----	575	522	862	999	1, 245	1, 528	1, 937	1, 936	1, 999	2, 371
Second-class postage paid in money (pound rates) ³ -----	29	23	40	64	86	131	181	192	191	214
Other postage paid in money under permit-----	74	177	678	1, 136	1, 699	2, 529	3, 706	3, 883	4, 126	4, 861
Box rents-----	1	8	14	26	29	34	42	44	49	58
Miscellaneous-----	9	3	11	41	147	154	216	236	245	325
Money-order revenues-----	17	24	63	66	64	57	60	56	55	55
Postal Savings System income ⁴ -----	2	11	8	18	7	3	-	-	-	-
Operating reimbursements-----	-	-	-	-	-	-	47	-	-	-
Government appropriations-----	-	-	-	-	-	-	884	1, 355	2, 086	1, 361
Investment income, net-----	-	-	-	-	-	-	-	-	-	102

- Represents zero.

¹ The U.S. Postal Service was established July 1, 1971. Revenues prior to that date are those of the Post Office Department. Revenues for 1969-1971 have been restated to be consistent with 1972.

² Net revenue after refunds of postage. Beginning 1965, includes operating reimbursements. ³ Beginning 1955, includes controlled circulation publications. ⁴ Includes \$37.4 million appropriated to postal revenues for public services as provided by the Postal Policy Act of 1958. ⁵ Discontinued April 1936.

Source of tables 796 and 797: U.S. Postal Service, *Annual Report of the Postmaster General*.

No. 798. POSTAL REVENUES AND COSTS, 1970 AND 1971, AND BY MAJOR CATEGORIES, 1971

[In millions of dollars, except as indicated. For years ending June 30]

MAIL AND SERVICE	REVENUES AND REIMBURSEMENTS		Per capita revenues ¹	ATTRIBUTABLE COSTS ²				
	Total	Percent of total		Total ³	Revenue as percent of total	Direct labor	Transportation	Overhead
1970.....	6,476.8	(X)	31.75	4,143.4	166.2	3,071.6	572.2	398.9
1971, total.....	6,795.7	100.0	32.97	4,492.0	151.3	3,326.7	587.5	456.8
First-class mail ⁴	3,505.9	51.6	17.01	2,105.3	166.5	1,803.5	52.0	248.5
Airmail ⁵	198.1	2.9	.96	213.5	92.8	170.8	18.0	24.8
Priority mail ⁶	302.9	4.5	1.46	103.0	294.1	37.5	59.7	5.8
Second-class mail ⁷	156.6	2.3	.75	342.8	45.7	282.3	29.7	30.8
Publishers' mail.....	153.2	2.3	.74	335.4	45.7	276.0	29.4	29.9
Outside the county:								
Regular rate publications.....	128.3	1.9	.62	247.3	51.9	203.5	21.7	22.0
Other.....	12.9	0.2	.06	59.0	79.4	47.0	6.8	5.2
Within the county and fees.....	12.0	0.2	.05	29.1	29.9	25.5	0.9	2.7
Controlled circulation publications ⁸	32.3	0.5	.15	14.8	218.2	10.4	3.1	1.2
Third-class mail ⁹	844.2	12.4	4.09	584.0	144.6	475.4	36.6	72.0
Bulk rate.....	719.7	10.6	3.49	483.8	248.9	393.1	31.9	58.7
Single piece rate and fees.....	124.5	1.8	.60	100.2	114.0	82.3	4.7	13.3
Fourth-class mail ¹⁰	819.3	12.1	3.97	545.8	150.1	326.0	171.6	48.2
Zone rate mail.....	715.8	10.5	3.47	422.4	169.5	243.9	142.0	38.5
Parcels.....	676.9	10.0	3.28	410.2	165.0	234.8	139.8	35.6
Catalogs and fees.....	38.9	0.6	.18	12.2	318.9	9.1	2.2	0.9
Special fourth class rate.....	99.7	1.5	.48	116.4	85.7	77.3	28.1	11.0
Library rate and fees.....	3.7	0.1	.01	7.0	52.9	4.8	1.5	0.6
Government mail ¹¹	206.2	3.0	1.00	115.1	179.1	78.3	27.1	9.8
International mail ¹²	276.7	4.1	1.34	164.8	167.9	81.9	69.4	13.0
Special services.....	311.7	4.6	1.51	180.2	173.0	58.6	-	2.5
Other ¹³	141.8	2.1	.68	122.6	100.1	2.0	120.4	0.2

- Represents zero. X Not applicable. ¹ Based on Bureau of the Census estimated population as of Jan. 1, including Armed Forces abroad. ² Costs which can be demonstrated to vary with changes in volume of a particular class or category of service or, even though fixed, to result from providing one specific class or category of service. ³ Includes other direct and specific fixed costs not shown separately.

⁴ Items mailed at 1st-class rates and weighing 12 ounces or less. Includes items wholly or partially in writing or typewriting, cards or bills and statements of account, items closed against postal inspection, etc. ⁵ Letters and cards weighing 8 ounces or less mailed at airmail rates. ⁶ Items otherwise qualified as 1st-class or airmail that exceed 12 ounces and 8 ounces, respectively. ⁷ Includes publishers' type mail paid at other than bulk rates. Publishers' mail includes printed publications periodically issued and mailed at a known post office to paid subscribers. These include regular rate newspapers and magazines, and classroom and nonprofit rate publications. Outside-the-county publications are those mailed to destinations outside the county of publication. ⁸ Publications of at least 24 pages and containing at least 25 percent nonadvertising content issued quarterly or more frequently for mainly free distribution. Includes certain trade publications and "shopper" guides. ⁹ Items less than 16 ounces in weight not mailed at either 1st- or 2d-class rates. ¹⁰ Items not mailed at 1st-, 2d-, or 3d-class rates, except government and international mail. May include parcel post, catalogs weighing 16 ounces or more, books, films, and records. ¹¹ Penalty and franked mail. ¹² Mail from U.S. to foreign countries paid at international mail rates. ¹³ Includes free mail for blind and handicapped, nonpostal services for other agencies and, for revenues and reimbursements, unassignable revenues.

Source: U.S. Postal Service, *Revenue and Cost Analysis*, annual.

No. 799. POST OFFICE EMPLOYEES, BY TYPE: 1950 TO 1972

[In thousands, except averages. As of June 30. Includes Puerto Rico and all outlying areas except Canal Zone; see table 801. See *Historical Statistics, Colonial Times to 1967*, series R 161, for total employees]

ITEM	1950	1955	1960	1965	1969	1970	1971	1972
Total employees.....	501	512	563	596	739	741	729	706
Substitute (part-time).....	137	145	154	148	193	193	183	130
Regular.....	364	367	409	447	546	549	546	571
Postmasters.....	145	142	35	33	31	30	30	31
Post office suppr. and tech. personnel.....	169	175	27	30	37	37	37	38
Post office clerks and mail handlers ²	90	91	110	133	164	165	166	175
City carriers.....	33	32	31	31	31	31	31	31
Rural carriers.....	27	26	34	32	40	42	42	45
Other.....								
Pieces of mail per employee, average.....	90	108	113	121	111	115	119	123

¹ Includes assistant postmasters: 3,540 in 1950, and 3,917 in 1955. ² Includes mobile unit employees.

Source: U.S. Postal Service, *Annual Report of the Postmaster General*.

No. 800. VOLUME OF MAIL, BY CLASSES: 1950 TO 1972

[Pieces of mail in millions, except per capita; weight of mail in millions of pounds. For years ending June 30. Includes Puerto Rico and all outlying areas except Canal Zone; see table 801. For definition of classes of mail, see footnotes, table 798. See also *Historical Statistics, Colonial Times to 1957*, series R 145-160]

CLASS OF MAIL	PIECES OF MAIL					WEIGHT OF MAIL				
	1950	1960	1970	1971	1972	1950	1960	1970	1971	1972
Total	45,064	63,675	84,882	86,983	87,156	11,521	11,689	13,281	13,373	12,936
Domestic	44,646	63,115	83,986	86,080	86,240	11,176	11,500	13,055	13,149	12,722
Per capita ¹	295	352	411	418	414	(X)	(X)	(X)	(X)	(X)
1st class and airmail.....	25,353	34,591	50,174	51,493	50,293	673	1,059	1,636	1,696	1,643
Per capita ¹	168	193	246	250	242	(X)	(X)	(X)	(X)	(X)
Priority mail ²	(X)	(X)	185	197	208	(X)	(X)	371	391	412
2d class.....	6,265	7,535	9,352	9,604	9,494	2,287	2,883	3,417	3,283	3,125
Per capita ¹	42	42	46	47	46	(X)	(X)	(X)	(X)	(X)
3d class.....	10,330	17,910	19,974	20,532	21,908	³ 641	1,277	2,032	2,157	2,290
Per capita ¹	69	100	98	100	105	(X)	(X)	(X)	(X)	(X)
4th class.....	1,166	1,016	977	968	914	³ 7,360	5,879	4,786	4,836	4,421
Controlled circulation publ.....	26	125	562	522	550	15	63	224	201	207
Penalty.....	1,472	1,826	2,544	2,506	2,564	183	305	540	528	573
Franked and free for blind.....	34	114	218	258	310	17	35	49	59	50
International ³	417	560	896	903	916	345	189	226	225	214
Regular and airmail.....	311	405	770	770	(X)	29	43	108	102	(X)
Parcel post, air parcel post.....	22	10	8	9	(X)	273	80	71	76	(X)

X Not applicable. ¹ Based on estimated total population as of Jan. 1, including Armed Forces abroad. ² Effective January 1968. ³ Includes publishers, 2d class.

Source: U.S. Postal Service, *Revenue and Cost Analysis Report*, annual, and *Annual Report of the Postmaster General*.

No. 801. POST OFFICES, 1960 AND 1971, AND MAIL, 1960 AND 1970—STATES AND OTHER AREAS

[Pieces of mail in millions. For years ending June 30. Represents independent post offices; excludes stations and branches. Stations: subordinate postal units located within the corporate limits of the city or town where the parent post office is situated; Branches: subordinate postal units not located within such limits]

STATE OR OTHER AREA	POST OFFICES		PIECES OF MAIL		STATE OR OTHER AREA	POST OFFICES		PIECES OF MAIL	
	1960	1971	1960	1970		1960	1971	1960	1970
Total	35,238	31,947	63,675	84,882	S.A.—Con.				
U.S.	35,118	31,831	63,452	84,594	N.C.....	835	798	764	1,019
N.E.....	2,068	1,828	3,948	5,254	S.C.....	435	401	382	492
Maine.....	599	515	127	161	Ga.....	714	660	1,146	1,528
N.H.....	297	254	255	297	Fla.....	514	471	1,656	2,207
Vt.....	323	296	127	178	E.S.C.	3,575	3,137	2,292	3,106
Mass.....	519	453	1,847	2,462	Ky.....	1,643	1,362	573	798
R.I.....	62	59	191	289	Tenn.....	651	609	955	1,273
Conn.....	268	251	1,401	1,867	Ala.....	738	675	509	721
M.A.	4,394	4,035	15,537	20,736	Miss.....	543	491	255	314
N.Y.....	1,757	1,651	9,042	12,078	W.S.C.	3,797	3,597	4,330	5,781
N.J.....	553	523	2,674	3,565	Ark.....	795	710	255	365
Pa.....	2,084	1,861	3,821	5,093	La.....	593	553	573	781
E.N.C.	5,121	4,852	13,945	18,589	Okl.....	715	665	637	815
Ohio.....	1,169	1,092	3,584	5,178	Texas.....	1,091	1,579	2,865	3,820
Ind.....	823	771	1,401	1,807	Mt.	2,480	2,169	1,878	2,479
Ill.....	1,365	1,299	5,476	7,300	Mont.....	439	392	127	163
Mich.....	933	888	2,038	2,716	Idaho.....	321	277	127	144
Wis.....	831	802	1,146	1,528	Wyo.....	222	182	32	66
W.N.C.	5,525	5,106	5,475	7,242	Colo.....	475	425	700	934
Minn.....	943	892	1,837	1,783	N. Mex.....	404	347	128	178
Iowa.....	1,026	975	1,019	1,358	Ariz.....	242	216	382	535
Mo.....	1,142	1,015	1,783	2,377	Utah.....	266	231	255	314
N. Dak.....	540	483	127	136	Nev.....	111	99	127	153
S. Dak.....	476	438	127	163	Pac.	2,617	2,322	8,342	11,137
Nebr.....	608	567	609	705	Wash.....	583	439	764	1,019
Kans.....	790	736	573	730	Oreg.....	431	371	510	688
S.A.	5,541	4,875	7,705	10,270	Calif.....	1,305	1,171	6,877	9,167
Del.....	61	57	127	161	Alaska.....	215	201	64	76
Md.....	486	433	955	1,273	Hawaii.....	83	80	127	187
D.C.....	1	1	1,656	2,207	Other areas.	120	116	223	288
Va.....	1,228	975	828	1,103	P.R.....	105	99	127	161
W. Va.....	1,267	1,079	191	280	V.I.....	5	5	32	42
					Others ¹	10	12	64	85

¹ Guam, Samoa (Tutuila), Wake, Caroline, Mariana, and Marshall Islands.

Source: U.S. Postal Service, *Directory of Post Offices, 1971*.

No. 802. BELL TELEPHONE COMPANIES—SUMMARY: 1950 TO 1972

[As of December 31 or calendar year, as applicable. Comprises American Telephone and Telegraph Company and its principal telephone subsidiaries, plus Southern New England and Cincinnati and Suburban Bell Telephone Companies. See also *Historical Statistics, Colonial Times to 1967*, series R 14-27]

ITEM	1950	1960	1965	1969	1970	1971	1972
Central offices, number ¹	8,656	11,212	13,425	14,759	15,135	15,595	16,056
Miles of wire ²mil.	144	308	423	554	602	646	695
Miles of coaxial tube.....1,000	63	97	169	279	287	290	307
Miles of microwave radio relay, broad band 1-way channel.....1,000	8	298	728	1,151	1,181	1,249	1,285
Book value of plant (cost).....mil. dol.	10,375	24,722	36,229	50,480	56,171	62,049	68,446
Depreciation and amortization reserves.....mil. dol.	2,905	5,402	7,794	11,554	12,610	13,745	14,812
Operating revenues.....mil. dol.	3,342	8,111	11,320	16,058	17,369	18,952	21,388
Local exchange.....mil. dol.	1,997	4,665	6,114	7,979	8,686	9,426	10,630
Toll.....mil. dol.	1,208	3,058	4,706	7,451	8,042	8,835	9,983
Operating expenses ³mil. dol.	2,653	5,586	7,857	11,402	12,867	14,293	16,032
Net income.....mil. dol.	370	1,279	1,847	2,307	2,303	2,352	2,658
Dividends declared ⁴mil. dol.	263	770	1,144	1,424	1,508	1,559	1,719
Employees, number.....1,000	535	595	627	755	793	796	797
Wages and salaries.....mil. dol.	1,742	3,283	4,169	5,912	6,641	7,332	8,344

¹ Beginning 1965, data on revised basis, not fully comparable with prior years. ² Excludes drop and block wire. ³ Includes operating taxes other than Federal income. ⁴ Includes dividends on all minority holdings of preferred and common stocks, but excludes intercompany dividends.

Source: American Telephone and Telegraph Company, New York, N. Y., compiled from reports of Bell System, Southern New England and Cincinnati and Suburban Companies, and unpublished data.

No. 803. TELEPHONE AND TELEGRAPH SYSTEMS: 1950 TO 1971

[Covers principal carriers filing annual reports with Federal Communications Commission. See also *Historical Statistics, Colonial Times to 1967*, series R 53-65 and R 72-85, for data on telegraph systems]

ITEM	1950	1955	1960	1965	1969	1970	1971
Domestic telephone:¹							
Carriers.....number	71	53	52	54	57	56	60
Telephones ²millions	39	50	66	82	101	105	109
Miles of wire.....millions	147	205	316	436	577	628	683
Book cost of plant.....mil. dol.	10,702	16,224	25,714	37,967	53,695	59,872	66,322
Depreciation and amortization reserves.....mil. dol.	2,979	4,098	5,577	8,105	12,084	13,216	14,453
Ratio to book cost.....percent	27.8	25.3	21.7	21.4	22.5	22.1	21.5
Capital stock.....mil. dol.	3,195	5,967	8,383	10,036	10,702	10,804	11,144
Operating revenues.....mil. dol.	3,445	5,562	8,365	11,762	16,823	18,223	19,977
Operating expenses ³mil. dol.	2,464	3,704	5,024	7,082	10,294	11,652	12,991
Operating ratio ⁴percent	71.5	66.6	60.1	60.2	61.2	63.0	65.0
Net operating income ⁵mil. dol.	455	764	1,399	2,094	2,813	3,122	3,414
Net income.....mil. dol.	372	694	1,250	1,862	2,261	2,268	2,346
Employees.....1,000	565	649	627	655	794	830	846
Compensation of employees.....mil. dol.	1,798	2,693	3,384	4,317	6,170	6,954	7,702
Overseas telephone:							
Number of overseas calls.....1,000	745	1,194	3,301	7,515	19,663	23,436	30,476
Revenue from overseas calls.....mil. dol.	9	16	42	101	226	252	281
Telephone ocean cable systems.....number	1	1	5	11	12	13	13
Communication satellites.....number	-	-	-	1	4	4	4
Overseas television transmission ⁶hours	-	-	-	33	738	711	706
Domestic telegraph:							
Carriers.....number	1	1	1	1	1	1	1
Revenue messages transmitted.....millions	179	154	124	94	77	70	44
Message revenues (incl. telex service).....mil. dol.	152	189	190	192	229	234	186
Total operating revenues.....mil. dol.	178	229	262	306	391	402	397
Operating revenue deductions.....mil. dol.	167	206	247	282	358	368	365
Operating income ⁷mil. dol.	9	13	11	24	33	34	32
Miles of wire in cable.....1,000	369	388	417	410	407	400	403
Miles of aerial wire.....1,000	929	712	647	554	276	221	180
Bell teletypewriter (TWX), messages ⁸millions	15	23	33	47	47	46	41
Overseas telegraph:⁹							
Carriers.....number	11	10	9	6	6	6	6
Revenue messages transmitted.....millions	23	26	28	29	32	32	31
Message revenues (incl. telex service).....mil. dol.	42	50	71	78	117	124	180
Total operating revenues.....mil. dol.	50	68	87	107	180	194	207
Operating revenue deductions.....mil. dol.	45	58	77	87	142	155	165
Operating income ⁷mil. dol.	4	3	6	14	25	26	30

- Represents zero. ¹ Includes Puerto Rico and, beginning 1965, Virgin Islands. Excludes intercompany duplications. Gross operating revenues of carriers reporting in 1970 estimated at 90 percent of all carriers. ² Includes company, service, and private. ³ Excludes taxes. ⁴ Ratio of operating expenses, excluding taxes, to operating revenues. ⁵ After tax deductions. ⁶ Includes overseas telegraph carriers. Service began July 1965. ⁷ After Federal income taxes. ⁸ Prior to April 1971, based on number of messages reported by Bell Companies only. This service was sold to Western Union Telegraph Company April 1, 1971. ⁹ Beginning 1965, excludes South American and most Caribbean operations of All America Cables and Radio, Inc.

Source: U.S. Federal Communications Commission, *Statistics of Communications Common Carriers*, annual, and unpublished data.

No. 804. TELEPHONES, CALLS, AND RATES: 1950 TO 1972

[See also *Historical Statistics, Colonial Times to 1957*, series R 1-13]

ITEM	1950	1960	1965	1967	1968	1969	1970	1971	1972
Telephones, Dec. 31mil.	43	74	94	104	109	115	120	125	132
Total per 1,000 population.....	281	408	478	518	540	564	584	601	628
Bell companies ¹mil.	37	63	79	87	91	96	100	104	109
Dial operated ¹mil.	28	61	78	87	91	96	100	104	109
Independent companies.....mil.	6	11	15	17	18	19	20	21	23
Business.....mil.	² 13	21	26	29	30	32	33	34	36
Residence.....mil.	230	54	68	75	79	83	87	91	96
Households with telephone ³percent.	62	78	85	87	89	90	92	93	94
Average daily conversations (millions):									
Bell companies ¹	145	225	287	315	330	359	379	399	421
Local ¹	139	215	273	299	312	338	356	375	394
Long distance ¹	6	10	14	17	18	21	23	24	27
Independent companies ⁴	31	60	80	91	96	102	107	126	135
Local.....	30	58	77	87	92	98	103	121	129
Long distance ⁴	1	2	3	4	4	4	4	5	6
Monthly toll revenue per residence account Bell system¹:									
Intrastate (over 24 miles).....dol.	1.40	2.42	3.46	4.13	4.52	5.00	5.53	(NA)	(NA)
AT & T long lines (interstate).....dol.	.69	1.29	2.34	2.85	3.18	3.80	3.73	(NA)	(NA)
Toll rates in effect, Dec. 31, from New York City to:⁵									
Philadelphia.....dol.	.45	.50	.50	.50	.50	.50	7.50	.55	.55
Chicago.....dol.	1.55	1.45	1.40	1.40	1.30	1.30	71.05	1.05	1.05
Denver.....dol.	2.20	1.80	1.70	1.60	1.55	1.55	71.25	1.25	1.25
San Francisco.....dol.	2.50	2.25	2.00	1.75	1.70	1.70	71.35	1.35	1.35

NA Not available. ¹ See headnote, table 802. ² Excludes Alaska and Hawaii. ³ See footnote 2, table 807.

⁴ Includes messages originating in independent company areas routed in part over Bell facilities.

⁵ As of 4th quarter, except 1969 intrastate, 2d quarter.

⁶ Source: Federal Communications Commission. Rates for dial station to station, daytime, 3-minute call.

⁷ In effect Feb. 1, 1970. Effective Jan. 26, 1971, toll to Philadelphia increased to \$.55.

Source: Except as noted, American Telephone and Telegraph Company, New York, N. Y.

No. 805. INDEPENDENT TELEPHONE COMPANIES—SUMMARY: 1950 TO 1971

[Money figures in millions of dollars. As of December 31 or calendar year, as applicable. Includes Puerto Rico. Covers only those companies submitting operating information to the United States Independent Telephone Association. Companies reporting in 1971 represented 93 percent of the independent telephones in service. See also *Historical Statistics, Colonial Times to 1957*, series R 28-42]

ITEM	1950	1955	1960	1965	1968	1969	1970	1971
All companies, number.....	5,542	4,714	3,301	2,423	1,972	1,894	1,843	1,807
Reporting companies, number.....	379	406	550	669	654	688	684	684
Telephones (incl. service telephones) 1,000.....	4,922	6,750	9,718	13,643	16,836	18,045	19,182	20,355
Telephone plant in service, book value.....	878	1,656	3,396	6,056	8,714	9,918	11,175	12,686
Depreciation reserves.....	203	326	600	1,168	1,706	1,934	2,203	2,476
Operating revenues.....	270	503	906	1,530	2,152	2,462	2,791	3,202
Operating expenses (excl. Fed. income tax).....	211	354	630	1,040	1,477	1,695	1,953	2,228
Net income.....	29	67	117	225	293	326	356	430
Employees.....1,000	63	72	85	101	123	133	142	148
Wages and salaries.....	147	224	359	537	782	871	1,001	1,137

Source: United States Independent Telephone Association, Washington, D.C., *Statistics of the Independent Telephone Industry*, annual. (Copyright.)

No. 806. REA AND RURAL TELEPHONE BANK PROGRAM, SUMMARY: 1950 TO 1972

[Cumulative data cover period from program authorization, October 28, 1949 to December 31 of years shown]

ITEM	1950	1960	1965	1970	1971	1972
Loans approved, cumulative, Dec. 31: ¹ Borrowers.....	61	727	845	862	864	873
Amount.....mil. dol.	19	737	1,200	1,816	1,933	2,236
REA.....mil. dol.	19	737	1,200	1,816	1,933	2,058
Rural telephone banks.....mil. dol.	-	-	-	-	-	178
Route miles of line provided for, cumulative, Dec. 31.....1,000	21	378	515	575	596	607
Subscribers provided for, cumulative, Dec. 31.....1,000	75	1,467	2,066	2,506	2,697	2,788
To receive initial service.....1,000	45	673	1,072	1,383	1,440	1,587
To receive improved service.....1,000	29	794	994	1,123	1,163	1,201
Telephones in service, Dec. 31.....1,000	(NA)	1,280	2,046	2,989	3,213	² 3,516
Total operating revenues during year.....mil. dol.	(NA)	94	187	363	408	² 471
Total telephone plant.....mil. dol.	(NA)	635	1,168	2,085	2,287	² 2,583
Employees.....	(NA)	9,872	11,567	15,448	15,487	² 16,599

- Represents zero. NA Not available. ¹ Net loans (recissions deducted). ² Preliminary.

Source: U.S. Rural Electrification Administration, *Annual Statistical Report—Rural Telephone Borrowers*.

No. 807. TELEPHONES IN USE, BY STATES: 1965 AND 1971

[As of December 31]

STATE	1965				1971					
	Telephones			Percent households with tele-phones ²	Telephones			Percent households with tele-phones ²	Telephones, by type of service	
	Total (1,000)	Per cent owned by Bell companies ¹	Per 100 population		Total (1,000)	Per cent owned by Bell companies ¹	Per 100 population		Residence (1,000)	Busi-ness (1,000)
United States	93,659	84.0	48.1	85	125,141	83	60.4	93	90,696	34,445
Alabama.....	1,197	85.5	34.4	70	1,650	84	47.3	82	1,238	412
Alaska.....	64	-	26.9	(NA)	127	-	40.5	(NA)	74	53
Arizona.....	645	97.5	39.5	70	1,055	97	56.3	88	739	317
Arkansas.....	620	73.7	31.5	63	920	73	47.2	80	686	233
California.....	10,596	79.9	56.2	89	13,751	79	67.6	96	9,734	4,017
Colorado.....	1,023	98.3	51.7	86	1,468	98	63.6	95	1,024	444
Connecticut.....	1,622	99.7	56.8	94	2,123	99	68.5	100	1,561	562
Delaware.....	281	100.0	55.2	89	387	100	69.1	98	286	102
District of Columbia.....	757	100.0	94.2	91	914	100	124.5	102	471	443
Florida.....	2,796	68.0	47.6	79	4,546	68	63.6	92	3,269	1,277
Georgia.....	1,688	86.2	38.5	73	2,687	86	55.1	86	1,873	713
Hawaii.....	323	-	48.8	(NA)	477	-	60.4	(NA)	296	181
Idaho.....	277	79.1	40.0	79	380	80	51.5	88	275	105
Illinois.....	5,823	84.1	54.4	89	7,343	83	65.4	95	5,312	2,031
Indiana.....	2,263	64.6	46.1	88	3,045	65	57.4	90	2,309	736
Iowa.....	1,328	68.8	48.1	95	1,686	70	58.9	95	1,291	394
Kansas.....	1,040	82.5	46.5	87	1,348	83	59.6	94	1,017	331
Kentucky.....	1,078	78.9	33.8	70	1,518	72	46.0	81	1,136	382
Louisiana.....	1,353	94.9	38.0	76	1,858	94	50.3	89	1,391	407
Maine.....	389	91.0	39.1	82	521	90	51.8	96	392	129
Maryland.....	1,805	99.9	50.7	90	2,591	99	64.3	96	1,889	703
Massachusetts.....	2,871	99.9	53.6	95	3,638	99	62.9	99	2,538	1,100
Michigan.....	4,065	89.6	49.3	93	5,345	88	59.1	97	4,012	1,332
Minnesota.....	1,730	81.2	48.5	94	2,357	82	60.3	97	1,766	501
Mississippi.....	620	95.6	26.6	56	955	95	42.9	75	729	226
Missouri.....	2,178	83.3	48.3	85	2,857	82	50.9	91	2,107	760
Montana.....	297	83.8	41.9	80	376	84	52.8	89	273	103
Nebraska.....	711	57.5	48.1	88	926	59	60.9	96	690	237
Nevada.....	224	41.1	49.6	69	362	35	70.5	89	230	132
New Hampshire.....	296	94.9	43.9	83	452	95	58.7	100	341	111
New Jersey.....	3,750	98.4	54.9	91	4,972	98	67.7	99	3,691	1,281
New Mexico.....	394	86.3	38.0	68	531	87	51.3	83	356	175
New York.....	10,492	92.7	57.8	91	12,342	92	66.9	95	8,409	3,932
North Carolina.....	1,625	54.3	32.9	69	2,528	53	48.9	85	1,890	639
North Dakota.....	263	69.2	40.3	86	337	70	53.8	96	253	84
Ohio.....	5,005	78.0	48.6	90	6,378	77	50.0	93	4,766	1,613
Oklahoma.....	1,122	88.5	45.1	79	1,555	88	50.2	89	1,127	427
Oregon.....	920	79.2	48.2	87	1,260	78	57.7	90	910	350
Pennsylvania.....	6,033	83.7	52.3	90	7,715	83	64.8	95	5,846	1,870
Rhode Island.....	432	100.0	48.3	90	552	100	57.3	97	405	148
South Carolina.....	796	74.9	31.2	68	1,248	74	47.3	83	930	318
South Dakota.....	278	80.9	39.5	82	351	81	52.3	92	265	85
Tennessee.....	1,436	84.9	37.1	75	2,068	84	51.5	85	1,539	530
Texas.....	4,556	83.5	42.9	75	6,680	83	57.8	87	4,781	1,899
Utah.....	468	96.4	47.1	89	635	97	57.1	94	461	174
Vermont.....	169	87.6	42.8	89	250	87	54.0	99	179	71
Virginia.....	1,788	80.4	39.8	77	2,652	79	56.0	90	1,898	754
Washington.....	1,494	79.4	49.9	89	2,048	77	59.1	91	1,485	563
West Virginia.....	626	87.9	34.7	74	793	87	45.2	84	600	192
Wisconsin.....	1,890	74.2	45.4	91	2,479	72	55.2	96	1,813	666
Wyoming.....	162	93.8	47.7	79	206	94	60.0	89	144	62

- Represents zero. NA - Not available.

¹ Includes 456,600 service telephones (non-company telephones for which switching service is provided) in 1965, and 453,000 in 1971.² Households with service are sum of residence main, apartment house private branch exchange and residence service main telephones, and other residence private branch exchange systems. There tends to be a slight overstatement of the proportion of households with telephone service.Source: U.S. Federal Communications Commission, *Statistics of Communications Common Carriers*, annual, and unpublished data. Data from American Telephone and Telegraph Company.

No. 808. COMMUNICATION RATES BETWEEN SELECTED CITIES: 1945 TO 1973

[See also *Historical Statistics, Colonial Times to 1957*, series R 68-71 and R 86-89]

EFFECTIVE DATE	BETWEEN NEW YORK CITY AND—				EFFECTIVE DATE	BETWEEN NEW YORK CITY AND—			
	Phila- delphia	Chicago	Denver	San Fran- cisco		London	Cairo	Tokyo	Buenos Aires
TELEGRAPH RATES ¹					TWX RATES ²—Con.				
1946, Dec. 29.....	\$0.36	\$0.72	\$1.08	\$1.44	1970, Feb. 1.....	\$0.25	\$0.50	\$0.65	\$0.70
1950, Feb. 1.....	.40	.75	1.25	1.45	In effect Jan. 1, 1973.	.25	.50	.65	.70
1956, Aug. 26.....	.95	1.30	1.75	1.75	CABLE AND RADIO TELEGRAPH RATES ³				
1960, Oct. 17.....	1.10	1.45	1.90	1.90	1945, May 1.....	.20	.42	.24	.20
1966, Jan. 1.....	1.27	1.70	2.23	2.23	1950, July 1.....	.19	.30	.30	.27
1968, Nov. 1.....	2.25	2.25	2.25	2.25	1958, Aug. 1.....	.21	.34	.34	.31
1970, Mar. 1.....	2.75	2.75	2.75	2.75	1966, Apr. 12.....	.23	.34	.34	.31
1971, July 4.....	3.75	3.75	3.75	3.75	In effect Jan. 1, 1973.	.23	.34	.34	.31
In effect Jan. 1, 1973.	3.75	3.75	3.75	3.75	TELEPHONE RATES ⁴				
TWX RATES ²					1945.....	12.00	30.00	19.50	12.00
1946, Feb. 1.....	.35	1.05	1.55	1.75	1946.....	12.00	12.00	12.00	12.00
1953, July 1.....	.45	1.20	1.65	1.75	1946.....	9.60	12.00	12.00	12.00
1960, Feb. 7.....	.45	1.15	1.65	1.75	1970, Mar. 1.....	9.60	12.00	12.00	12.00
1966, Sept. 1.....	.25	.45	.55	.60	In effect Jan. 1, 1973.	9.60	12.00	12.00	12.00

¹ Beginning Sept. 1, 1951, minimum charge for 15 text words or less; prior to that, for 10 text words or less.

² Prior to September 1966, telephone company rates for 3 minutes or less, 2-way; thereafter, for each minute or fraction thereof. Since 1959, the telegraph company has offered similar service called "Telex" with a different rate structure. As of Apr. 1, 1971, the telephone company TWX service and facilities were purchased by the telegraph company; the two rate structures were continued in effect.

³ Per plain language telegraph-word including address and signature.

⁴ For person-to-person, 3-minute call. Station-to-station service available to Tokyo beginning June 18, 1964; to London beginning Feb. 1, 1967; and to Buenos Aires beginning Nov. 1, 1969, with 3-minute initial period rates, in effect Dec. 31, 1970, of \$0.00, \$5.40, and \$8.00, respectively.

Source: U.S. Federal Communications Commission, releases and unpublished data.

No. 809. BROADCAST AND NONBROADCAST STATIONS AUTHORIZED AND OPERATORS LICENSED, BY CLASS: 1965 AND 1972

[As of June 30. Includes Puerto Rico and Virgin Islands. See also *Historical Statistics, Colonial Times to 1957*, series R 90-94 and R 120-126]

CLASS	1965	1972	CLASS	1965	1972
Safety and special radio services ¹			Broadcast services ²	18,544	27,670
Amateur and disaster.....	1,456,911	1,791,397	Commercial AM.....	4,097	4,422
Citizens.....	280,343	284,235	Commercial TV.....	689	774
Aviation.....	744,713	851,610	Educational TV.....	125	227
Aircraft.....	109,897	161,223	TV translator.....	2,023	2,896
Aeronautical and fixed.....	86,826	133,830	Auxiliary TV.....	1,688	2,656
Civil air patrol.....	5,071	6,530	Experimental TV.....	25	6
Other.....	16,878	18,627	ULF signal booster.....	(NA)	9
Industrial.....	1,122	2,236	Aural, studio-transmitter-link, intercity relay.....	³ 143	606
Power.....	141,360	171,387	Commercial FM.....	1,565	2,468
Business.....	15,504	15,435	Educational PM.....	272	599
Petroleum.....	73,915	103,312	International.....	3	3
Forest products.....	10,075	9,760	Remote pickup.....	7,748	12,626
Special industrial.....	2,781	3,577	Instructional TV fixed.....	33	178
Other.....	35,805	32,738	Other.....	133	200
Land transportation.....	3,280	6,565	Common carrier services.....	10,017	19,415
Railroad.....	15,635	18,318	Point to point microwave.....	4,554	6,807
Taxicab.....	5,260	7,920	Local TV transmission.....	77	56
Interurban property.....	4,796	3,494	Rural radio.....	498	848
Other.....	2,786	2,077	Developmental.....	110	174
Marine.....	2,793	4,827	Domestic public land mobile ¹	4,710	11,471
Ship.....	114,075	238,415	Fixed public teleg.-telephone.....	9	8
Alaskan.....	111,690	232,633	International control-fixed.....	8	9
Coastal and other.....	1,674	2,416	Fixed public telephone.....	8	7
Public safety.....	50,888	66,209	Fixed public telegraph.....	11	13
Police.....	17,156	20,083	Satellite earth stations.....	1	15
Fire.....	10,121	11,431	Satellites in orbit.....		
Forestry conservation.....	4,334	5,169	Experimental services.....	812	1,159
Highway maintenance.....	5,747	6,920	Community antenna relay service.....		432
Special emergency.....	6,166	7,917	Radio operators.....1,000..	2,971	3,914
Other.....	7,364	14,709	Commercial operators.....1,000..	2,712	3,648
			Amateur operators.....1,000..	259	266

- Represents zero. NA Not available.

¹ Each license, construction permit, or combination construction permit and license is counted as one station; therefore, a station might include a transmitter and many mobile units.

² Stations licensed or holding construction permits. ³ Studio-transmitter-link only.

Source: U.S. Federal Communications Commission, *Annual Report*.

No. 810. COMMERCIAL BROADCAST STATIONS, NUMBER AND REVENUES: 1950 TO 1971

[Includes Puerto Rico and Virgin Islands. Total broadcast revenues are defined as total time sales of all networks and stations, less commissions to agencies and plus incidental revenues, such as sale of talent and program material. See also *Historical Statistics, Colonial Times to 1957*, series R 104-105 and R 114-115]

STATION	1950	1955	1960	1965	1966	1967	1968	1969	1970	1971
Stations reporting, Dec. 31.....	2,336	3,179	4,218	4,867	5,008	5,100	5,236	5,309	5,359	5,467
Revenues.....mil. dol.	550	1,198	1,866	2,757	3,075	3,183	3,544	3,882	3,945	3,981
AM and AM-FM:										
Stations reporting, Dec. 31.....	2,143	2,704	3,470	3,941	4,019	4,076	4,161	4,194	4,209	4,252
Revenues.....mil. dol.	443	452	592	777	853	885	995	1,052	1,096	1,176
FM (independents):										
Stations reporting, Dec. 31.....	86	38	218	338	381	405	433	442	464	527
Revenues.....mil. dol.	1	1	6	16	19	23	28	33	41	55
TV:										
Stations reporting, Dec. 31.....	107	437	530	538	608	619	642	673	686	688
Revenues.....mil. dol.	106	745	1,269	1,965	2,203	2,275	2,521	2,796	2,808	2,750

¹ Prior to 1960, includes 4 national networks and 3 regional networks; 1960-1967, includes 4 national networks; thereafter, includes 7 national networks, (CBS, MBS, NBC, and ABC's 3 AM and 1 FM).

² Includes 4 networks through Sept. 15, 1955; 3 thereafter.

Source: U.S. Federal Communications Commission, *AM-FM Broadcast Financial Data*, annual, and *TV Broadcast Financial Data*, annual.

No. 811. COMMERCIAL BROADCAST STATIONS ON THE AIR—STATES AND OTHER AREAS: JANUARY 1, 1972

STATE OR OTHER AREA	Total	AM	FM	TV	STATE OR OTHER AREA	Total	AM	FM	TV
Total.....	7,289	4,324	2,258	707	Montana.....	61	41	8	12
United States.....	7,196	4,273	2,229	694	Nebraska.....	79	48	17	14
Alabama.....	208	136	56	16	Nevada.....	33	21	10	7
Alaska.....	26	16	3	7	New Hampshire.....	43	27	13	3
Arizona.....	88	59	18	11	New Jersey.....	66	35	27	4
Arkansas.....	133	84	41	8	New Mexico.....	83	57	19	7
California.....	438	232	157	49	New York.....	285	159	98	28
Colorado.....	106	65	30	11	North Carolina.....	296	202	75	19
Connecticut.....	64	38	21	5	North Dakota.....	49	27	10	12
Delaware.....	15	10	5	-	Ohio.....	257	118	112	27
Dist. of Columbia.....	19	6	7	6	Oklahoma.....	112	66	36	10
Florida.....	316	194	97	25	Oregon.....	111	78	20	13
Georgia.....	254	171	67	16	Pennsylvania.....	312	171	118	23
Hawaii.....	38	24	4	10	Rhode Island.....	24	15	7	2
Idaho.....	57	43	7	7	South Carolina.....	155	102	42	11
Illinois.....	252	121	107	24	South Dakota.....	50	30	10	10
Indiana.....	181	86	77	18	Tennessee.....	232	148	68	16
Iowa.....	128	72	43	13	Texas.....	471	286	129	56
Kansas.....	99	58	29	12	Utah.....	45	32	10	3
Kentucky.....	182	106	64	12	Vermont.....	26	18	6	2
Louisiana.....	152	91	45	16	Virginia.....	197	125	60	12
Maine.....	58	36	15	7	Washington.....	154	97	42	15
Maryland.....	94	53	34	7	West Virginia.....	95	60	26	9
Massachusetts.....	114	63	40	11	Wisconsin.....	194	99	77	18
Michigan.....	231	125	84	22	Wyoming.....	33	29	1	3
Minnesota.....	144	87	45	12	Other areas.....	93	51	29	13
Mississippi.....	151	100	42	9	Puerto Rico.....	83	47	26	10
Missouri.....	180	106	50	24	Guam.....	3	1	1	1
					Virgin Islands.....	7	3	2	2

- Represents zero.

Source: U.S. Federal Communications Commission, *AM-FM Broadcast Financial Data*, annual, and *TV Broadcast Financial Data*, annual, and unpublished data.

No. 812. CABLE TELEVISION—SYSTEMS AND SUBSCRIBERS: 1952 TO 1972

[As of January 1]

YEAR	Systems ¹	SUBSCRIBERS (households)			YEAR	Systems ¹	SUBSCRIBERS (households)		
		Total (1,000)	Percent of U.S.	Average per system			Total (1,000)	Percent of U.S.	Average per system
1952	70	14	(z)	200	1962	800	850	1.7	1,063
1953	150	30	(z)	200	1963	1,000	950	1.9	950
1954	300	65	(z)	217	1964	1,200	1,085	2.1	904
1955	400	150	0.5	375	1965	1,325	1,275	2.4	982
1956	450	300	0.9	667	1966	1,570	1,575	2.9	1,003
1957	500	350	0.9	700	1967	1,770	2,100	3.8	1,186
1958	525	450	1.1	857	1968	2,000	2,800	4.4	1,400
1959	560	550	1.3	982	1969	2,260	3,600	6.1	1,593
1960	640	650	1.4	1,016	1970	2,490	4,500	7.7	1,807
1961	700	725	1.5	1,086	1971	2,570	5,300	8.8	2,082
					1972	2,770	6,000	9.7	2,166

Z Less than 0.05 percent. ¹ Stations.

Source: John Blair & Company, New York, N.Y., *Statistical Trends in Broadcasting*, annual.

No. 813. EDUCATIONAL TELEVISION STATIONS: 1961 TO 1972

[General programming is directed at the general community. Instructional programming is directed at students in the classroom or otherwise in the general context of formal education]

ITEM	1961	1962	1964	1965	1968	1970	1972
Stations	56	62	88	115	¹ 153	¹ 190	220
Total weekly broadcast hours	2,186	2,596	3,715	5,688	8,534	12,217	15,587
General programs	1,431	1,396	1,992	3,248	4,671	7,697	7,904
Percent of total hours	65.5	54.0	54.0	57.5	54.7	63.0	50.7
Instructional programs	755	1,200	1,723	2,440	3,863	4,520	7,683
Percent of total hours	34.5	46.0	46.0	42.5	45.3	37.0	49.3
Average weekly broadcast hours per station	39.0	41.9	42.3	49.5	56.1	65.3	70.9
General programming	25.6	22.5	22.6	28.2	30.7	41.1	36.0
Instructional programming	13.8	19.3	19.6	21.2	25.4	24.2	34.9

¹ 152 stations reported in 1968 and 187 in 1970; details include data for reporting stations only.

Source: Through 1970, National Instructional Television Center, Bloomington, Ind., *One Week of Educational Television, 1970*. (Copyright.) Beginning 1972, Corporation for Public Broadcasting, Washington, D.C., *One Week of Public TV, April 1972*.

No. 814. PERCENT OF HOUSEHOLDS WITH TELEVISION SETS: 1955 TO 1970

[For composition of regions, see figure I, p. xii; for definition of standard metropolitan statistical areas (SMSA's), see text, section 33. For 1955-1969, 212 SMSA's as defined at time of 1960 Census of Population; for 1970, 243 SMSA's as defined Feb. 23, 1971. See *Historical Statistics, Colonial Times to 1957*, series R 98, for number of families with TV]

ITEM	June 1955 ¹	May 1960	Aug. 1965	June 1967	Jan. 1969	Apr. 1970	PERCENT OF TELEVISION HOUSEHOLDS HAVING—				
							UHF set ²			Color set	
							June 1967	Jan. 1969	Apr. 1970	June 1967	Jan. 1969
All households	100	100	100	100	100	100	(X)	(X)	(X)	(X)	(X)
Percent with TV	67	88	92	94	95	96	(X)	(X)	(X)	(X)	(X)
Television households, total	(X)	(X)	(X)	(X)	(X)	(X)	42	55	54	19	32
By area: Inside SMSA's	78	91	94	95	96	96	45	59	60	21	34
Outside SMSA's	50	82	89	92	94	94	37	47	40	17	28
By region: Northeast	80	92	94	95	96	96	41	55	58	18	29
North Central	72	89	94	95	96	96	47	58	57	21	34
South	53	82	90	92	94	95	38	51	48	16	29
West	62	87	92	93	95	94	43	57	54	24	40
By number of sets: No set	33	12	8	6	5	4	(X)	(X)	(X)	(X)	(X)
1 set	65	77	73	69	66	67	35	47	54	13	22
2 sets or more	2	11	20	25	29	29	61	73	54	37	54

X Not applicable. ¹ Excludes Alaska and Hawaii. ² Sets equipped for ultrahigh frequency reception.

Source: U.S. Bureau of the Census; *Current Housing Reports*, series H-121, and 1970 Census of Housing, *Detailed Housing Characteristics, HC(1)-B1*.

No. 815. TELEVISION BROADCAST INDUSTRY FINANCES: 1960 TO 1971

[Money figures in millions of dollars. Includes Puerto Rico and Virgin Islands. See also headnote, table 810, and *Historical Statistics, Colonial Times to 1967*, series R 114-117]

ITEM	1960	1965	1967	1968	1969	1970	1971
Number of networks, Dec. 31.....	3	3	3	3	3	3	3
Number of stations reporting, Dec. 31.....	530	588	635	660	673	686	688
VHF.....	454	488	502	502	504	506	506
UHF.....	76	100	133	158	169	180	182
Broadcast revenues.....	1,269	1,965	2,275	2,521	2,796	2,808	2,750
3 networks (incl. owned and operated stations).....	641	1,024	1,217	1,308	1,467	1,457	1,379
Other stations.....	628	941	1,059	1,213	1,329	1,351	1,371
Broadcast expenses of networks and stations.....	1,025	1,517	1,861	2,026	2,243	2,354	2,361
3 networks (incl. owned and operated stations).....	546	862	1,057	1,129	1,241	1,290	1,234
Other stations.....	479	655	804	897	1,001	1,065	1,127
Broadcast income before Federal income tax.....	244	448	415	495	554	454	389
3 networks (incl. owned and operated stations).....	95	162	160	179	226	167	145
Other stations.....	149	286	255	316	328	286	244
BROADCAST REVENUES							
Broadcast revenues, net.....	1,269	1,965	2,275	2,521	2,796	2,808	2,750
Commissions to regularly established agencies, representatives, brokers, and others.....	235	363	426	474	529	528	515
Broadcast revenues, gross.....	1,504	2,328	2,701	2,995	3,325	3,337	3,264
Revenues from sales to advertisers.....	1,456	2,266	2,634	2,916	3,235	3,243	3,179
Network sales.....	747	1,142	1,359	1,424	1,670	1,551	1,490
National non-network sales.....	459	796	883	1,010	1,119	1,103	1,023
Local sales.....	240	328	392	432	547	589	666
Other revenues (non-advertising).....	48	62	67	79	90	94	85

Source: U.S. Federal Communications Commission, *TV Broadcast Financial Data*, annual, and unpublished data.

No. 816. RADIO BROADCAST INDUSTRY FINANCES: 1960 TO 1971

[Money figures in millions of dollars. Includes Puerto Rico and Virgin Islands. Minus sign (-) denotes loss. See also headnote, table 810, and *Historical Statistics, Colonial Times to 1967*, series R 103-107]

ITEM	1960	1965	1967	1968	1969	1970	1971
Number of networks, Dec. 31.....	4	4	4	7	7	7	7
Number of stations reporting, Dec. 31.....	3,688	4,279	4,481	4,594	4,636	4,673	4,802
AM and AM-FM.....	3,470	3,941	4,076	4,161	4,194	4,209	4,252
FM independents ¹	218	338	405	433	442	464	550
Broadcast revenues.....	598	793	907	1,023	1,086	1,137	1,258
7 networks (incl. owned and operated stations) ²	63	74	77	81	86	88	100
Other stations.....	535	719	830	942	1,000	1,049	1,158
Broadcast expenses of networks and stations.....	552	715	826	910	985	1,044	1,155
7 networks (incl. owned and operated stations) ²	66	71	79	86	88	90	97
Other stations.....	486	644	747	824	897	955	1,059
Broadcast income before Federal income tax.....	46	78	81	113	101	93	103
7 networks (incl. owned and operated stations) ²	-3	3	-2	-5	-2	-1	3
Other stations.....	49	75	83	118	103	94	99
BROADCAST REVENUES							
Broadcast revenues, net.....	598	793	907	1,023	1,086	1,137	1,258
AM and AM-FM.....	592	777	885	995	1,052	1,096	1,200
FM independents ¹	6	16	23	28	33	41	58
Commissions to regularly established agencies, representatives, brokers and others.....	67	87	102	119	128	135	145
Broadcast revenues, gross.....	665	880	1,009	1,142	1,214	1,272	1,399
Revenues from sales to advertisers.....	654	868	997	1,130	1,200	1,257	1,384
Network sales.....	46	54	58	55	51	49	56
National non-network sales.....	208	261	298	342	349	355	378
Local sales.....	401	553	641	733	800	853	951
Other revenues (non-advertising).....	11	12	12	12	14	15	16

¹ FM stations not associated with AM stations.

² Through 1967, 4 national networks; thereafter, 7 national networks (CBS, MBS, NBC, and ABC's 3 AM and 1 FM).

Source: U.S. Federal Communications Commission, *AM-FM Broadcast Financial Data*, annual, and unpublished data.

No. 817. TELEVISION STATIONS—MULTIPLE OWNERSHIP AND NEWSPAPER AFFILIATION: 1968

[Revenue in millions of dollars. As of Dec. 31. Covers all TV stations in operation during 1968, including satellites "Multiply owned" stations are those licensed to owner of more than 1 TV station; "newspaper affiliated," those licensed to a newspaper or newspaper affiliated company. Markets ranked by size of market revenue]

TYPE OF STATION	ALL MARKETS		TOP 10 MARKETS		TOP 25 MARKETS		TOP 50 MARKETS	
	Stations	Revenue	Stations	Revenue	Stations	Revenue	Stations	Revenue
All stations.....	666	1,504	67	605	128	879	218	1,116
Multiply owned.....	349	1,174	50	547	94	762	156	980
Percent of total.....	52.4	78.1	74.6	90.4	73.4	86.7	71.6	85.1
Newspaper affiliated.....	108	285	13	84	26	148	40	195
Non-newspaper affiliated..	241	889	37	464	68	615	116	785
Singly owned.....	317	330	17	58	34	117	62	166
Percent of total.....	47.6	21.9	25.4	9.6	26.6	13.3	28.4	14.9
Newspaper affiliated.....	52	133	6	53	12	86	15	96
Non-newspaper affiliated..	265	197	11	5	22	31	47	70
Network affiliated stations...	561	1,325	30	461	76	718	149	941
Multiply owned.....	303	1,015	24	407	60	611	115	792
Newspaper affiliated.....	95	230	4	35	14	94	27	140
Non-newspaper affiliated..	208	785	20	373	46	518	88	652
Singly owned.....	258	310	6	53	16	106	34	149
Newspaper affiliated.....	48	131	6	53	11	84	14	94
Non-newspaper affiliated..	210	179	-	-	5	22	20	55
Independent stations.....	105	179	37	145	52	162	69	175
Multiply owned.....	46	159	26	140	34	151	41	158
Newspaper affiliated.....	13	55	9	49	12	54	13	55
Non-newspaper affiliated..	33	104	17	91	22	97	28	103
Singly owned.....	59	20	11	5	18	11	28	17
Newspaper affiliated.....	4	2	-	-	1	2	1	2
Non-newspaper affiliated..	55	18	11	5	17	9	27	15

- Represents zero.

Source: U.S. Federal Communications Commission, *TV Broadcast Financial Data*, annual.

No. 818. RADIO AND TELEVISION STATIONS OWNED BY NEWSPAPERS AND/OR MAGAZINES: 1961 TO 1972

DATE	AM	FM	TV	DATE	AM	FM	TV
1961, Sept. 1.....	412	147	161	1968, Dec. 4.....	381	191	183
1963, Sept. 30.....	381	147	174	1969, Dec. 1.....	394	245	189
1964, Oct. 31.....	383	159	181	1971, Feb. 1.....	402	248	191
1965, Oct. 31.....	391	170	174	1971, Dec. 1.....	318	209	176
1966, Nov. 10.....	387	177	172	1972, Dec. 1.....	325	171	178
1967, Nov. 1.....	383	181	177				

Source: Broadcasting Publications, Inc., Washington, D.C., *Broadcasting Yearbook*. (Copyright.)

No. 819. TELEVISION PROGRAMMING—LIVE, FILM, AND VIDEOTAPE: 1965 AND 1971

ITEM	1965			1971		
	All stations	Network affiliated stations	Non-network stations	All stations	Network affiliated stations	Non-network stations
Average weekly hours on air, total.....	116:09	118:48	68:26	140:18	121:27	77:13
Total network programs.....	70:07	74:45	-	64:10	74:26	-
Percent of total air time.....	60.4	62.8	(X)	45.7	61.3	(X)
Nonnetwork, by type of programing:						
Percent of total air time.....	39.6	37.2	100.0	54.3	38.7	100.0
Film, total:						
Weekly hours.....	25:02	24:19	36:04	26:40	23:19	42:57
Percent of air time.....	21.6	20.7	52.7	19.0	19.2	55.6
Video-tape:						
Weekly hours.....	7:42	7:38	10:08	13:23	10:56	21:51
Percent of air time.....	6.7	6.5	14.8	9.3	8.4	28.3
Live, local:						
Weekly hours.....	13:18	12:06	22:14	12:37	12:45	11:19
Percent of air time.....	11.1	10.3	32.9	8.9	10.5	15.1

- Represents zero. X Not applicable.

Source: Broadcasting Publications Inc., Washington, D.C., *Broadcasting Yearbook*. (Copyright.)

No. 820. NEWSPAPERS AND PERIODICALS: 1950 TO 1973

[Prior to 1960, excludes Alaska and Hawaii. Data refer to year of compilation of the Directory cited as the source, i.e., generally to year preceding year shown]

FREQUENCY OF PUBLICATION	1950	1955	1960	1965	1968	1969	1970	1971	1973
Newspapers	12,115	11,415	11,315	11,383	11,293	11,336	11,383	11,350	11,324
Semiweekly.....	337	324	324	357	387	413	423	412	459
Weekly.....	9,794	9,126	8,979	8,989	8,898	8,855	8,903	8,888	8,804
Daily.....	1,894	1,860	1,854	1,843	1,833	1,833	1,838	1,818	1,792
Other.....	90	105	158	194	215	235	219	232	269
Periodicals	6,960	7,648	8,422	8,990	9,400	9,434	9,573	9,657	9,630
Weekly.....	1,443	1,602	1,580	1,716	1,796	1,787	1,856	1,873	2,022
Semimonthly ¹	416	503	527	550	606	587	589	544	315
Monthly.....	3,094	3,782	4,113	4,195	4,331	4,353	4,314	4,277	4,107
Bimonthly.....	436	608	743	876	899	899	957	1,005	925
Quarterly.....	604	674	895	1,030	1,078	1,084	1,108	1,124	1,148
Other.....	367	479	564	623	690	724	749	834	1,113

¹ Includes fortnightly prior to 1968.

Source: N. W. Ayer and Son, Inc., Philadelphia, Pa., *Ayer Directory of Publications*, annual. (Copyright.)

No. 821. NEWSPAPERS AND PERIODICALS—CIRCULATION AND RECEIPTS: 1958, 1963, AND 1967

[Circulation in thousands; receipts in millions of dollars. See also *Historical Statistics, Colonial Times to 1957*, series R 173-186]

TYPE OF PUBLICATION	1958			1963			1967		
	Circulation per issue ¹	Receipts		Circulation per issue ¹	Receipts		Circulation per issue ¹	Receipts	
		Total	Advertising		Total	Advertising		Total	Advertising
Newspapers, total²	(X)	3,458	2,444	(X)	4,255	3,024	(X)	5,550	3,896
Daily and Sunday.....	(X)	3,125	2,209	(X)	3,792	2,728	(X)	4,962	3,653
Morning ⁴	1,908	88	55	2,602	124	81	3,442	206	135
Evening ⁴	13,225	561	410	13,971	681	500	14,446	909	684
Morning and Sunday.....	29,523	724	497	31,663	891	628	31,623	1,301	951
Evening and Sunday.....	26,459	705	500	32,424	940	673	31,552	1,065	780
Morning and evening ⁴	619	30	21	717	37	27	651	41	31
Morning, evening, and Sunday.....	35,227	1,016	725	34,002	1,119	819	36,942	1,443	1,065
Weekly and other.....	(X)	298	235	(X)	379	296	(X)	321	243
Weekly ⁵	29,828	248	195	(7)	288	219	(7)	248	182
Other ⁵	3,651	50	41	(7)	91	77	(7)	73	61
Not specified.....	(X)	35	(NA)	(X)	84	(NA)	(X)	287	(NA)
Periodicals, total	408,364	1,539	1,018	(X)	2,036	1,242	(X)	2,668	1,547
Farm.....	18,850	67	55	14,305	54	46	11,988	57	46
General.....	14,872	48	40	12,087	43	37	10,219	41	32
Specialized.....	3,978	19	16	2,218	11	9	1,896	16	14
Specialized.....	51,577	380	294	(X)	535	413	(X)	675	525
Industrial, engineering, technical.....	11,399	212	182	12,113	247	217	12,952	353	308
Merchandising.....	4,686	72	66	(S)	127	106	(NA)	145	121
Professional, institutional, service.....	35,492	96	47	(S)	121	65	8,303	159	87
Not specified.....	(X)	(X)	(X)	(S)	40	25	(X)	17	9
General.....	241,741	887	544	(X)	1,167	711	(X)	1,473	880
Comics.....	68,035	22	1	27,594	11	1	15,178	9	(Z)
Women and home services.....	70,729	207	133	72,573	316	204	74,541	362	245
General entertainment.....	98,378	530	319	102,501	659	380	136,567	847	457
General news.....	7,780	101	73	7,375	141	106	9,652	204	146
Business news.....	1,819	26	18	(S)	28	15	1,409	40	25
Not specified.....	(X)	(X)	(X)	(X)	12	5	(X)	11	6
Other.....	96,196	266	123	141,943	230	73	127,215	284	97
Not specified.....	(X)	40	(NA)	(X)	49	(NA)	(X)	180	(NA)

NA Not available. S Does not meet publication standards. X Not applicable.
 Z Less than \$500,000. ¹ Includes paid, free bulk, etc. "Issue" defined as the sum of all editions published on a given day. Figures are totals of average circulation per issue.
² Includes foreign language newspapers. ³ Includes amounts not specified by kind.
⁴ No Sunday editions. ⁵ Establishments with less than 10 employees were not required to file reports specifying source of receipts. Thus a substantial portion of "Not specified" is included in "Weekly and other."
⁶ Includes those issued on Sunday only. ⁷ Not shown because not reported by many small newspapers.
⁸ Includes newspapers issued more than once but less than 4 times a week, and those issued less frequently than once a week. ⁹ Partially estimated.

Source: U.S. Bureau of the Census, *Census of Manufactures: 1963*, vol. II, part 1, and *Census of Manufactures: 1967*, vol. II, part 2.

Newspapers

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NO. 822. DAILY AND SUNDAY NEWSPAPERS—NUMBER AND CIRCULATION, 1950 TO 1971, AND BY STATES, 1972

[Circulation in thousands. As of October 1, except number of newspapers; beginning 1965, as of January 1 of following year. Prior to 1960, excludes Alaska and Hawaii. For English language newspapers only. See also *Historical Statistics, Colonial Times to 1957*, series R 169-172]

YEAR AND STATE	DAILY NEWSPAPERS						SUNDAY NEWS-PAPERS	
	Total		Morning		Evening		Number	Net paid circulation
	Number	Net paid circulation	Number	Net paid circulation	Number	Net paid circulation		
1950.....	1,772	53,829	322	21,266	1,450	32,563	549	46,582
1955.....	1,760	56,147	316	22,183	1,454	33,964	541	46,448
1960.....	1,763	58,882	312	24,029	1,459	34,853	563	47,699
1965.....	1,751	60,358	320	24,107	1,444	36,251	562	48,600
1968.....	1,762	62,535	328	25,838	1,443	36,697	578	49,693
1969.....	1,768	62,060	333	25,812	1,443	36,248	585	49,475
1970.....	1,748	62,108	334	25,931	1,429	36,174	586	49,217
1971.....	1,749	62,231	339	26,116	1,425	36,115	590	49,665
1972, total.....	1,761	62,510	337	26,078	1,441	36,432	603	49,339
Alabama.....	24	743	7	215	17	528	16	654
Alaska.....	7	76	1	14	6	63	1	18
Arizona.....	12	481	2	242	10	239	4	40
Arkansas.....	35	438	5	170	31	268	12	343
California.....	127	5,836	22	2,522	105	3,313	39	4,915
Colorado.....	26	756	3	274	23	483	9	650
Connecticut.....	28	967	6	299	22	667	7	639
Delaware.....	5	180	2	56	3	124	1	23
District of Columbia.....	2	936	1	520	1	416	2	1,008
Florida.....	52	2,166	17	1,393	35	773	32	2,053
Georgia.....	34	1,087	6	413	28	625	11	976
Hawaii.....	5	238	1	73	4	165	2	196
Idaho.....	15	194	4	91	11	103	5	153
Illinois.....	93	4,035	20	1,988	74	2,047	19	2,457
Indiana.....	79	1,691	8	452	73	1,240	19	1,172
Iowa.....	42	949	5	351	38	508	9	814
Kansas.....	52	664	5	231	48	433	14	457
Kentucky.....	26	773	5	331	21	442	12	584
Louisiana.....	26	823	5	397	21	425	13	739
Maine.....	10	274	5	204	5	70	1	109
Maryland.....	12	744	4	223	8	522	4	706
Massachusetts.....	46	2,160	5	826	42	1,333	8	1,523
Michigan.....	55	2,510	1	599	54	1,911	14	2,245
Minnesota.....	32	1,128	5	413	28	715	11	1,074
Mississippi.....	21	365	4	126	17	249	8	246
Missouri.....	54	1,805	9	768	45	1,037	12	1,172
Montana.....	13	194	4	139	9	55	8	189
Nebraska.....	19	495	3	175	16	320	4	361
Nevada.....	7	153	2	63	5	92	4	142
New Hampshire.....	9	174	1	32	9	142	1	58
New Jersey.....	31	1,712	8	582	23	1,129	7	1,090
New Mexico.....	19	231	2	77	17	154	14	213
New York.....	78	7,313	19	4,230	60	3,083	21	6,037
North Carolina.....	50	1,328	9	602	41	725	20	974
North Dakota.....	11	157	3	38	9	119	3	62
Ohio.....	96	3,549	9	943	88	2,606	20	2,378
Oklahoma.....	52	869	8	431	43	438	42	829
Oregon.....	22	673	3	287	19	336	5	550
Pennsylvania.....	106	3,990	30	1,306	81	2,684	11	2,814
Rhode Island.....	7	315	1	66	6	249	2	211
South Carolina.....	17	579	8	406	9	174	7	465
South Dakota.....	13	178	1	3	12	175	4	125
Tennessee.....	34	1,161	7	507	27	654	14	961
Texas.....	111	3,298	26	1,534	85	1,764	32	3,295
Utah.....	5	265	1	110	4	7	1	289
Vermont.....	9	120	2	70	7	50	1	3
Virginia.....	32	1,032	10	470	22	562	13	743
Washington.....	24	1,029	5	297	20	732	13	979
West Virginia.....	29	1,491	9	233	20	258	9	389
Wisconsin.....	37	1,222	3	258	34	964	6	843
Wyoming.....	10	80	5	52	5	28	3	53

- Represents zero. ¹ Adjusted to account for all-day papers listed in morning and evening figures (circulations divided between them). ² Adjusted to allow for duplication of Texarkana, Ark.-Tex., and Bristol, Tenn.-Va., papers in individual State tabulations (circulations divided between States); for Covington, Ky., papers also included in Ohio.

Source: Editor & Publisher Company, New York, N.Y., *Editor & Publisher Year Book-1973*. (Copyright.)

No. 823. NEWSPRINT CONSUMPTION AND NEWSPAPER PAGES: 1950 TO 1972

[Prior to 1960, excludes Alaska and Hawaii]

ITEM	1950	1955	1960	1965	1969	1970	1971	1972 (prel.)
Newsprint consumption, total¹								
By newspapers, total ² 1,000 short tons..	5,863	6,484	7,312	8,442	9,820	9,754	10,077	10,596
Advertising.....1,000 short tons..	5,521	6,173	6,800	7,861	9,133	9,071	9,372	9,864
Percent of total.....	3,279	3,827	4,148	4,760	5,662	5,579	5,876	6,340
Other content.....1,000 short tons..	59.4	62.0	61.0	60.5	62.0	61.5	62.7	64.4
Percent of total.....	2,242	2,346	2,652	3,101	3,471	3,492	3,496	3,508
Percent of total.....	40.6	38.0	39.0	39.5	38.0	38.5	37.3	35.6
Newspaper pages per issue:²								
Daily.....	36	40	43	50	56	47	51	56
Sunday.....	112	132	142	167	191	145	162	176

¹ Apparent consumption; equals production plus imports minus exports adjusted for year-end changes in newspaper publishers' inventories and domestic mill stocks.

² Based on information of Media Records, Inc.

Source: U.S. Bureau of Competitive Assessment and Business Policy, unpublished data.

No. 824. REGISTRATION OF COPYRIGHTS, BY SUBJECT MATTER: 1950 TO 1972

[For years ending June 30. Comprises copyrights issued to citizens of the United States and residents of foreign countries. For information on patents, see table 878. See also *Historical Statistics, Colonial Times to 1967*, series W 52-65]

SUBJECT MATTER OF COPYRIGHT	1950	1955	1960	1965	1970	1971	1972
Total.....	210,564	224,732	243,926	293,617	316,466	329,696	344,574
Books (incl. pamphlets, leaflets, etc.).....	50,456	54,414	60,034	76,098	88,432	96,124	103,231
Periodicals (issues).....	55,436	59,448	64,204	78,307	88,882	84,491	84,686
Contributions to newspapers, periodicals.....	4,438	3,746	3,306	2,095	1,943	1,884	2,004
Lectures, sermons, addresses.....	1,007	813	835	848	1,669	1,555	1,940
Dramatic or dramatico-musical comp.....	4,427	3,493	2,445	3,343	3,352	3,553	3,838
Musical compositions.....	52,309	57,527	65,558	80,881	88,949	95,202	97,482
Maps.....	1,638	2,013	1,812	3,262	1,921	1,677	1,633
Works of art, models, or designs.....	4,013	3,456	5,271	5,735	6,807	7,916	7,901
Reproductions of works of art.....	326	900	2,516	3,241	3,036	3,047	3,434
Drawings or plastic works of a scientific or technical character.....	1,316	1,350	768	1,239	835	924	1,050
Photographs.....	1,143	1,105	842	860	1,171	1,160	1,140
Prints and pictorial illustrations.....	4,309	3,793	3,343	2,927	3,373	4,209	4,524
Commercial prints and labels.....	13,320	10,505	8,142	7,509	5,265	4,424	4,118
Motion picture photoplays.....	782	1,216	2,755	2,536	1,244	1,169	1,816
Motion pictures not photoplays.....	1,113	1,434	702	1,216	1,301	1,226	1,388
Sound recordings.....(X)	(X)	(X)	(X)	(X)	(X)	(X)	1,141
Renewals of all classes.....	14,531	19,519	21,393	23,520	23,316	20,835	23,239

X Not applicable

Source: The Library of Congress, *Annual Report*.

No. 825. BOOKS—IMPORTS AND TRANSLATIONS INTO ENGLISH: 1971 AND 1972

[Imports cover all books printed abroad and distributed in U.S. on exclusive basis. See also headnote, table 826]

SUBJECT	IMPORTS		SUBJECT	IMPORTS		LANGUAGE	TRANSLATIONS	
	1971	1972		1971	1972		1971	1972
Total.....	3,882	3,850					1,126	1,093
Agriculture.....	69	54	Law.....	71	63	French.....	280	277
Art.....	280	232	Literature.....	223	239			
Biography.....	100	132	Medicine.....	227	327	German.....	295	272
Business.....	71	63	Music.....	26	21	Italian.....	16	26
Education.....	94	84	Philosophy, psychology.....	133	100	Oriental.....	48	63
Fiction.....	32	49	Poetry, drama.....	145	100			
General works.....	89	91	Religion.....	97	105	Russian.....	126	135
History.....	151	160	Science.....	457	502	Scandinavian.....	40	50
Home economics.....	36	35	Sociology, economics.....	794	853			
Juvenile.....	104	49	Sports, recreation.....	83	94	Spanish.....	47	38
Language.....	118	104	Technical books.....	198	171	Other.....	274	232
			Travel.....	284	222			

Source: R.R. Bowker Co., New York, N.Y., *Publishers' Weekly*. (Copyright, by Xerox Corp.)

No. 826. NEW BOOKS AND NEW EDITIONS PUBLISHED, BY SUBJECT: 1950 TO 1972

[Comprises new books (those published for the first time) and new editions (those published with changes in text or format). Excludes State and Federal publications; subscription books, except encyclopedias; dissertations; second, third, or fourth printings or impressions; periodicals and quarterlies; and pamphlets of under 49 pages. Beginning 1965, data not strictly comparable with earlier years because of internal shifts in classifications. See also *Historical Statistics, Colonial Times to 1867*, series R 165-167]

SUBJECT	1950	1955	1960	1965	1970			1972		
					Total	New books	New editions	Total	New books	New editions
Total	11,022	12,589	15,012	28,595	36,071	24,288	11,783	38,053	26,868	11,185
Agriculture.....	152	168	156	270	285	200	65	390	286	104
Art.....	357	347	470	971	1,169	852	317	1,470	1,097	373
Biography.....	603	833	879	685	1,536	735	801	1,986	1,086	900
Business.....	250	312	305	537	797	658	139	684	523	155
Education.....	256	274	348	954	1,178	842	336	1,222	1,041	251
Fiction.....	1,907	2,073	2,440	3,241	3,137	1,998	1,139	3,260	2,109	1,151
General works.....	345	337	282	634	846	568	278	1,048	802	246
History.....	516	665	865	1,682	1,995	1,010	985	1,629	906	723
Home economics.....	193	255	197	300	321	235	86	596	479	117
Juvenile.....	1,059	1,455	1,725	2,895	2,640	2,472	168	2,526	2,126	400
Language.....	148	168	228	527	472	339	133	479	354	125
Law.....	298	305	394	436	604	355	249	716	418	298
Literature.....	591	680	786	1,686	3,085	1,349	1,736	2,525	1,398	1,127
Medicine.....	443	534	520	1,218	1,476	1,144	332	1,839	1,404	435
Music.....	113	103	98	300	404	217	187	402	215	187
Philosophy, psychology.....	340	314	480	979	1,280	843	437	1,164	829	335
Poetry, drama.....	531	493	492	994	1,474	973	501	1,484	883	601
Religion.....	727	849	1,104	1,855	1,788	1,315	473	1,705	1,233	472
Science.....	705	801	1,089	2,562	2,358	1,955	403	2,536	2,143	443
Sociology, economics.....	515	520	754	3,242	5,912	3,897	2,045	6,415	4,688	1,727
Sports, recreation.....	188	200	286	591	799	583	216	941	686	255
Technology.....	497	477	698	1,163	1,141	990	211	1,425	1,184	341
Travel.....	288	366	466	883	1,394	848	546	1,491	972	519

Source: R. R. Bowker Co., New York, N.Y., *Publishers' Weekly*. (Copyright, by Xerox Corporation.)

No. 827. BOOKS AND PERIODICALS—AVERAGE RETAIL PRICES, BY SUBJECT: 1960 TO 1972

SUBJECT	AVERAGE PRICES OF BOOKS ¹				SUBJECT	AVERAGE PRICES OF PERIODICALS ⁴			
	1960	1965	1971	1972		1960	1965	1971	1972
Total	\$5.24	\$7.65	\$13.25	\$12.99	Total	\$5.32	\$6.95	\$11.66	\$13.23
Agriculture.....	(NA)	8.04	13.64	10.94	Agriculture.....	2.84	3.83	5.74	6.35
Art.....	12.61	10.60	16.41	14.94	Business and economics.....	5.34	6.39	9.72	9.92
Biography.....	4.98	7.65	11.64	12.80	Chemistry and physics.....	11.30	18.42	38.31	45.46
Business.....	6.83	9.68	12.60	12.45	Children's periodicals.....	2.06	2.61	2.94	3.24
Children's books.....	2.74	3.11	4.23	4.37	Education.....	4.19	5.14	8.25	9.51
Economics.....	6.19	8.43	17.47	16.98	Engineering.....	5.86	7.70	13.28	16.04
Education.....	4.97	5.79	7.81	10.26	Fine and applied arts.....	4.94	5.92	8.17	8.42
History.....	5.91	8.83	12.97	14.92	History.....	4.60	5.30	7.40	8.25
Home economics.....	(NA)	(NA)	7.33	7.88	Home economics.....	4.43	5.37	7.94	10.25
Law.....	8.01	10.64	18.37	17.15	Industrial arts.....	4.60	6.56	8.14	8.98
Literature:					Journalism, communications.....	4.08	5.32	6.91	8.68
General.....	3.50	6.90	11.43	12.03	Labor and industrial relations.....	2.26	2.66	3.88	3.92
Fiction.....	3.59	4.34	5.98	6.47	Law.....	5.81	7.49	10.19	11.15
Poetry.....	3.31	3.92	9.15	10.62	Library science.....	3.71	5.15	8.65	9.40
Drama.....	4.48	5.47			Literature and languages.....	4.05	4.65	6.88	7.45
Medicine.....	8.41	11.88	17.58	16.19	Mathematics, botany, geology, and general science.....	7.27	10.96	20.06	22.63
Music.....	5.56	8.04	11.73	13.53	Medicine.....	10.28	14.02	27.00	29.39
Religion.....	4.05	6.72	8.48	9.50	Philosophy and religion.....	4.05	4.65	6.71	7.16
Science.....	10.21	12.13	15.94	16.05	Physical ed. and recreation.....	3.47	4.26	5.72	6.39
Sports.....	4.80	6.58	10.20	10.65	Political science.....	4.77	5.57	7.23	8.47
Technology.....	8.89	12.30	15.28	16.11	Psychology.....	9.67	11.85	18.70	20.98
					Sociology and anthropology.....	4.52	5.26	7.92	9.12
					Zoology.....	8.90	10.31	19.29	22.39
					General interest periodicals.....	5.19	6.19	9.32	9.62

NA Not available. ¹ Excludes paperbound books, government documents, and certain multi-volume encyclopedias. Refers to books published in year stated.

² Includes sociology. ³ Includes recreation. ⁴ Average annual subscription prices.
 Source: 1960, U.S. Office of Education, *The Cost of Library Materials; Price Trends of Publications*, Circular OE-15029A. Beginning 1965, R. R. Bowker Co., New York, N.Y., average prices of books, *Publishers' Weekly*, and average prices of periodicals, *Library Journal*. (Copyright, by Xerox Corporation.)

No. 828. BOOKS AND PAMPHLETS—QUANTITY SOLD AND VALUE OF RECEIPTS:
1958, 1963, AND 1967

[Includes number of copies sold and dollar receipts reported by establishments classified in the "Books, publishing and printing" industry and by establishments reporting these receipts as "secondary" activities in other industries]

TYPE OF PUBLICATION	1958		1963		1967	
	Copies sold (mil.)	Receipts (mil. dol.)	Copies sold (mil.)	Receipts (mil. dol.)	Copies sold (mil.)	Receipts (mil. dol.)
Total	(X)	1,010.7	(X)	1,547.8	(X)	2,255.3
All books	(X)	959.4	(X)	1,484.3	(X)	2,081.2
Textbooks.....	(X)	281.6	(X)	1,471.1	(X)	1,738.6
Elementary, grades 1-8:						
Hardbound.....	47.5	76.6	54.9	112.7	85.1	180.6
Paperbound.....	26.8	11.6	38.5	21.7	30.0	24.3
High school, grades 9-12:						
Hardbound.....	23.1	58.2	32.9	97.8	36.3	122.7
Paperbound.....	2.5	2.0	9.4	8.8	11.6	14.9
College, grades 13 and over: ²						
Hardbound.....	19.6	81.4	24.2	131.7	41.2	226.6
Paperbound.....	3.1	2.8	9.3	14.9	16.7	32.7
Workbooks, paperbound.....	76.6	40.3	106.3	61.1	124.3	85.6
Standardized tests, paperbound ³	97.0	8.7	137.3	19.3	188.0	28.5
Subscription reference books, hardbound ⁴	44.9	163.6	35.7	207.3	33.1	216.3
Technical, scientific, and professional books.....	(X)	116.0	(X)	1,156.3	(X)	1,240.2
Law, designed for the profession.....	3.7	36.4	6.5	57.4	8.4	74.0
Medical, designed for the profession ⁵	2.4	21.4	4.1	24.1	8.5	41.0
Business, nonfiction, for adults.....	2.1	9.4	1.2	5.6	3.7	20.1
Other.....	18.6	48.8	29.6	68.0	16.5	93.5
Religious books.....	(X)	58.6	(X)	181.1	(X)	1,110.4
Hardbound and paperbound:						
Bibles, complete editions.....	8.9	18.3	15.3	26.4	10.5	36.7
Testaments.....	10.2	4.7				15.4
Hymnals and devotionals ⁶	5.1	8.1	4.7	8.2	7.8	
Other, fiction or nonfiction: ⁷						
Hardbound.....	9.8	16.0	16.9	31.3	14.7	29.7
Paperbound.....	36.8	11.5	22.5	12.6	24.1	15.7
General books, trade, etc.....	(X)	274.7	(X)	1,458.2	(X)	1,657.7
Book club books, hardbound and paperbound.....	65.2	95.7	75.7	143.4	147.2	201.5
Wholesale paperbound books, digest size ⁸	232.6	47.7	241.4	60.5	201.1	67.7
Adult trade books, fiction or nonfiction: ⁹						
Hardbound.....	32.3	64.7	40.2	108.5	52.7	148.9
Paperbound.....	5.7	5.4	48.9	34.5	148.6	82.7
Juvenile, fiction and nonfiction: ⁹						
\$1.00 and over retail.....	34.3	40.2	55.1	72.7	65.3	107.5
Under \$1.00 retail.....	137.8	21.1	120.5	31.3	144.3	35.1
Other books:						
Hardbound.....	(S)	52.1	(S)	84.4	29.5	108.1
Paperbound.....	25.9	12.7	41.4	25.9	(S)	(S)
Pamphlets.....	(X)	31.1	(X)	(S)	(S)	(S)
Religious.....	(S)	11.7	(S)	(S)	69.9	2.1
Other.....	(S)	19.5	(S)	32.9	(S)	(S)
Books and pamphlets, not specified by kind	(X)	20.2	(X)	18.9	(X)	97.0

S Does not meet publication standards. X Not applicable.

¹ Includes receipts not specified by kind, as follows (in millions of dollars): Textbooks, 1963, 3.1 and 1967, 14.7; technical, scientific, and professional, 1963, 6.2 and 1967, 11.6; religious, 1963, 2.6 and 1967, 12.9; general, 1963, 7.3 and 1967, 14.3.

² Includes private business and secretarial school, post high vocational schools, and institutes and training courses of college grade.

³ Objective tests, manuals, etc.; includes answer sheets.

⁴ Represents books sold direct to the consumer through agents or distributors, usually on installment plan of payment. Includes multivolume encyclopedias, children's literature, biblical sets, etc. Copies sold represent number of volumes rather than sets.

⁵ Includes missals and prayer books.

⁶ For adults and juveniles.

⁷ Digest size 4¼" x 6½"; distributed 75 percent or more through magazine wholesalers in 1963, and 50 percent or more in 1967.

⁸ Sold primarily through booksellers or book dealers (retail and wholesale) at trade discounts. Juvenile books represent hardbound and paperbound books, excluding toy books.

Source: U.S. Bureau of the Census, *Census of Manufactures: 1963*, vol. II, part 1, and *Census of Manufactures: 1967*, vol. II, part 2.

Section 19

Power

This section presents statistics on power and energy. The principal sources are the Federal Power Commission and the American Gas Association, Arlington, Va.

The Federal Power Commission, in its *Annual Report* and in periodic publications and surveys, issues information on the electric power and natural gas industries. Among annual reports are *Statistics of Privately Owned Electric Utilities in the United States*; *Statistics of Publicly Owned Electric Utilities in the United States*; *Sales of Firm Electric Power for Resale*; *Steam-Electric Plant Construction Cost and Annual Production Expenses*; *Hydroelectric Plant Construction Cost and Annual Production Expenses*; *Statistics for Interstate Natural Gas Pipeline Companies*; *Sales by Producers of Natural Gas to Natural Gas Pipeline Companies*; and *World Power Data*. Monthly reports include *Electric Power Statistics* and *Statistics of Major Interstate Natural Gas Pipeline Companies*. Principal surveys are the *National Power Survey, 1964*, and *1970*. These various publications contain national and State data on production of electricity, capacity of generating plants, fuels used in energy production, energy sales and consumption, hydroelectric power, construction costs and production expenses of power plants, and depreciation practices.

The Commission also issues data on electric utility charges in its annual *All-Electric Homes* and *Typical Electric Bills*; projections for the future in its periodic *Electric Power Requirements and Supply of the United States, by Regions, Present and Future*; and maps showing principal natural gas pipelines and electric facilities.

The American Gas Association, in its monthly and quarterly bulletins and its yearbook, *Gas Facts*, presents data on gas utilities, including sales, revenues, customers, prices, and other financial and operating statistics. Other sources include the Bureau of Mines' *Minerals Yearbook*, containing data on coal, oil, and natural gas production and utilization; the Edison Electric Institute's monthly and annual *Statistical Bulletin*, containing data on the distribution of electric energy by public utilities; and the Atomic Energy Commission's *Annual Report to Congress*, containing data on atomic energy, equipment, finances, and licenses.

Historical statistics.—Tabular headnotes provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

No. 829. TOTAL HORSEPOWER OF ALL PRIME MOVERS: 1940 TO 1972

[In millions. As of January, except as noted. Prior to 1960, excludes Alaska and Hawaii, except as noted. Prime movers are mechanical engines and turbines, and work animals, which originally convert fuels or force (as wind or falling water) into work and power. Electric motors, which obtain their power from prime movers, are excluded to avoid duplication. See also *Historical Statistics, Colonial Times to 1957*, series S 1-14.]

ITEM	1940	1950	1955	1960	1965	1970	1971	1972 (prel.)
Total horsepower	2, 773	4, 868	7, 158	11, 008	15, 096	20, 408	21, 862	22, 915
Automotive ¹ 2.....	2, 511	4, 404	6, 632	10, 367	14, 306	19, 325	20, 732	21, 738
Nonautomotive.....	262	464	526	641	790	1, 083	1, 130	1, 177
Factories.....	22	33	36	42	48	54	56	58
Mines.....	7	22	31	35	40	45	45	47
Railroads ³	92	111	60	47	44	54	56	57
Merchant ships and sailing vessels.....	4 9	4 23	4 24	24	24	22	21	21
Farms ⁴	70	165	212	240	272	290	300	305
Electric central stations ²	54	88	138	217	307	435	473	508
Aircraft ^{5 6}	4 7	4 22	4 26	37	55	183	179	181

¹ Includes passenger cars, trucks, buses, and motorcycles. ² As of July 1. ³ Beginning 1965, not strictly comparable with earlier years. ⁴ Includes Alaska and Hawaii. ⁵ For 1972 includes about 1.4 million hp. in work animals and 16,000 in windmills. ⁶ Includes private planes and commercial airliners.

Source: The Twentieth Century Fund, J. F. Dewhurst and Associates, *America's Needs and Resources, A New Survey*; and John A. Waring, *Transactions of Canadian Sectional Meeting, World Power Conference, 1958*, and unpublished estimates.

No. 830. MINERAL FUEL RESOURCES AND ELECTRICITY—PRODUCTION AND CONSUMPTION: 1940 TO 1972

[In trillions of British thermal units, except percent. Prior to 1960, excludes Alaska and Hawaii, except data for bituminous coal include Alaska for all years. Unit heat values used are, B.t.u. per pound: Anthracite, 12,700; bituminous coal and lignite through 1950, 13,100; bituminous coal and lignite production: 1960, 12,930; 1965, 12,710; 1970, 14,820; 1971, 13,451; 1972, 14,372; bituminous coal and lignite consumption: 1960, 12,740; 1965, 12,610; 1970, 12,488; 1971, 11,887; 1972, 12,566. Crude petroleum, in B.t.u. per barrel: 5,800,000 through 1950; 1960, 5,695,000; 1965, 5,592,300; 1970, 5,620,900; 1971, 5,594,100; 1972, 5,675,000. Natural gas: Total production multiplied by 1,076 B.t.u. minus repressuring vent and waste gas multiplied by 1,035 through 1960; thereafter, dry natural gas production which excludes gas used for repressuring, vented, or flared multiplied by 1,032 B.t.u. per cubic foot for 1965, and 1,031 in 1970-72, to which is added the computed energy equivalent of the heat value of natural gas liquids production for each year. For electricity series, hydropower and nuclear power converted to theoretical energy inputs calculated from national average heat rates for fossil-fueled steam-electric plants using 10,760 B.t.u. per net kilowatt-hour in 1960; 10,453 in 1965; 10,494 in 1970; and in 1971 and 1972, 10,478 for hydropower and 10,660 for nuclear power. See also *Historical Statistics, Colonial Times to 1967*, series M 71-87]

YEAR	Total	PERCENT				YEAR	Total	PERCENT			
		Coal	Crude petroleum ¹	Natural gas ²	Electricity			Coal	Crude petroleum ¹	Natural gas ²	Electricity
Production:						Consumption:					
1940.....	25, 088	53.3	31.3	11.9	(NA)	1940.....	23, 908	52.4	31.4	12.4	(NA)
1950.....	34, 510	42.4	33.2	19.8	(NA)	1950.....	34, 153	37.8	37.2	20.3	(NA)
1960.....	41, 552	26.8	35.3	34.0	3.9	1960.....	44, 569	22.8	41.8	31.7	3.7
1965.....	49, 074	27.3	32.4	36.0	4.3	1965.....	53, 343	22.3	40.1	33.7	3.9
1970.....	61, 852	24.4	32.0	38.9	4.6	1970.....	67, 143	18.9	40.3	36.5	4.3
1971.....	61, 029	22.4	31.7	40.6	5.3	1971.....	68, 728	17.6	40.8	36.8	4.8
1972.....	62, 947	23.1	31.2	40.2	5.5	1972.....	72, 378	17.2	41.9	35.9	5.0

NA Not available.

¹ Includes commingled condensate. Beginning 1950, consumption includes petroleum products (net imports).

² Marketed production; includes amount stored and lost in transmission. Consumption includes dry and liquid gas. Beginning 1965, on pressure base of 14.73 pounds per square inch absolute; formerly, on base of 14.65.

Source: U.S. Bureau of Mines, *Minerals Yearbook*. Current data in *Mineral Industry Surveys*.

No. 831. ENERGY INPUT TO THE U.S. ECONOMY, 1971, AND PROJECTIONS, 1975 TO 2000

[In quadrillions of B.t.u.'s, except percent]

ITEM	1971	PROJECTIONS			
		1975	1980	1985	2000
Total gross energy input.....	69.0	80.3	96.0	116.6	191.9
By consuming sector:					
Net energy consumption.....	57.1	65.1	76.1	89.7	140.1
Non-fuel uses ¹	4.0	4.7	5.4	6.4	10.7
Percent of total.....	6	6	6	5	6
Residential and commercial.....	17.4	20.2	23.9	27.7	39.6
Percent of total.....	25	25	25	24	21
Industrial.....	22.6	25.9	29.4	34.9	57.8
Percent of total.....	33	32	31	30	30
Transportation.....	17.0	19.1	22.9	27.1	42.7
Percent of total.....	25	24	24	23	22
Conversion losses ²	11.9	15.1	19.9	26.9	51.8
Percent of total.....	17	19	21	23	27
By energy source:					
Coal.....	12.6	13.8	16.1	21.5	31.4
Petroleum.....	30.5	35.1	42.2	50.7	71.4
Domestic supply.....	22.6	22.1	23.8	23.6	21.2
Supplemental supply.....	7.9	13.0	18.4	27.1	50.2
Percent of total.....	26	37	44	53	70
Natural gas.....	22.7	25.2	27.0	28.4	34.0
Domestic supply.....	21.8	22.6	23.0	22.5	22.9
Gas imports.....	.9	2.6	4.0	5.9	11.1
Percent of total gas.....	4	10	15	19	28
Nuclear power.....	.4	2.6	6.7	11.8	49.2
Hydropower.....	2.8	3.6	4.0	4.3	6.0

¹ Primarily asphalt and road oil in the residential and commercial sector, chemical feedstocks in the industrial sector, and lubes and greases in the transportation sector.

² Losses caused by converting a primary energy source to a secondary energy source.

Source: U.S. Dept. of the Interior, *United States Energy Through the Year 2000*.

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No. 832. ENERGY CONSUMPTION INDICATORS: 1947 TO 1971

YEAR	Gross energy input	NET ENERGY INPUT			Conversion efficiency ²
		Total	Per capita	Per dollar of GNP ¹	
	<i>Quadril. B.t.u.</i>	<i>Quadril. B.t.u.</i>	<i>Mil. B.t.u.</i>	<i>1,000 B.t.u.</i>	<i>Percent</i>
1947	33.0	29.2	202.8	94.2	88.5
1950	34.0	29.7	194.8	83.6	87.3
1955	39.7	34.3	206.7	78.3	86.4
1960	44.6	38.2	211.5	78.3	85.7
1965	53.3	45.3	232.1	73.3	85.0
1966	56.4	47.6	242.2	72.3	83.8
1967	58.3	50.4	253.8	74.0	86.4
1968	61.7	51.7	287.7	73.2	83.7
1969	65.0	54.4	268.5	75.1	83.7
1970	67.4	56.0	273.6	77.8	83.1
1971 (prel.)	69.0	56.9	274.8	76.7	82.7

¹ In 1958 constant dollars. ² Difference between total gross energy inputs and net energy inputs, representing losses from conversion of primary fuels to electrical energy.

Source: U.S. Dept. of the Interior, *United States Energy Through the Year 2000*.

No. 833. ELECTRIC ENERGY PRODUCTION AND INSTALLED GENERATING CAPACITY, BY CLASS OF OWNERSHIP AND TYPE OF PRIME MOVER: 1950 TO 1972

[Production for calendar years; other data as of December 31. Prior to 1965, excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1967*, series S 15-35 and S 44-69]

ITEM	1950	1955	1960	1965	1969	1970	1971 (prel.)	1972 (prel.)
Production (bil. kw.-hr.)	389	629	842	1,158	1,553	1,640	1,718	1,853
Prod. per kw. of capacity (kw.-hr.)	4,776	4,779	4,484	4,469	4,602	4,490	4,393	4,373
Industrial plants ¹	60	82	88	102	111	108	104	106
Electric utilities (for public use)	329	547	753	1,055	1,442	1,532	1,614	1,747
Privately owned	267	421	579	809	1,102	1,183	1,250	1,357
Percent of utility production	81.1	76.9	76.8	76.7	76.4	77.3	77.5	77.6
Publicly owned	62	126	175	246	340	348	364	391
Municipal	15	26	37	50	70	71	73	79
Federal	40	89	112	145	183	186	194	207
Cooperatives and other ²	6	11	26	51	87	91	97	105
Source of energy (percent):								
Coal ³	47.1	55.1	53.6	54.5	49.0	46.2	44.3	44.1
Nuclear					1.0	1.4	2.3	3.1
Oil	10.3	6.8	6.1	6.1	9.6	11.9	13.5	15.6
Gas	13.5	17.4	21.0	21.0	23.1	24.3	23.3	21.5
Hydro	20.2	20.7	19.3	18.4	17.3	16.2	16.5	15.6
Installed capacity (mil. kw.)	83	131	186	255	333	360	387	418
Industrial plants ¹	14	16	18	18	19	19	19	19
Electric utilities (for public use)	69	114	168	236	313	341	367	400
Privately owned	55	87	128	178	240	263	287	315
Percent of utility capacity	80.1	75.9	76.5	75.2	76.6	77.0	78.1	78.8
Publicly owned	14	28	40	59	73	78	81	85
Municipal	5	8	11	15	20	21	22	23
Federal	7	17	22	32	36	39	40	41
Cooperatives and other ²	2	3	6	11	17	19	19	21
TYPE OF PRIME MOVER								
Electric utilities (for public use):								
Number of plants, total ⁴	3,867	3,587	3,435	3,290	3,472	3,519	3,558	3,603
Hydro	1,458	1,381	1,331	1,231	1,188	1,183	1,176	1,176
Steam	1,051	1,045	1,060	1,068	1,008	1,009	1,017	1,017
Gas turbine					269	321	361	411
Internal combustion	1,358	1,161	1,044	991	1,012	1,006	1,004	999
Production (bil. kw.-hr.)	329	547	753	1,055	1,442	1,532	1,614	1,747
Hydro	96	113	146	194	250	247	266	273
Steam	230	430	608	856	1,178	1,262	1,319	1,438
Gas turbine					8	16	22	29
Internal combustion	4	4	4	5	6	6	6	7
Installed capacity (mil. kw.)	69	114	168	236	313	341	367	400
Hydro	18	25	32	44	53	55	56	57
Steam	49	87	133	189	246	266	285	310
Gas turbine					10	15	22	28
Internal combustion	2	2	3	3	4	4	4	5

¹ Plants of 100 kilowatts and over, including stationary powerplants of railroads. ² Includes Power Districts and State Projects.

³ Includes small percentage from wood and waste and geothermal sources.

⁴ Each prime mover type in combination plants counted separately.

Source: U.S. Federal Power Commission, press releases.

No. 834. ELECTRIC ENERGY—PRODUCTION, BY TYPE OF PRIME MOVER AND CLASS OF OWNERSHIP, STATES: 1960, 1965, AND 1971

[In millions of kilowatt-hours. Minus sign denotes decrease]

STATE	1960, total	1965, total	1970, total	1971 (prel.)						
				Type of prime mover			Class of ownership of electric utilities			
				Total	Electric utilities		Industrial plants	Privately owned	Publicly owned	
					Fuel	Hydro			Municipal	Other ¹
U.S.	2 841,616	1,157,583	1,639,771	1,717,520	1,347,616	266,320	103,585	1,250,005	72,535	291,396
N.E.	32,670	44,078	65,574	68,391	59,651	4,286	4,453	62,973	826	139
Maine.....	4,696	5,854	7,273	6,965	2,696	1,651	2,619	4,310	13	24
N.H.....	2,589	2,938	5,415	5,056	3,801	929	326	4,730	(2)	—
Vt.....	918	821	989	924	167	683	74	715	135	—
Mass.....	14,348	20,969	30,235	30,423	28,838	637	947	28,820	634	21
R.I.....	1,816	1,396	1,624	1,485	1,448	(2)	36	1,409	(2)	39
Conn.....	8,303	12,102	20,037	23,538	22,701	385	451	22,988	44	56
M.A.	122,138	166,189	221,539	230,965	196,738	25,635	8,591	200,061	925	21,387
N.Y.....	54,234	75,823	97,840	101,043	73,275	25,178	2,590	76,563	513	21,378
N.J.....	19,078	23,405	33,306	36,790	35,102	-314	1,003	35,527	255	6
Pa.....	48,826	62,161	85,393	93,181	87,361	771	4,999	87,972	157	3
E.N.C.	184,774	239,449	312,958	324,398	298,688	4,066	21,644	287,984	8,303	6,467
Ohio.....	55,785	64,186	85,768	91,462	85,745	9	5,708	83,970	1,701	83
Ind.....	34,461	48,085	59,281	59,174	52,529	431	6,214	50,422	974	1,564
Ill.....	45,923	58,983	76,697	78,152	75,675	119	2,358	73,478	1,655	661
Mich.....	33,030	47,492	61,428	64,106	57,541	1,625	4,940	54,973	3,265	928
Wis.....	15,576	20,703	29,784	31,504	27,197	1,883	2,424	25,142	708	3,231
W.N.C.	47,291	67,452	103,033	107,184	88,224	14,787	4,174	67,670	8,485	26,855
Minn.....	11,493	15,653	20,486	20,335	16,606	829	2,900	15,896	1,417	121
Iowa.....	8,557	10,824	15,130	14,945	13,500	911	533	12,448	1,341	622
Mo.....	11,089	16,773	23,411	30,932	29,786	703	443	24,719	2,065	3,705
N. Dak.....	1,841	3,312	6,747	8,342	5,038	3,285	73	834	4	7,430
S. Dak.....	1,721	4,373	7,341	8,427	649	7,741	37	651	(2)	7,739
Nebr.....	4,365	5,415	7,988	7,773	6,406	1,359	12	—	914	6,851
Kans.....	8,222	11,302	15,929	16,425	16,242	7	176	13,121	2,742	3,886
S.A.	120,433	172,880	263,493	281,312	249,035	16,192	16,084	247,570	9,709	7,949
Del.....	2,437	3,435	5,808	5,707	5,511	—	196	5,340	171	—
Md.....	10,668	18,698	24,917	25,320	22,220	1,772	1,327	23,911	81	—
D.C.....	1,017	614	3,105	2,254	2,205	1	48	2,205	—	1
Va.....	20,614	25,849	31,022	31,422	27,822	1,082	2,518	28,086	242	576
W. Va.....	19,739	25,470	39,185	42,138	38,449	486	3,203	38,935	—	—
N.C.	21,374	32,574	53,174	55,462	45,014	5,910	1,538	52,605	10	1,308
S.C.....	12,375	15,068	19,029	23,600	18,015	3,440	2,144	17,142	14	4,299
Ga.....	12,479	18,777	29,446	32,537	26,390	3,247	2,900	28,252	—	1,385
Fla.....	19,781	32,405	57,808	62,872	60,409	253	2,210	51,093	9,190	379
E.S.C.	93,261	116,801	151,672	156,179	128,243	22,868	5,067	54,002	1,468	95,642
Ky.....	20,032	31,729	45,175	49,343	45,753	3,536	54	16,725	1,106	31,458
Tenn.....	42,795	38,378	44,956	45,239	34,439	9,420	1,439	823	—	43,036
Ala.....	26,635	40,740	49,098	49,511	36,933	9,912	2,616	26,386	—	20,599
Miss.....	3,500	5,954	11,633	12,025	11,068	—	957	10,068	362	638
W.S.C.	87,683	131,245	211,347	223,574	184,677	4,064	34,833	166,396	12,589	9,756
Ark.....	6,500	9,566	15,402	13,738	9,937	1,804	1,998	9,222	63	2,465
La.....	19,284	26,945	46,406	49,354	37,118	—	12,236	35,120	1,998	—
Okla.....	5,534	13,166	23,622	24,900	23,292	1,383	224	21,236	515	2,924
Tex.....	53,364	81,569	125,916	135,582	114,330	877	20,375	100,318	10,012	4,377
Mt.	39,932	54,111	76,926	84,881	50,769	29,265	4,847	56,811	1,578	21,645
Mont.....	6,040	8,897	10,045	10,665	1,058	9,594	13	6,511	—	4,142
Idaho.....	6,315	6,802	7,252	7,637	1	7,469	166	6,101	67	1,302
Wyo.....	1,762	3,725	6,674	6,553	5,146	1,312	195	5,141	—	1,316
Colo.....	5,935	8,193	12,292	13,015	10,977	1,584	454	8,450	1,188	2,922
N. Mex.....	3,454	8,710	15,569	17,348	16,718	27	602	16,211	192	2,343
Ariz.....	9,458	9,941	14,344	16,038	8,066	6,621	1,351	5,232	10	9,444
Utah.....	4,172	4,325	5,749	4,823	2,086	980	1,757	2,384	116	565
Nev.....	2,796	3,519	5,911	8,703	6,717	1,678	308	6,781	5	1,609
Pac.	113,434	165,378	233,229	240,637	91,590	145,156	3,890	106,538	28,651	101,557
Wash.....	35,417	50,260	73,086	74,883	2,551	71,428	905	4,919	8,757	60,302
Oreg.....	13,118	17,058	30,473	34,882	29	34,304	549	9,212	511	24,610
Calif.....	64,899	94,189	123,776	124,246	83,567	39,046	1,633	87,921	18,886	15,807
Alaska.....	(NA)	948	1,615	1,707	1,071	357	279	94	—	837
Hawaii.....	(NA)	2,924	4,428	4,918	4,372	21	525	4,393	—	—

- Represents zero. NA Not available. Z Less than 500,000 kw.-hr.
¹ Includes Federal, State public utility districts, and cooperatives.
² Excludes Alaska and Hawaii.

Source: U.S. Federal Power Commission, annual summaries and related monthly reports.

No. 835. UTILITY ELECTRIC ENERGY USE, 1960 TO 1970, AND PROJECTED REQUIREMENTS, 1975 TO 1990

[Excludes generation by industrial facilities and railways having generating facilities of their own]

YEAR	ENERGY USE				PEAK LOAD		
	Billion kw.-hr.	Percent increase		Kw.-hrs. per capita ²	Million kw.	Percent increase	
		From 1960	For each interval ¹			From 1960	For each interval ¹
1960.....	764	(X)	(X)	4,229	138	(X)	(X)
1965.....	1,080	38.7	6.8	5,457	189	37.0	6.5
1969.....	1,448	89.5	7.4	7,147	263	90.6	7.4
1970 (prel.).....	1,539	101.4	7.2	7,573	278	101.4	7.2
1975.....	2,194	187.2	7.3	10,181	398	188.4	7.3
1980.....	3,086	303.9	7.2	13,366	556	302.9	7.2
1985.....	4,263	458.0	7.1	17,311	769	457.2	7.1
1990.....	5,852	666.0	7.0	22,442	1,056	665.2	7.0

X Not applicable. ¹ Represents annual growth rate. ² Based on U.S. Bureau of the Census population data including Armed Forces abroad for July 1, except 1970 and projections based on April 1, 1970 census count. Projection figures used are from series D (see table 3).

Source: U.S. Federal Power Commission, *National Power Survey, 1970*, and unpublished data.

No. 836. ELECTRIC UTILITIES—BALANCE SHEET AND INCOME ACCOUNT OF PRIVATELY-OWNED COMPANIES: 1950 TO 1971

[In millions of dollars. Prior to 1960, excludes Alaska and Hawaii. Data cover reports of all companies with annual electric revenues over \$1 million representing about 98 percent of the privately-owned companies. See also *Historical Statistics, Colonial Times to 1967*, series V 128-142]

ITEM	1950	1955	1960	1965	1969	1970	1971
COMPOSITE BALANCE SHEET							
Assets and other debits.....	20,523	30,992	44,742	56,395	78,316	87,417	98,174
Electric utility plant.....	18,956	30,307	45,456	59,703	83,671	93,303	104,300
Provisions for depreciation and amortization ¹	3,832	5,715	8,889	13,651	18,675	20,263	22,006
Net electric utility plant.....	15,124	24,594	36,567	46,072	64,996	73,050	82,294
Other utility plant.....	2,485	3,402	4,852	6,613	8,378	8,974	9,536
Provisions for depreciation and amortization ¹	534	678	895	1,418	1,926	2,096	2,268
Net other utility plant.....	1,951	2,724	3,889	5,195	6,543	6,879	7,268
Total utility plant.....	21,441	33,709	50,308	68,315	92,049	102,277	113,836
Provisions for depreciation and amortization ¹	4,366	6,391	9,852	15,048	20,600	22,548	24,274
Net total utility plant.....	17,075	27,318	40,456	51,267	71,449	79,929	89,562
Other property and investments.....	1,237	933	1,004	1,247	1,691	1,742	2,245
Current and accrued assets.....	2,058	2,567	3,066	3,639	4,810	5,321	5,887
Deferred debits.....	153	174	216	242	365	425	480
Liabilities and other credits.....	20,523	30,992	44,742	56,395	78,316	87,417	98,174
Capital stock.....	7,621	10,404	13,322	15,668	18,584	20,782	23,919
Other paid-in capital.....	589	1,083	1,747	2,622	3,686	4,400	5,422
Retained earnings.....	1,346	2,191	3,736	5,712	8,608	9,363	10,129
Long-term debt.....	9,179	14,316	21,035	25,502	37,072	41,937	46,708
Current and accrued liabilities.....	1,527	2,381	3,112	4,222	6,048	7,309	7,918
Deferred credits and operating reserves.....	195	247	277	546	900	945	1,096
Contributions in aid of construction.....	66	109	188	294	430	483	567
Accumulated deferred income taxes.....	-	261	1,325	1,829	2,088	2,198	2,424
COMPOSITE INCOME ACCOUNTS							
Electric operating revenues.....	4,784	7,199	10,116	13,400	18,023	19,791	22,322
Electric operating expenses.....	3,828	5,702	7,917	10,296	13,899	15,310	17,353
Net electric operating revenues.....	956	1,497	2,199	3,104	4,124	4,481	4,969
Income from electric plant leased to others.....	5	3	2	3	3	(²)	(²)
Electric utility operating income.....	961	1,500	2,201	3,107	4,127	4,481	4,969
Other utility operating income.....	72	120	196	301	366	2,404	2,433
Total utility operating income.....	1,033	1,620	2,397	3,409	4,493	4,885	5,402
Other income.....	106	118	178	191	538	774	1,001
Total income.....	1,139	1,738	2,575	3,600	5,031	5,659	6,403
Income deductions.....	317	494	792	1,019	1,835	2,251	2,551
Net income.....	822	1,244	1,783	2,581	3,196	3,408	3,852

- Represents zero. ¹ Accumulated. ² Included with other utility operating income.

Source: U.S. Federal Power Commission, *Statistics of Privately Owned Electric Utilities in the United States*.

No. 837. LARGEST PUBLIC UTILITY COMPANIES—ASSETS, REVENUES, INCOME, AND STOCKHOLDERS' EQUITY, BY RANK OF ASSETS: 1972

[In millions of dollars, except percent. As of December 31 or calendar year, as applicable]

ASSET GROUP	INCLUDING TELEPHONE COMPANIES ¹				EXCLUDING TELEPHONE COMPANIES			
	Assets ²	Operating revenues ³	Net income	Stockholders' equity ⁴	Assets ²	Operating revenues ³	Net income	Stockholders' equity ⁴
50 largest.....	171,875	54,727	6,632	68,196	98,433	28,395	3,685	36,606
Lowest ten.....	11,794	3,347	525	4,761	11,794	3,347	525	4,761
Second ten.....	14,469	4,993	567	4,971	12,903	4,526	514	4,567
Third ten.....	17,873	5,932	649	6,177	16,144	5,298	587	5,708
Fourth ten.....	24,102	6,823	877	8,588	24,102	6,823	877	8,588
Highest ten.....	103,637	33,623	4,015	43,699	33,490	8,401	1,182	12,982
Percent of total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lowest ten.....	6.9	6.1	7.9	7.0	12.0	11.8	14.2	13.0
Second ten.....	8.4	9.1	8.5	7.3	13.1	15.9	13.9	12.5
Third ten.....	10.4	10.8	9.8	9.0	16.4	18.7	15.9	15.6
Fourth ten.....	14.0	12.5	13.2	12.6	24.5	24.0	23.8	23.5
Highest ten.....	60.3	61.5	60.5	64.1	34.0	29.6	32.1	35.5

¹ American Telephone and Telegraph Co., and Continental Telephone Co.

² Total assets employed in business, net of depreciation; includes consolidated subsidiaries. ³ Gross receipts from operations during year; includes nonutility revenues from manufacturing, transportation, etc.

⁴ Capital stock, surplus, and retained earnings (i.e., net worth).

 Source: Fortune, New York, N.Y., adapted from *The Fortune Directory*. (Copyright, 1972, by Time Inc.)

No. 838. FEDERAL ELECTRIC UTILITY PROJECTS—INSTALLED CAPACITY AND INVESTMENT ALLOCATED TO ELECTRIC PLANT: 1960 TO 1971

[As of June 30. Comprises only electricity generating plant of these projects; excludes projects not primarily manufacturing electricity (e.g., West Point, Annapolis). Investments represent allocation to power projects for capital equipment and improvements. Reserves for depreciation not deducted]

PROJECT GROUP OR SYSTEM	INSTALLED CAPACITY (1,000 kw.)				INVESTMENT ALLOCATED ¹ (mil. dol.)			
	1960	1965	1970	1971	1960	1965	1970	1971
Total.....	22,616	29,317	36,650	37,805	5,398	7,925	10,121	10,828
Percent capacity of all electric utilities.....	13.5	12.8	10.7	10.3	(X)	(X)	(X)	(X)
Central Valley: Bureau of Reclamation.....	630	1,014	1,322	1,322	138	294	213	224
Columbia Basin:								
Bonneville Power Admin. (transmission).....	-	-	-	-	480	614	1,118	1,212
Bureau of Reclamation.....	2,282	2,282	2,464	2,503	277	676	359	427
Corps of Engineers.....	3,781	4,262	6,522	7,062	850	956	1,603	1,641
Hoover and Parker-Davis: Bu. of Reclamation.....	1,695	1,690	1,690	1,690	209	217	225	226
Missouri Basin: Bureau of Reclamation.....	397	678	693	693	304	520	508	618
Corps of Engineers.....	745	1,580	2,048	2,048	357	601	714	717
Southeastern Power Adm.: Corps of Engineers.....	1,271	1,677	1,910	1,910	410	547	644	641
Southwestern Power Administration:								
Southwestern Power Admin. (transmission).....	-	-	-	-	27	37	56	58
Corps of Engineers.....	601	1,242	1,533	1,533	203	351	438	438
Tennessee Valley Authority.....	11,032	13,923	17,256	17,662	2,054	2,685	3,703	4,176
Other projects.....	282	969	1,212	1,382	88	427	540	549
Bureau of Reclamation.....	218	905	1,148	1,318	62	400	511	520

 - Represents zero. X Not applicable. ¹ Includes estimates.

No. 839. CONSUMPTION OF FUELS BY ELECTRIC UTILITIES: 1950 TO 1972

 [Prior to 1965, excludes Alaska and Hawaii. Includes use of fuels for stand-by purposes. See also *Historical Statistics, Colonial Times to 1967*, series S 36-43]

ITEM	1950	1955	1960	1965	1969	1970	1971	1972 (Prel.)
Net generation by fuel ¹bil. kw. hr..	233	434	607	861	1,192	1,284	1,348	1,475
Fuel consumed:								
Total coal equivalent.....mil. sh. tons.....	138	207	266	369	524	583	618	672
Coal, including lignite.....mil. sh. tons.....	92	144	177	245	311	321	328	351
Oil.....mil. (42-gal.) bbl.....	75	75	85	115	241	336	396	494
Gas.....bil. cu. ft.....	629	1,153	1,724	2,321	3,488	3,932	3,993	3,979
Per kilowatt-hour:								
Coal.....lb.....	1.19	0.95	0.78	0.858	0.880	0.909	0.918	0.911
Oil.....gal.....	0.094	0.085	0.088	0.075	0.076	0.077	0.076	0.076
Gas.....cu. ft.....	14.1	12.1	10.9	10.5	10.5	10.5	10.6	10.6

¹ Includes following kw.-hr., in billions; Nuclear power—4 in 1965, 14 in 1969, 22 in 1970, 38 in 1971, and 54 in 1972

Source of tables 837-839: U.S. Federal Power Commission, annual summaries and related monthly reports.

Installed Generating Capacity

513

No. 840. ELECTRIC ENERGY—INSTALLED GENERATING CAPACITY, BY TYPE OF PRIME MOVER AND CLASS OF OWNERSHIP, STATES: 1960 TO 1971

[In thousands of kilowatts. As of Dec. 31. Covers utilities for public use and industrial plants]

STATE	1960, total	1965, total	1970, total	1971 (prel.)						
				Type of prime mover			Class of ownership of electric utilities			
				Total	Electric utilities		Industrial plants	Privately owned	Publicly owned	
					Fuel	Hydro			Municipal	Other ¹
U.S.	2 185,815	254,519	360,327	386,702	311,498	55,898	19,306	286,879	21,789	58,728
N.E.	8,225	10,033	14,532	14,783	12,344	1,230	1,208	13,207	322	45
Maine	1,102	1,207	1,432	1,423	578	842	503	899	3	18
N.H.	850	844	1,241	1,241	785	881	75	1,163	3	-
Vt.	283	324	322	344	141	186	17	257	69	-
Mass.	3,459	4,608	6,560	6,396	5,761	185	450	5,740	196	11
R.I.	456	449	371	377	358	2	17	354	2	5
Conn.	2,074	2,540	4,006	5,003	4,721	134	147	4,795	50	11
M.A.	27,847	36,126	52,818	55,963	48,037	5,967	1,960	50,568	313	3,132
N.Y.	12,360	17,403	22,674	23,813	19,292	3,974	547	19,985	159	3,122
N.J.	4,909	6,697	8,933	10,047	9,450	341	256	9,705	83	2
Pa.	10,578	11,965	20,711	22,103	19,295	1,651	1,157	20,868	71	8
E.N.C.	41,045	49,939	67,750	71,321	66,163	841	4,317	62,749	2,997	1,259
Ohio	11,841	13,279	18,200	19,561	18,386	2	1,173	17,538	835	15
Ind.	7,384	9,324	12,182	12,244	11,016	93	1,136	10,490	386	233
Ill.	10,034	13,110	18,287	19,241	18,682	32	527	17,990	580	144
Mich.	7,923	9,346	12,171	13,201	11,842	345	1,014	11,045	950	191
Wis.	3,863	4,880	6,911	7,074	6,238	368	468	5,685	246	679
W.N.C.	12,265	17,407	24,708	26,398	22,480	3,092	826	16,933	3,340	5,295
Minn.	2,809	3,542	4,527	5,129	4,474	136	520	3,872	641	97
Iowa	2,139	2,749	3,715	3,739	3,496	133	111	2,798	608	223
Mo.	2,813	4,291	7,707	8,371	7,462	801	108	6,740	716	807
N. Dak.	679	755	1,364	1,328	908	400	20	191	15	1,101
S. Dak.	557	1,482	1,717	1,725	332	1,384	9	300	32	1,385
Neb.	1,231	1,595	2,022	2,020	1,778	238	5	-	402	1,613
Kans.	2,036	2,995	3,657	4,086	4,031	2	54	3,031	928	74
S.A.	25,836	38,094	56,631	62,777	54,352	5,505	2,920	54,807	2,688	2,361
Del.	465	639	1,030	1,030	1,000	-	30	956	44	-
Md.	2,349	3,014	5,296	6,082	5,368	494	220	5,810	52	-
D.C.	555	549	1,127	1,127	1,112	3	13	1,112	-	3
Va.	4,103	5,578	6,849	7,016	5,668	842	506	6,226	52	232
W. Va.	4,222	4,610	7,185	8,647	7,949	101	597	8,050	52	-
N.C.	4,054	6,054	9,979	10,489	8,364	1,834	291	9,808	7	383
S.C.	2,697	3,170	4,558	6,091	4,481	1,145	466	4,574	5	1,046
Ga.	2,504	4,508	6,739	7,816	6,347	1,056	412	6,752	42	622
Fla.	4,287	8,472	13,868	14,481	14,004	30	387	11,489	2,529	76
E.S.C.	17,573	24,911	31,808	34,384	28,279	5,217	888	12,817	404	20,276
Ky.	3,398	6,127	9,359	9,966	9,288	686	22	3,932	262	5,749
Tenn.	7,974	8,691	9,763	10,137	7,826	2,023	288	172	(Z)	9,678
Ala.	5,068	8,748	10,172	10,948	7,970	2,508	469	5,823	(Z)	4,656
Miss.	1,133	1,345	2,524	3,334	3,225	-	109	2,890	142	193
W.S.C.	20,082	29,839	46,064	50,757	43,291	2,259	5,207	37,773	4,595	3,273
Ark.	1,437	2,321	3,630	3,698	2,413	977	308	2,236	99	1,085
La.	4,050	6,004	9,209	10,017	8,310	-	1,706	7,484	827	-
Okla.	2,274	3,145	4,846	5,633	4,827	765	42	4,355	178	1,058
Tex.	12,321	18,370	28,379	31,409	27,741	517	3,150	28,698	3,431	1,130
Mt.	9,489	13,747	17,733	19,942	12,429	6,581	931	13,193	442	5,375
Mont.	1,369	1,404	1,837	1,836	320	1,512	4	1,082	-	750
Idaho	1,294	1,295	1,300	1,303	10	1,255	38	1,039	13	213
Wyo.	433	893	1,174	1,516	1,254	222	40	1,249	2	225
Colo.	1,412	2,083	2,915	2,973	2,134	743	97	1,971	300	606
N. Mex.	879	1,885	3,569	3,568	3,421	24	123	3,228	6	155
Ariz.	2,482	3,811	4,300	4,362	2,107	1,941	314	1,419	7	2,622
Utah	853	1,042	1,033	1,033	585	202	246	602	55	131
Nev.	788	1,334	1,604	3,350	2,598	682	70	2,604	4	673
Pac.	2 23,453	34,423	48,782	50,376	24,122	25,206	1,049	24,842	6,778	17,708
Wash.	7,534	9,646	12,981	13,012	1,043	11,633	337	1,055	1,973	9,647
Oreg.	2,798	3,353	5,699	5,969	169	5,639	160	1,687	139	4,083
Calif.	13,121	20,359	28,586	29,824	21,637	7,853	333	21,212	4,519	3,780
Alaska	(NA)	261	415	468	323	77	68	34	147	219
Hawaii	(NA)	803	1,101	1,104	950	3	150	954	-	-

- Represents zero. NA Not available. Z Less than 500 kw.
¹ Includes Federal, State, public utility districts, and cooperatives. ² Excludes Alaska and Hawaii.
 Source: U.S. Federal Power Commission, annual summaries and related monthly reports.

No. 841. ELECTRIC LIGHT AND POWER INDUSTRY—ENERGY GENERATED, SALES, REVENUE, AND CUSTOMERS: 1950 TO 1972

[Prior to 1960, excludes Alaska and Hawaii]

CLASS	1950	1955	1960	1965	1969	1970	1971	1972
Energy generated ¹bil. kw.-hr.	329	547	755	1,055	1,442	1,632	² 1,614	² 1,747
Sales to ultimate customersbil. kw.-hr.	³ 281	³ 481	683	953	1,307	1,391	1,466	1,578
Residential or domestic.....bil. kw.-hr.	67	125	196	281	408	448	479	511
Percent of total.....	23.8	26.0	28.7	29.5	31.2	32.2	32.7	32.4
Commercial and industrial:								
Small light and power.....bil. kw.-hr.	50	78	115	202	287	313	334	362
Large light and power.....bil. kw.-hr.	139	258	345	433	557	573	593	640
All other.....bil. kw.-hr.	17	20	27	37	55	57	60	65
Revenue from ultimate customersmil. dol.	³ 5,986	³ 8,020	11,516	15,158	20,139	22,066	24,725	27,921
Residential or domestic.....mil. dol.	1,932	3,323	4,850	6,329	8,533	9,416	10,484	11,730
Percent of total.....	38.0	41.4	42.2	41.8	42.4	42.7	42.4	42.0
Commercial and industrial:								
Small light and power.....mil. dol.	1,334	1,944	2,828	4,313	5,705	6,290	7,072	8,041
Large light and power.....mil. dol.	1,405	2,416	3,334	3,885	5,045	6,430	6,134	6,984
All other.....mil. dol.	268	337	498	632	850	930	1,035	1,166
Ultimate customers, Dec. 311,000.	³ 44,986	³ 52,559	58,870	65,558	70,929	72,485	74,265	76,150
Residential or domestic.....1,000.	37,533	45,828	51,446	57,596	62,599	64,018	65,650	67,314
Commercial and industrial:								
Small light and power.....1,000.	5,466	6,156	6,760	7,420	7,745	7,865	8,003	8,200
Large light and power.....1,000.	235	402	454	310	349	353	350	370
All other.....1,000.	157	173	210	232	236	249	250	266

¹ Source: U.S. Federal Power Commission. ² Preliminary. ³ Includes rural customers, not shown separately.

 Source: Except as noted, Edison Electric Institute, New York, N.Y., *Statistical Year Book*.

No. 842. ELECTRIC ENERGY SALES, BY CLASS OF SERVICE, 1970 AND 1971, AND BY STATES, 1971

[In millions of kilowatt-hours]

YEAR AND STATE	Total ¹	Residential	Commercial	Industrial	STATE	Total ¹	Residential	Commercial	Industrial
1970.....	1,395,518	466,998	306,661	572,306	S.A.—Con.				
1971.....	1,469,306	499,615	328,907	589,711	W. Va.....	15,373	3,723	2,316	9,200
N.E.	59,596	23,438	16,228	18,560	N.C.....	43,568	15,787	9,418	17,147
Maine.....	5,317	1,888	872	2,376	S.C.....	23,391	7,841	3,798	10,007
N.H.....	3,997	1,666	667	1,562	Ga.....	33,591	13,099	8,489	11,078
Vt.....	2,893	1,360	507	856	Fla.....	55,292	27,254	14,669	9,846
Mass.....	26,226	10,182	8,051	7,492	E.S.C.	136,991	45,397	15,715	72,350
R.I.....	4,233	1,507	1,261	1,298	Ky.....	33,310	7,547	2,461	22,002
Conn.....	16,931	6,834	4,869	4,977	Tenn.....	51,700	18,196	5,929	26,643
M.A.	208,883	63,843	52,090	82,245	Ala.....	35,803	12,237	4,618	18,171
N.Y.....	90,283	26,691	28,014	27,002	Miss.....	16,178	7,416	2,706	5,474
N.J.....	39,990	12,855	11,281	15,395	W.S.C.	167,391	58,633	35,883	66,814
Pa.....	78,609	24,297	12,794	39,848	Ark.....	14,265	4,737	2,541	6,546
E.N.C.	288,954	90,467	58,599	129,186	La.....	31,791	10,110	6,823	12,460
Ohio.....	99,124	23,606	15,407	47,337	Okla.....	17,760	7,776	3,924	5,243
Ind.....	40,145	14,372	6,864	18,782	Tex.....	103,574	36,001	22,590	42,565
Ill.....	74,596	23,977	19,042	26,854	Mt.	67,850	19,787	18,192	26,906
Mich.....	59,244	18,168	11,372	27,290	Mont.....	8,890	1,683	990	5,999
Wis.....	25,845	10,343	5,913	8,923	Idaho.....	10,973	2,602	2,196	6,110
W.N.C.	95,787	39,548	20,229	32,798	Wyo.....	3,312	664	619	1,951
Minn.....	21,660	9,297	2,992	8,983	Colo.....	11,712	4,209	4,596	2,503
Iowa.....	16,422	6,854	3,434	5,658	N. Mex.....	6,126	1,029	1,917	2,057
Mo.....	27,136	10,420	5,502	10,174	Ariz.....	15,231	4,931	4,257	5,080
N. Dak.....	2,988	1,472	517	849	Utah.....	5,550	1,879	1,605	1,643
S. Dak.....	2,943	1,665	876	284	Nev.....	6,056	2,251	2,011	1,584
Neb.....	10,229	4,295	2,998	2,182	Pac.	206,744	68,533	56,092	79,709
Kans.....	14,409	5,545	3,909	4,660	Wash.....	48,115	16,520	6,777	24,351
S.A.	237,109	89,970	55,880	81,142	Oreg.....	27,256	10,835	6,875	9,285
Del.....	4,687	1,248	918	2,474	Calif.....	125,885	39,154	41,179	44,004
Md. ²	29,745	8,965	8,240	12,004	Alaska.....	1,302	632	506	107
Va.....	31,462	12,053	8,031	7,765	Hawaii.....	4,187	1,301	754	1,970

¹ Includes "Other" service, not shown separately. ² Includes District of Columbia.

 Source: U.S. Federal Power Commission, *Annual Report*, and unpublished data.

No. 843. RURAL ELECTRIFICATION ADMINISTRATION—ELECTRIC PROGRAM, SUMMARY OF OPERATIONS: 1950 TO 1972

[Includes data from date of first loan to borrowers in Virgin Islands (1940) and Puerto Rico (1952)]

ITEM	1950	1955	1960	1965	1969	1970	1971 ¹	1972 ¹
Loans approved, cumulative, Dec. 31: ²								
Borrowers ³	1,076	1,077	1,087	1,103	1,098	1,096	1,094	1,092
Amount.....mil. dol.	2,312	3,125	4,256	5,793	7,151	7,496	7,835	8,356
Systems in operation, Dec. 31: ⁴								
Systems ⁵	1,007	1,026	1,088	1,052	1,049	1,050	1,048	1,047
Miles energized ⁶1,000-	1,089	1,362	1,465	1,567	1,650	1,676	1,700	1,731
Consumers served.....1,000-	3,413	4,251	4,826	5,541	6,197	6,442	6,748	7,072
Borrowers' operations during year: ⁷								
Energy generated.....mil. kw.-hr.	1,077	3,255	4,922	8,834	18,073	23,814	27,760	32,290
Energy purchased.....mil. kw.-hr.	7,270	14,996	26,057	39,104	56,031	60,478	65,494	73,812
Energy sold.....mil. kw.-hr.	6,884	15,739	27,269	42,668	66,421	70,009	84,283	91,036
Revenue.....mil. dol.	229	420	615	847	1,168	1,309	1,482	1,673
Average monthly consumption per consumer, all consumers.....kw.-hr.	180	306	466	654	876	914	998	1,062
Residential consumers ⁸kw.-hr.	147	242	357	479	643	687	711	754
Total utility plant.....mil. dol.	(NA)	2,706	3,697	4,978	6,593	7,175	7,708	8,304
Employees.....	(NA)	(NA)	(NA)	31,702	35,771	37,013	33,197	39,829

NA Not available. ¹ Preliminary, except loans approved. ² Net; i.e., excludes loans rescinded. ³ Organizations, mainly cooperatives, to which loans for extending central station electric service in rural areas are made. ⁴ Includes data at time of repayment of loan for borrowers whose loans have been repaid in full. As of Dec. 31, 1972, there were 66 such borrowers, with 25,498 miles energized and 144,266 consumers served. ⁵ Rural electric distribution, generation, and transmission systems operated by R.E.A. borrowers. ⁶ Pole miles of electric distribution and transmission line in service. ⁷ Excludes energy sales and revenues of power sold by one R.E.A. borrower to another. ⁸ Includes rural-nonfarm and farm consumers.

Source U.S. Rural Electrification Administration, *Annual Statistical Report—Rural Electric Borrowers*.

No. 844. WATER POWER—DEVELOPED AND ESTIMATED UNDEVELOPED, BY GEOGRAPHIC DIVISION: 1945 TO 1971

[In thousands of kilowatts. Prior to 1960, excludes Alaska and Hawaii. As of December 31. For composition of divisions, see fig. 1, p. xii]

ITEM AND DIVISION	1945	1950	1955	1960	1965	1969	1970	1971
DEVELOPED WATER POWER ¹								
United States.....	15,892	18,675	25,742	33,180	44,490	50,248	51,952	53,404
New England.....	1,170	1,239	1,385	1,520	1,495	1,495	1,473	1,511
Middle Atlantic.....	1,668	1,678	1,789	2,472	4,815	4,231	4,264	4,252
East North Central.....	818	901	943	929	886	933	936	944
West North Central.....	617	629	932	1,594	2,982	2,785	2,728	2,726
South Atlantic.....	2,664	2,767	3,536	3,773	5,170	5,271	5,265	5,473
East South Central.....	2,229	2,729	3,576	3,750	4,497	5,111	5,224	5,226
West South Central.....	374	466	948	944	1,061	1,840	1,946	2,005
Mountain.....	2,007	2,286	3,706	4,821	5,060	6,097	6,202	6,219
Pacific.....	4,345	5,979	8,898	13,578	17,424	22,485	23,014	24,958
UNDEVELOPED WATER POWER								
United States.....	277,130	87,604	86,895	114,200	124,087	128,900	127,990	125,203
New England.....	3,348	3,250	2,586	2,900	3,240	3,300	3,330	3,318
Middle Atlantic.....	5,175	6,572	8,023	7,600	4,986	4,545	4,455	4,269
East North Central.....	2,574	2,344	3,051	3,000	1,851	1,288	1,576	1,305
West North Central.....	4,735	5,775	6,284	6,400	4,146	4,604	4,390	4,329
South Atlantic.....	7,462	8,151	7,943	8,400	9,977	9,708	9,556	9,059
East South Central.....	4,552	4,736	3,707	4,600	4,287	3,680	3,810	3,877
West South Central.....	2,894	3,568	3,506	3,900	3,056	2,394	3,279	3,029
Mountain.....	17,755	23,440	20,668	23,600	26,530	26,923	26,655	26,174
Pacific.....	28,635	29,768	31,127	53,800	66,514	71,478	70,930	69,843

¹ Capacity of actual installations only. Electric utilities and industrial plants, excluding pumped storage capacity. ² 1947 data.

Source: U.S. Federal Power Commission, annual summaries and related monthly reports.

No. 845. GAS UTILITY AND PIPELINE INDUSTRY—BALANCE SHEET AND INCOME ACCOUNT: 1950 TO 1971

[In millions of dollars. Excludes Hawaii through 1955 and Alaska through 1960. Represents privately owned companies. Excludes operations of companies distributing gas in bottles or in tanks]

ITEM	1950	1955	1960	1965	1968	1969	1970	1971
COMPOSITE BALANCE SHEET								
Assets and other debits.....	9,010	15,435	24,570	32,845	40,245	42,952	45,625	49,730
Utility plant and adjustments.....	7,620	13,305	20,835	28,205	34,400	36,593	38,541	41,067
Investment and fund accounts.....	360	525	1,380	1,885	2,455	2,679	3,024	4,009
Current and accrued assets.....	970	1,465	2,185	2,545	3,120	3,328	3,674	4,198
Deferred debits ¹	60	140	170	210	270	352	386	456
Liabilities and other credits.....	9,010	15,435	24,570	32,845	40,245	42,952	45,625	49,730
Capital stock.....	2,405	3,905	5,785	7,115	7,905	7,862	8,345	9,302
Long-term debt.....	3,145	5,900	9,130	11,515	13,610	14,423	15,681	17,191
Current and accrued liabilities.....	735	1,390	2,420	3,035	4,325	4,902	4,832	4,777
Reserve for depreciation, retirements, depletion, etc.....	1,740	2,775	4,570	7,205	9,310	10,010	10,696	11,894
Reserve for deferred income taxes.....	-	(⁴)	350	660	725	804	788	903
Capital surplus.....	135	200	145	175	210	239	390	(³)
Retained income.....	720	1,040	1,880	2,715	3,595	3,962	4,230	4,943
Other liabilities and credits.....	130	225	290	425	565	622	663	720
COMPOSITE INCOME ACCOUNT								
Operating revenues.....	2,553	5,063	8,696	11,525	13,770	14,896	16,380	18,062
Net operating income.....	371	665	1,109	1,462	1,702	1,958	2,074	2,307
Utility operating income.....	372	667	1,112	1,469	1,710	1,966	2,086	2,310
Gross income.....	405	715	1,222	1,626	2,000	2,264	2,384	2,651
Net income.....	317	509	830	1,107	1,312	1,450	1,427	1,638

- Represents zero.

¹ Includes capital stock discount and expense and reacquired securities. Beginning 1960, reacquired securities are deducted from the appropriate capital account. ² Breakdown will not add to total because of error in reporting units. ³ Capital surplus included with capital stock. ⁴ Included in "Other liabilities and credits."

No. 846. GAS UTILITY INDUSTRY, SUMMARY, 1950 TO 1972 AND PROJECTIONS, 1975

[Excludes Hawaii through 1955 and Alaska through 1960. Covers natural, manufactured, mixed, and liquid petroleum gas. Based on questionnaire mailed to all privately owned gas utilities and municipally owned gas departments in the United States, except those with annual revenues less than \$25,000, which in the aggregate account for only a negligible portion of the industry]

ITEM	1950	1955	1960	1965	1969	1970	1971	1972 (prel.)	1975
Customers¹.....1,000.....	24,001	28,479	33,054	37,338	40,854	41,482	42,241	43,307	45,690
Residential.....	22,146	26,283	30,418	34,341	37,538	38,097	38,788	39,716	41,897
Commercial.....	1,739	2,048	2,458	2,790	3,074	3,131	3,199	3,332	3,502
Industrial.....	99	121	141	166	193	199	205	209	291
Other.....	17	28	37	41	49	55	49	50	
Sales².....mil. therms³.....	42,091	66,586	92,876	119,803	153,916	160,435	166,795	169,686	182,016
Residential.....	13,839	22,387	31,881	39,990	48,204	49,237	50,397	51,761	59,250
Commercial.....	4,104	6,029	9,198	13,448	18,781	20,066	21,555	23,343	26,236
Industrial.....	22,887	35,351	47,094	61,465	81,358	84,392	86,434	85,303	96,530
Other.....	1,261	2,819	4,704	4,900	5,573	6,740	8,409	9,280	
Revenues².....mil. dol.....	1,948	3,450	5,617	7,407	9,480	10,283	11,355	12,498	(NA)
Residential.....	1,177	2,007	3,177	4,030	4,883	5,207	5,635	6,138	(NA)
Commercial.....	268	424	723	1,054	1,459	1,620	1,829	2,074	(NA)
Industrial.....	480	938	1,563	2,148	2,919	3,181	3,568	3,873	(NA)
Other.....	26	81	153	176	219	274	323	413	(NA)
Gas mains mileage,1,000.....	387	497	631	768	892	915	935	959	1,069
Field and gathering.....	33	46	56	62	65	67	67	(NA)	77
Transmission.....	113	146	184	211	248	253	267	(NA)	293
Distribution.....	242	305	391	495	579	596	611	(NA)	698
Construction expenditures, total.....mil. dol.....	1,198	1,345	1,845	1,935	2,686	2,506	2,419	2,963	2,924
Transmission.....	716	593	848	770	1,511	1,019	842	887	688
Distribution.....	290	500	696	824	863	913	888	969	1,188
Production and storage.....	144	198	216	225	211	370	511	963	874
General.....	39	54	85	116	101	205	178	164	174

NA Not available. ¹ Yearly averages. ² Excludes sales for resale.

³ A therm is equivalent to 100,000 British thermal units. (A B.t.u. is the quantity of heat required to raise the temperature of 1 pound of water 1° F. at or near its point of maximum density.)

Source of tables 845 and 846: American Gas Association, Arlington, Va., *Gas Facts*, annual. (Copyright.)

Gas Utility Industry

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No. 847. GAS UTILITY INDUSTRY—CUSTOMERS, SALES, AND REVENUES, BY TYPE OF GAS, CLASS OF SERVICE, AND STATES: 1971

[See headnote, table 846]

TYPE OF GAS AND STATE	CUSTOMERS ¹ (1,000)				SALES ² (mil. therms ⁴)				REVENUES ³ (mil. dol.)			
	Total ²	Residential	Commercial	Industrial	Total ²	Residential	Commercial	Industrial	Total ²	Residential	Commercial	Industrial
U.S.	42,241	38,788	3,199	205	166,795	50,397	21,555	86,434	11,355	5,635	1,829	3,568
N.E.	1,711	1,589	104	15	2,596	1,415	506	579	440	288	85	60
Maine.....	24	22	1	(Z)	18	8	4	5	2	1	1	1
N.H.....	45	41	3	(Z)	72	39	15	13	11	7	2	1
Vt.....	15	14	1	(Z)	31	12	5	14	4	2	1	1
Mass.....	1,073	999	61	10	1,674	903	321	264	271	184	53	28
R.I.....	162	152	9	2	272	128	48	93	39	24	7	7
Conn.....	394	362	28	3	629	323	114	191	111	69	21	22
M.A.	8,235	7,625	567	29	17,149	8,287	2,736	5,780	1,947	1,184	329	402
N.Y.....	4,136	3,854	286	14	6,188	3,611	1,057	1,287	801	532	136	109
N.J.....	1,788	1,603	174	6	3,091	1,486	607	977	405	254	84	66
Pa.....	2,316	2,168	187	9	7,871	3,190	1,072	3,517	741	398	109	227
E.N.C.	9,720	8,940	730	47	40,721	15,724	6,698	17,584	3,158	1,628	550	947
Ohio.....	2,673	2,469	195	7	11,460	4,818	1,919	4,533	888	466	165	286
Ind.....	1,113	1,004	104	4	5,129	1,602	730	2,829	380	169	65	145
Ill.....	3,007	2,783	206	17	11,674	4,651	2,032	4,822	900	490	158	247
Mich.....	2,079	1,907	162	11	8,953	3,551	1,662	3,685	703	362	129	205
Wis.....	848	777	63	8	3,506	1,142	455	1,716	287	140	44	94
W.N.C.	3,570	3,223	317	28	17,955	5,293	2,578	9,384	1,072	516	190	343
Minn.....	660	601	53	5	3,136	1,048	470	1,538	237	124	43	68
Iowa.....	647	576	69	2	3,193	953	570	1,423	207	96	42	60
Mo.....	1,094	1,007	82	4	4,233	1,696	708	1,792	280	155	52	68
N. Dak.....	59	52	7	(Z)	195	87	83	21	17	10	6	1
S. Dak.....	85	74	10	(Z)	289	115	90	81	22	13	7	3
Nebr.....	374	324	42	8	1,994	539	284	1,064	114	50	20	40
Kans.....	652	590	55	8	4,914	956	373	3,464	194	68	20	103
S.A.	3,624	3,307	287	20	13,679	3,593	1,756	7,730	1,067	474	176	383
Del.....	83	77	5	(Z)	246	84	34	113	24	13	4	6
Md.....	726	674	46	5	1,540	741	187	580	180	112	24	42
D.C.....	162	143	18	1	280	146	103	10	37	22	12	1
Va.....	506	460	43	3	1,421	511	268	567	141	76	29	32
W. Va.....	385	353	32	1	1,619	573	243	791	108	50	17	40
N.C.....	300	257	37	3	1,626	289	185	1,060	122	38	20	58
S.C.....	249	223	25	1	1,334	201	129	942	92	28	13	47
Ga.....	829	764	58	6	3,376	872	391	2,090	230	101	33	93
Fla.....	384	356	26	1	2,286	176	216	1,576	133	33	24	63
E.S.C.	1,983	1,793	176	6	9,861	2,165	1,173	6,295	552	215	87	238
Ky.....	597	543	52	1	1,984	830	354	726	140	73	26	36
Tenn.....	435	380	49	3	2,567	462	377	1,688	144	44	29	68
Ala.....	597	552	42	1	2,758	561	283	1,909	163	68	22	73
Miss.....	354	317	34	2	2,553	312	158	1,972	105	29	10	61
W.S.C.	4,851	4,401	407	37	32,004	4,221	1,948	23,235	1,136	379	109	580
Ark.....	424	376	46	3	3,055	470	221	121	38	16	6	66
La.....	893	829	61	3	7,381	717	244	6,294	226	58	13	151
Okla.....	706	637	65	4	3,631	783	390	1,389	151	65	21	38
Tex.....	2,827	2,560	236	27	17,937	2,250	1,035	13,271	638	219	59	325
Mt.	1,976	1,772	192	9	9,607	2,441	1,445	5,399	497	209	92	182
Mont.....	155	137	17	1	790	244	149	356	44	21	10	12
Idaho.....	85	74	11	(Z)	453	87	69	282	33	12	7	13
Wyo.....	83	73	10	(Z)	710	130	85	479	25	9	4	12
Colo.....	611	541	69	1	2,711	848	588	1,255	134	63	35	36
N. Mex.....	240	213	22	3	1,288	267	122	769	57	23	8	23
Ariz.....	470	423	39	3	1,776	351	213	1,109	106	39	14	46
Utah.....	252	233	18	1	1,176	435	147	593	57	32	8	17
Nev.....	80	74	6	(Z)	705	80	61	557	41	11	6	24
Pac.	6,570	6,138	417	15	23,222	7,258	2,716	10,447	1,487	741	211	434
Wash.....	302	266	35	1	1,646	366	224	1,056	117	48	24	45
Oreg.....	212	187	25	(Z)	906	228	134	545	78	35	17	26
Calif.....	6,003	5,639	353	11	20,489	6,629	2,823	8,765	1,271	651	166	355
Alaska.....	17	14	3	1	149	26	28	67	12	3	3	4
Hawaii.....	36	33	2	2	30	9	7	15	8	3	2	3

Z Less than 500.

¹ Averages for the year. ² Includes "Other" service, not shown separately.

³ Excludes sales for resale. ⁴ For definition, see footnote 3, table 846.

Source: American Gas Association, Arlington, Va., *Gas Facts*, annual. (Copyright.)

No. 848. NUCLEAR POWER PLANT CAPACITY, 1960 TO 1972, AND PROJECTIONS, 1975 AND 1980

[In net megawatts, except percent]

ITEM	1960	1965	1968	1969	1970	1971	1972	1975	1980
Existing nuclear capacity, yearend.....	381	1,027	2,724	4,272	7,498	10,041	14,683	54,200	181,600
Percent of total electric utility capacity.....	0.2	0.4	0.9	1.4	2.2	2.7	3.7	11.4	19.8
Nuclear capacity added and ordered during year.....	534	5,153	32,432	14,934	24,812	27,244	50,436	(X)	(X)
Placed in commercial operation.....	200	87	1,005	1,265	1,726	3,459	5,546	11,900	28,300
Construction initiated.....	317	625	18,521	6,466	8,814	3,832	6,598	(X)	(X)
Ordered from manufacturers.....	17	4,441	12,906	7,203	14,272	19,953	38,292	(X)	(X)

X Not applicable.

Source: U.S. Atomic Energy Commission various releases and unpublished data.

No. 849. ATOMIC ENERGY COMMISSION—SELECTED DATA ON NUCLEAR REACTORS, URANIUM, RADIOISOTOPES, AND HEAVY WATER: 1960 TO 1972

[For years ending June 30, except as noted]

ITEM	1960	1965	1968	1969	1970	1971	1972
NUCLEAR REACTORS							
Electrical generation: ¹							
Capacity.....net electrical megawatts.....	381	1,207	2,724	4,272	7,498	10,041	14,683
Gross output.....1,000 megawatt hours.....	591	4,638	13,974	16,388	23,760	40,724	57,705
Development costs.....mil. dol.....	399	538	549	508	496	505	511
Civilian power reactors.....mil. dol.....	100	117	167	155	148	156	185
Military reactors.....mil. dol.....	187	116	124	128	139	155	167
Space propulsion.....mil. dol.....	15	93	78	60	54	51	33
Auxiliary power sources.....mil. dol.....	12	105	63	50	53	48	31
General.....mil. dol.....	85	107	117	118	102	95	105
URANIUM							
AEC procurement:							
Quantity.....tons of U ₃ O ₈	34,582	15,313	7,737	7,124	4,009	² 1,296	(²)
Cost.....mil. dol.....	704	265	124	100	49	² 15	(²)
Est. ore reserves ³1,000 tons of contained U ₃ O ₈	238	145	161	204	243	275	273
Rated ore milling capacity ³1,000 tons per day.....	22	12	18	26	28	28	32
RADIOISOTOPES							
Sales by AEC.....\$1,000.....	2,209	1,601	1,473	1,122	1,206	1,211	998
Exports (domestic) ^{1,4}\$1,000.....	1,286	3,026	3,918	5,395	4,847	6,719	8,730
Imports ^{1,4}\$1,000.....	1,394	2,818	3,241	4,697	3,471	5,671	4,443
HEAVY WATER							
Sales by AEC.....tons.....	86	82	98	348	620	770	276
Value.....\$1,000.....	4,867	4,067	4,822	17,234	34,633	43,002	14,517

¹ Calendar year data.

² Program phased out in Dec. 1970.

³ As of December.

⁴ Source: U.S. Bureau of the Census, prior to 1968, *U.S. Exports of Radioactive and Stable Isotopes*, FT 9523, and *U.S. Imports of Radioactive Substances*, FT 9066; beginning 1968, *U.S. Exports, Schedule B Commodity and Country*, FT 410, and *U.S. Imports for Consumption and General Imports, TSUSA Commodity and Country*, FT 246. Export figures include shipments made by AEC and by commercial firms.

Source: Except as noted, U.S. Atomic Energy Commission, *Annual Report*, and unpublished data.

No. 850. ATOMIC ENERGY COMMISSION—FINANCES AND EMPLOYMENT: 1955 TO 1972

[Money figures in millions of dollars. For years ending June 30. Minus sign (—) denotes net income]

ITEM	1955	1960	1965	1968	1969	1970	1971	1972
Appropriations received	1,210	2,650	2,625	2,509	2,616	2,222	2,308	2,293
Operations.....	1,099	2,387	2,262	2,140	2,109	1,867	1,929	1,952
Plant and capital equipment.....	111	263	363	369	507	355	379	341
Plant investment, year end	6,487	7,345	8,871	9,127	9,454	9,728	9,925	10,152
Completed plant.....	5,858	7,018	8,470	8,827	9,012	9,173	9,286	9,507
Production plants.....	4,646	5,458	5,464	5,310	5,333	5,407	5,420	5,520
Research and development facilities.....	707	1,271	2,370	2,926	3,073	3,170	3,281	3,382
Other.....	505	289	636	591	602	596	585	605
Construction in progress.....	629	327	401	300	442	555	638	645
Cost of operations (incl. depreciation)	1,290	2,619	2,570	2,507	2,566	2,504	2,501	2,576
Procurement of raw materials.....	194	717	261	125	101	51	17	2
Production of nuclear materials.....	588	731	571	507	495	490	502	547
Weapons development and fabrication.....	259	505	763	784	898	896	935	956
Development of nuclear reactors.....	115	399	538	549	508	496	505	511
Physical research.....	48	133	237	310	332	336	328	322
Biology and medicine research.....	29	49	84	99	99	100	99	100
Community operations (net).....	10	7	4	1	—	(z)	(z)	(z)
Administrative expenses.....	34	51	80	97	108	124	134	149
Expenses and income (net).....	13	27	31	36	25	11	—19	—11
Employment	112,618	122,718	133,912	129,959	127,212	122,472	115,174	109,926
Federal Government.....	6,076	6,907	7,329	7,665	7,467	7,548	7,408	7,392
Contractor operating.....	82,936	104,612	114,783	111,846	103,856	106,995	99,207	93,726
Contractor construction and design.....	23,606	11,199	11,800	10,448	10,889	8,929	8,559	8,808

— Represents zero. Z Less than \$500,000.

Source: U.S. Atomic Energy Commission, *Financial Report*.

No. 851. SHIPMENTS OF ATOMIC ENERGY EQUIPMENT AND PRODUCTS: 1970 AND 1971

[In thousands of dollars. Excludes construction expenditures, engineering and design costs, research and development expenditures, and products used in atomic energy which are not uniquely designed for nuclear applications. Excludes radiation detection and monitoring devices and control and measuring devices containing radioactive isotopes]

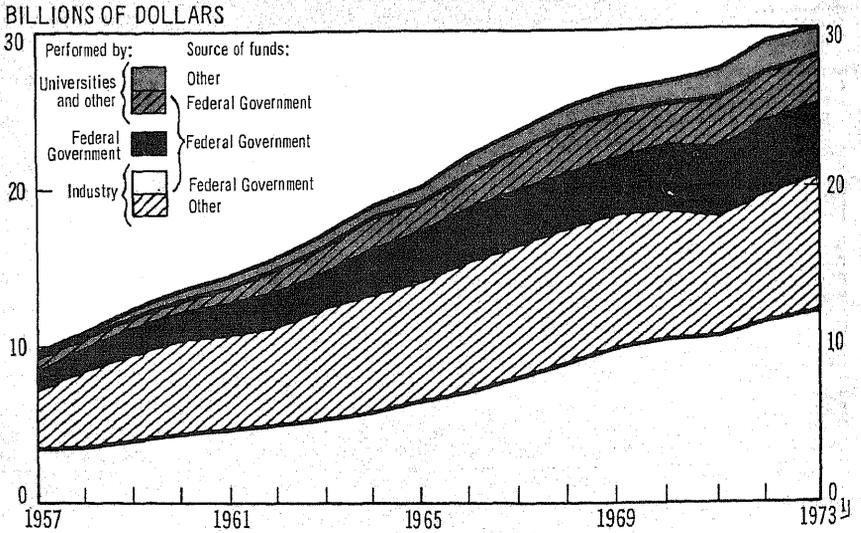
ITEM	1970			1971		
	Total	U.S. Government agencies	Other, including exports	Total	U.S. Government agencies	Other, including exports
Total	800,805	162,698	1638,107	870,109	1205,345	1664,764
Nuclear reactors ²	67,961	(D)	(D)	67,770	(D)	(D)
Reactor components and equipment:						
Control rod drive mechanisms and components ³	255,795	44,695	211,100	244,886	50,181	194,705
Heat exchangers and condensers.....	101,702	19,381	82,371	116,943	20,923	87,020
Pressurizers, components, auxiliary equipment, and pumps.....	111,775	17,917	93,858	122,910	21,857	101,053
Valves.....	48,800	18,111	30,689	57,012	25,467	31,545
Complete reactor fuel elements and control rods shipped directly for installation or use in a reactor.....	81,918	(D)	(D)	142,650	(D)	(D)
Partially fabricated reactor fuel element materials and control rods not shipped directly for installation or use in a reactor.....	27,178	8,144	19,034	22,081	8,990	13,091
Reactor moderators, coolants, reflectors, and other specialized reactors components and equipment.....	49,028	6,055	42,973	31,912	5,592	26,320
Hot laboratory equipment and shieldings.....	6,429	4,396	2,033	6,673	2,975	3,698
Wholesale and retail radioisotopes, organic compounds, and stable isotopes.....	26,117	1,488	24,629	35,136	(D)	(D)
Radiation sources and other radioactive materials produced from purchased isotopes.....	14,059	830	13,229	12,759	(D)	(D)
Receipts for processing of source and special nuclear materials and for commercial irradiation service.....	10,043	7,076	2,967	9,377	8,265	1,122

D Withheld to avoid disclosing figures for individual companies.

¹ Includes the value of products for which separate figures are not shown to avoid disclosure.² Includes primary vessels and tanks. ³ Includes core structurals (barrels, cans, boxes, plates, etc.), fuel handling equipment, and accessory instrumentation for reactor control.⁴ Includes radiographic, radioteletherapy, and process irradiation devices and systems.Source: U.S. Bureau of the Census, *Current Industrial Reports*, series MA-38Q.

FIG. XXXIV. RESEARCH AND DEVELOPMENT FUNDS, BY PERFORMANCE SECTOR AND BY SOURCE: 1957 TO 1973

[See table 853]

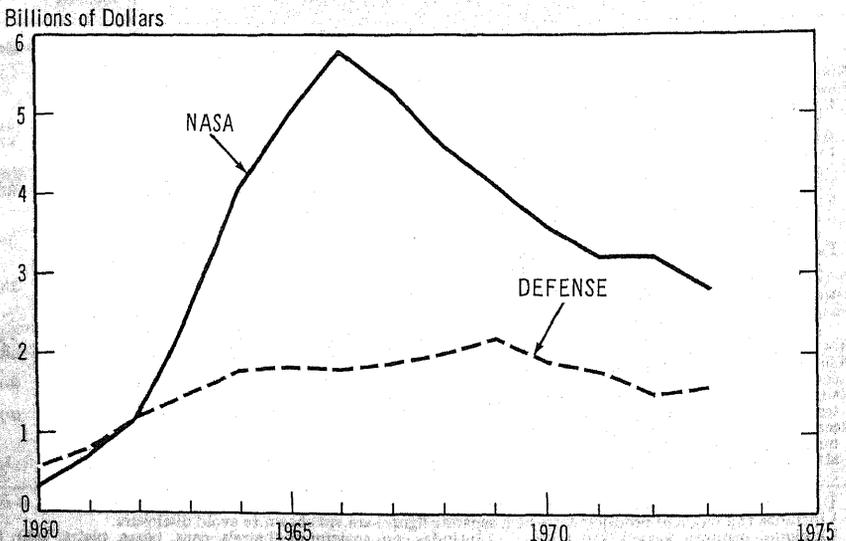


¹ 1971-1973 estimated.

Source: Chart prepared by U.S. Bureau of the Census. Data from U.S. National Science Foundation.

FIG. XXXV. EXPENDITURES FOR FEDERAL SPACE PROGRAM: 1960 TO 1973

[See table 879]



Source: Chart prepared by U.S. Bureau of the Census. Data from U.S. Office of Management and Budget.

Section 20

Science

This section presents statistics relating to various aspects of scientific and technical activity. Major topics are research and development, training and employment of scientists and engineers, space vehicles, and patents and trademarks. Principal sources of these data are the National Science Foundation and the National Aeronautics and Space Administration.

The National Science Foundation gathers data chiefly through recurring statistical surveys. Some current Foundation publications containing data on funds for research and development and on scientific and engineering personnel include the occasional bulletin series, *Reviews of Data on Science Resources*; annual and biennial reports such as *Federal Funds for Research, Development, and Other Scientific Activities*; *Research and Development in Industry*; *National Patterns of R & D Resources*; *Resources for Scientific Activities at Universities and Colleges*; *An Analysis of Federal R & D Funding by Function*; *Scientists, Engineers, and Physicians From Abroad*; *Federal Scientific, Technical, and Health Personnel*; occasional reports relating to nonprofit institutions, State and local governments and graduate student support; special reports such as *Federal Support to Universities, Colleges, and Selected Nonprofit Institutions*; and policy reports relating to national allocation of manpower and funds to science and technology. Statistical surveys in these areas pose particularly difficult problems of concept and definition and the data should, therefore, be regarded as broad estimates rather than precise quantitative statements. Detailed discussions of the scope and limitations of the data appear in the source publications.

The National Aeronautics and Space Administration does not publish any statistical reports as such. NASA's *Semiannual Report* contains current data on finances and its biweekly *Satellite Situation Report* presents information on artificial satellites, including both objects in orbit and decayed objects.

Other sources of statistics on scientific and technical activities include *The Budget of the United States Government*, which contains summary financial data on all Federal research and development programs; the report series, *Resources for Medical Research*, issued by the Public Health Service of the Department of Health, Education, and Welfare, and designed to present timely information on funds, manpower, facilities, and institutions devoted to medical and health-related research; and the *Annual Report of the Commissioner of Patents*, issued by the Department of Commerce's Patent Office and presenting data on patent applications and issuances and on trademark registrations and renewals.

Research and development.—The National Science Foundation defines research as a “systematic and intensive study directed toward a fuller knowledge of the subject studied” and development as “the systematic use of scientific knowledge directed toward the production of useful materials, devices, systems, methods, or processes.” The data on funds are presented within the framework of a national economic structure composed of four sectors: (1) The *government sector*, made up primarily of Federal executive agencies; (2) the *industry sector*, consisting of manufacturing and nonmanufacturing firms and the Federally Funded Research and Development Centers they administer; (3) the *colleges and universities sector*, composed of colleges, universities, and their affiliated institutions, agricultural experiment stations and associated schools of agriculture, and Federally Funded Research and Development Centers administered by educational institutions; and (4) the *other nonprofit institutions sector*, consisting of such organizations as private philanthropic foundations, nonprofit research insti-

tutes, voluntary health agencies, and Federally Funded Research and Development Centers administered by nonprofit organizations. The federally funded centers are research and development organizations which are exclusively or substantially financed by the Federal government and which, in most instances, were originally established to meet a particular research and development need of the Government. They are administered on a contractual basis, by companies, educational institutions, or other nonprofit organizations. The research and development funds reported consist of current operating costs, including those for planning and administration, except as otherwise noted. They exclude funds for routine testing, mapping and surveying, collection of general-purpose data, dissemination of scientific information, and training of scientific manpower.

Scientists, engineers, and technicians.—Scientists and engineers are defined as persons engaged in scientific and engineering work at a level requiring a knowledge of sciences equivalent at least to that acquired through completion of a 4-year college course. They are generally classified according to the fields of their employment and not according to the discipline in which they received their major training. Technicians are defined as persons engaged in technical work at a level requiring knowledge acquired through a technical institute, junior college, or other type of training less extensive than 4-year college training. Craftsmen and skilled workers are excluded.

Historical statistics.—Tabular headnotes provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

No. 852. RESEARCH AND DEVELOPMENT—DEFENSE, SPACE, AND OTHER OUTLAYS: 1955 TO 1973

[Includes basic research, applied research, and development. Defense related outlays comprise all research and development spending by Dept. of Defense including space activities, and a portion of Atomic Energy Commission funds. Space related outlays are those of the National Aeronautics and Space Administration; they exclude space activities of other Federal agencies, estimated at less than 5 percent of all space research and development spending]

YEAR	Total research and development (mil. dol.)	AS PERCENT OF TOTAL RESEARCH AND DEVELOPMENT					
		Defense-space related			Other outlays		
		Total	Defense	Space	Total	Non-federal	Federal
1955.....	6,279	48.4	47.4	1.0	51.6	44.1	7.5
1956.....	8,483	49.5	48.6	0.9	50.5	42.7	7.8
1957.....	9,912	53.2	52.2	1.0	46.8	38.3	8.5
1958.....	10,870	53.0	52.0	1.0	47.0	37.5	9.5
1959.....	12,540	55.8	53.3	2.5	44.2	35.7	8.5
1960.....	13,730	54.7	51.6	3.1	45.3	36.3	9.0
1961.....	14,552	54.7	49.2	5.5	45.3	36.3	9.0
1962.....	15,665	53.7	47.0	6.7	46.3	36.6	9.6
1963.....	17,371	54.3	40.6	13.7	45.7	35.4	10.3
1964.....	19,214	54.6	36.1	18.5	45.4	34.7	10.7
1965.....	20,439	52.7	32.3	20.4	47.3	36.2	11.1
1966.....	22,264	51.0	32.0	19.0	49.0	37.2	11.9
1967.....	23,613	48.2	33.9	14.3	51.8	38.9	12.8
1968.....	25,119	47.0	33.9	13.1	53.0	40.5	12.5
1969.....	26,179	44.6	33.5	11.1	55.4	43.0	12.4
1970.....	26,566	42.3	31.6	10.7	57.7	44.4	13.3
1971 (prel.).....	27,315	40.2	31.0	9.2	59.8	45.1	14.7
1972 est.....	29,150	39.5	29.2	10.3	60.5	45.4	15.1
1973 est.....	30,100	37.8	28.0	9.8	62.2	46.9	15.3

Source: U.S. National Science Foundation, *National Patterns of R & D Resources—Funds and Manpower United in the States, 1953-73*, annual.

No. 853. FUNDS FOR PERFORMANCE OF RESEARCH AND DEVELOPMENT AND BASIC RESEARCH, BY SECTOR, DISTRIBUTED BY SOURCE: 1955 TO 1973

[In millions of dollars. Data primarily on calendar year basis—data for calendar year 1955 for industry and other nonprofit institutions combined with Federal and university data for fiscal 1955 (1954-55); same pattern followed for subsequent years. Data refer, in general, to natural sciences including engineering and to social sciences in all but industry sector. Excludes capital expenditures data. Expenditures at associated Federally Funded Research and Development Centers administered by industry and other nonprofit institutions included in totals of respective sectors]

PERFORMANCE SECTOR AND SOURCE OF FUNDS	1955	1960	1965	1968	1969	1970	1971 (prel.)	1972 (est.)	1973 (est.)
Total research and development ¹	6,279	13,730	20,439	25,119	26,179	26,566	27,315	29,150	30,100
Percent Federal as source.....	55.9	63.7	63.8	59.5	57.0	55.6	54.9	54.6	53.1
Federal Government	905	1,726	3,093	3,493	3,501	3,853	4,153	4,480	4,500
Industry.....	4,640	10,509	14,185	17,429	18,318	18,062	18,314	19,540	20,300
Federal funds.....	2,180	6,081	7,740	8,560	8,457	7,779	7,671	8,145	8,100
Industry funds.....	2,460	4,428	6,445	8,869	9,861	10,283	10,643	11,395	12,200
Universities and colleges	409	825	1,822	2,599	2,705	2,856	3,070	3,280	3,425
Federal funds.....	169	405	1,073	1,572	1,600	1,658	1,724	1,788	1,860
Industry funds.....	25	40	41	55	60	62	70	77	83
University and college funds ²	185	328	615	841	900	970	1,099	1,226	1,290
Other nonprofit institutions funds ²	30	52	93	131	145	166	177	189	192
Universities and colleges, associated Federally Funded R and D Centers	180	360	629	719	725	737	716	769	800
Other nonprofit institutions	145	310	710	879	930	1,058	1,062	1,081	1,075
Federal funds.....	75	180	498	608	640	748	732	741	725
Industry funds.....	28	40	53	73	81	90	100	105	110
Other nonprofit institutions funds ³	42	90	159	198	209	220	230	235	240
Total research, basic and applied	2,133	4,419	7,390	9,092	9,386	9,929	10,167	10,802	11,315
Percent Federal as source.....	52.9	54.7	60.5	58.9	57.2	57.6	56.1	55.7	55.1
Federal Government	400	755	1,454	1,706	1,766	2,024	2,012	2,157	2,250
Industry.....	1,117	2,405	3,250	3,766	3,905	4,028	4,013	4,205	4,485
Federal funds.....	395	912	1,224	1,223	1,175	1,207	1,108	1,130	1,195
Industry funds.....	722	1,493	2,026	2,543	2,730	2,821	2,905	3,075	3,290
Universities and colleges	392	791	1,765	2,503	2,588	2,712	2,935	3,154	3,280
Federal funds.....	161	387	1,036	1,509	1,520	1,554	1,625	1,695	1,750
Industry funds.....	24	37	39	52	55	56	64	71	75
University and college funds ²	178	317	600	819	878	947	1,079	1,209	1,274
Other nonprofit institutions funds ²	29	50	90	123	135	155	167	179	181
Universities and colleges, associated Federally Funded R and D Centers	114	219	412	507	485	485	480	515	540
Other nonprofit institutions	110	249	509	610	642	680	727	771	760
Federal funds.....	58	145	344	406	422	450	482	516	495
Industry funds.....	20	20	41	55	61	65	70	75	80
Other nonprofit institutions funds ³	32	75	124	149	159	165	175	180	185
Total basic research	608	1,326	2,853	3,648	3,758	3,934	4,010	4,310	4,480
Percent Federal as source.....	47.0	52.3	63.7	64.3	63.5	62.6	59.6	59.0	58.0
Federal Government	90	160	424	502	565	646	535	578	590
Industry.....	189	376	592	642	618	629	625	660	705
Federal funds.....	27	79	186	180	160	158	131	140	145
Industry funds.....	162	297	406	462	458	471	494	520	560
Universities and colleges	237	576	1,419	2,011	2,087	2,185	2,365	2,542	2,615
Federal funds.....	108	299	879	1,268	1,275	1,288	1,349	1,409	1,420
Industry funds.....	16	24	26	36	39	40	46	51	63
University and college funds ²	99	215	445	621	678	747	851	954	1,013
Other nonprofit institutions funds ²	19	38	69	86	95	110	119	128	129
Universities and colleges, associated Federally Funded R and D Centers	49	97	208	276	275	269	260	265	300
Other nonprofit institutions	43	117	210	217	213	205	225	245	270
Federal funds.....	17	58	120	118	111	100	115	130	145
Industry funds.....	5	10	16	20	22	25	25	25	30
Other nonprofit institutions funds ³	21	49	74	79	80	80	85	90	95

¹ Basic research, applied research, and development.

² Includes State and local government funds received by these institutions and used for research and development.

³ Includes estimates for independent nonprofit hospitals and voluntary health agencies.

Source: U.S. National Science Foundation, *National Patterns of R & D Resources—Funds and Manpower in the United States, 1953-73*, annual.

No. 854. FEDERAL EXPENDITURES FOR RESEARCH AND DEVELOPMENT, BY MAJOR FUNCTION: 1960 TO 1973

[In millions of dollars. For years ending June 30]

FUNCTION	1960	1965	1967	1968	1969	1970	1971	1972 (est.)	1973 (est.)
Total ¹	7,300	13,811	16,073	16,333	15,695	15,157	15,300	16,007	16,584
National defense ²	6,318	7,804	8,857	9,353	9,058	8,784	8,856	9,421	9,627
Space research and technology	347	4,562	5,137	4,598	4,186	3,699	3,338	3,138	3,132
Human resources ³	366	859	1,298	1,573	1,606	1,702	1,844	2,133	2,444
Natural resources and environment	76	154	203	227	251	279	332	420	464
Economic affairs ⁴	190	354	556	558	566	660	892	845	859

¹ Includes international affairs and finance, and general government, not shown separately.

² Includes all Dept. of Defense military and all Atomic Energy Commission research and development programs, and some research and development programs of the Office of Emergency Preparedness.

³ Health, education, manpower, income security, veterans benefits and services, and community development and housing. ⁴ Commerce and transportation, and agriculture and rural development.

Source: U.S. National Science Foundation, *An Analysis of Federal R & D Funding by Function*, annual.

No. 855. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT: 1960 TO 1973

[In millions of dollars. For years ending June 30. Excludes research and development plant. For any given year, obligations differ from expenditures (see table 856) because not all funds are expended during year obligated]

ITEM	1960	1965	1967	1968	1969	1970	1971	1972	1973 ¹
Total R and D	7,552	14,614	16,529	15,921	15,637	15,330	15,550	16,500	17,110
Basic research	610	1,690	2,015	2,072	2,094	2,062	2,132	} 6,483	6,689
Applied research	1,331	3,164	3,258	3,293	3,145	3,540	4,018		
Development	5,611	9,760	11,256	10,557	10,398	9,728	9,399		
Total research	1,941	4,854	5,273	5,365	5,239	5,602	6,150	6,483	6,689
Life sciences	511	1,167	1,451	1,537	1,501	1,533	1,673	(NA)	(NA)
Psychological sciences	38	103	108	98	103	113	116	(NA)	(NA)
Physical sciences	} 608	{ 1,029	1,074	1,131	1,169	1,110	1,043	(NA)	(NA)
Environmental sciences			870	663	551	587	677	(NA)	(NA)
Mathematical sciences	25	105	130	119	116	102	122	(NA)	(NA)
Engineering sciences	690	1,576	1,555	1,569	1,499	1,968	2,111	(NA)	(NA)
Social sciences	35	127	189	195	220	216	306	(NA)	(NA)
Other sciences	33	70	95	51	80	72	103	(NA)	(NA)

NA Not available. ¹ Estimated.

No. 856. FEDERAL EXPENDITURES FOR RESEARCH AND DEVELOPMENT, AND RESEARCH AND DEVELOPMENT PLANT, BY AGENCY: 1960 TO 1973

[In millions of dollars. For years ending June 30. Includes social science research. Expenditure data in this table differ from those in table 853 because of the difference between Federal fiscal year reports and predominantly calendar year reporting by other sectors. See also *Historical Statistics, Colonial Times to 1857*, series W 79-84]

AGENCY	RESEARCH AND DEVELOPMENT					R AND D PLANT				
	1960	1965	1970	1972	1973 ¹	1960	1965	1970	1972	1973 ¹
Total ²	7,300	13,811	15,157	16,103	15,886	444	1,077	579	527	697
Departments:										
Agriculture	121	200	285	349	360	11	6	14	10	12
Commerce	30	58	123	165	179	3	28	5	5	6
Defense ³	5,553	6,628	7,447	8,117	7,873	101	100	141	158	174
Army	1,066	1,409	1,753	1,850	1,892	43	20	18	30	42
Navy	1,277	1,397	2,151	2,462	2,365	24	23	22	39	35
Air Force	2,958	3,360	3,089	3,363	3,168	20	45	62	64	71
Health, Educ., and Welfare	292	681	1,218	1,513	1,670	32	57	43	4	91
National Institutes of Health	256	555	877	1,082	1,172	31	40	41	-	80
Interior	63	109	152	210	262	2	10	8	4	18
Transportation	-	-	269	274	290	-	-	-	4	25
Atomic Energy Commission ³	762	1,241	1,346	1,298	1,359	224	279	270	254	262
Environmental Protection Agency	-	-	68	133	145	-	-	-	2	5
National Aero. and Space Admin.	347	4,562	3,697	3,373	3,008	54	531	57	50	54
National Science Foundation	58	150	293	418	423	7	67	31	17	38
Veterans Administration	15	37	58	66	71	4	4	4	10	9

- Represents zero. ¹ Estimated. ² Includes agencies not shown separately.

³ Data represent accrued costs rather than expenditures.

Source of tables 855 and 856: U.S. National Science Foundation, *Federal Funds for Research, Development, and Other Scientific Activities*, annual, and U.S. Office of Management and Budget, *The Budget of the United States Government*, 1974, Special Analysis P, *Federal Research and Development Programs*.

No. 857. FUNDS FOR PERFORMANCE OF INDUSTRIAL RESEARCH AND DEVELOPMENT, BY CHARACTER OF WORK, 1960 TO 1971, AND BY INDUSTRY, 1971

[In millions of dollars. Includes performance of Federally Funded Research and Development Centers administered by industrial firms, classified by industry of the administering company. Excludes performance by certain industry-oriented organizations, such as trade associations, that account annually for less than 1 percent of the total. Excludes funds for research and development capital and the social sciences]

YEAR AND INDUSTRY	Total	RESEARCH			Development
		Total	Basic	Applied	
1960.....	10,509	2,405	376	2,029	8,104
1965.....	14,185	3,250	592	2,658	10,934
1969.....	18,318	3,905	618	3,287	14,413
1970.....	18,062	4,028	629	3,399	14,034
1971.....	18,314	4,013	625	3,388	14,301
Chemicals and allied products.....	1,822	953	247	706	869
Petroleum refining and extraction ¹	505	249	23	226	256
Electrical equipment and communication.....	4,523	817	144	673	3,706
Aircraft and missiles.....	4,940	520	50	470	4,420
All other.....	6,524	1,474	161	1,313	5,050

¹ Excludes geological and geophysical exploration activities of petroleum companies.

No. 858. FUNDS FOR PERFORMANCE OF INDUSTRIAL RESEARCH AND DEVELOPMENT, BY INDUSTRY AND SOURCE OF FUNDS: 1963 TO 1971

[In millions of dollars. Covers basic research, applied research, and development. See headnote, table 857]

ITEM	1963	1965	1970			1971		
			Total	Federal	Private industry	Total	Federal	Private industry
Total	12,630	14,185	18,062	7,779	10,283	18,314	7,671	10,643
Food and kindred products.....	130	151	235	3	232	245	2	243
Textiles and apparel.....	30	38	58	(NA)	(NA)	58	(NA)	(NA)
Lumber, wood products, and furniture.....	11	12	48	-	48	48	-	48
Paper and allied products.....	69	77	178	(NA)	(NA)	187	(NA)	(NA)
Chemicals and allied products.....	1,239	1,390	1,706	180	1,586	1,822	183	1,639
Petroleum refining and extraction.....	317	434	515	22	493	505	17	488
Rubber products.....	156	166	220	22	198	230	20	210
Stone, clay, and glass products.....	100	117	167	2	155	156	3	153
Primary metals.....	183	213	275	10	265	275	6	269
Fabricated metal products.....	153	145	200	6	194	230	8	222
Machinery.....	958	1,128	1,649	239	1,410	1,775	286	1,489
Electrical equip. and communication.....	2,866	3,168	4,352	2,261	2,091	4,523	2,293	2,230
Motor veh. and other transp. equip.....	1,090	1,223	1,582	308	1,274	1,759	301	1,458
Aircraft and missiles.....	4,712	5,098	5,245	4,032	1,213	4,940	3,928	1,012
Professional and scientific instruments.....	284	383	745	204	541	725	158	567
All other industries.....	330	443	837	(NA)	(NA)	836	(NA)	(NA)

- Represents zero. NA Not available.

No. 859. RESEARCH AND DEVELOPMENT SCIENTISTS AND ENGINEERS—MAN-YEARS AND COST, BY INDUSTRY AND SOURCE OF SUPPORT: 1971

INDUSTRY	Total	Company	FEDERAL			
			Total	Dept. of Defense	Nat'l Aero. and Space Admin.	All other agencies
Man-years of R and D scientists and engineers	359,700	236,200	123,500	188,000	122,500	113,000
Chemicals and allied products.....	41,800	38,700	3,100	(NA)	(NA)	2,400
Machinery.....	40,700	35,200	5,500	(NA)	1,200	900
Electrical equipment and communication.....	89,000	49,500	39,500	27,900	5,400	6,200
Motor veh. and other transportation equip.....	28,500	22,500	6,000	4,600	(NA)	(NA)
Aircraft and missiles.....	75,100	18,400	56,700	41,900	12,600	2,200
Other industries.....	84,600	71,900	12,700	9,700	(NA)	(NA)
Cost (per scientist or engineer)	\$50,400	\$45,100	\$62,100	\$60,900	\$62,900	\$69,300
Chemicals and allied products.....	43,300	42,400	59,000	(NA)	(NA)	58,300
Machinery.....	48,500	42,300	52,000	(NA)	59,100	37,800
Electrical equipment and communication.....	49,500	45,100	58,100	54,600	57,000	74,500
Motor veh. and other transportation equip.....	61,400	64,800	52,000	55,000	(NA)	(NA)
Aircraft and missiles.....	65,400	55,000	69,800	68,500	74,000	56,400
Other industries.....	41,300	39,200	53,500	50,200	(NA)	(NA)

NA Not available. ¹ Includes data for industries not available separately.

Source of tables 857-859: U.S. National Science Foundation, *Research and Development in Industry*, annual.

NO. 860. INDUSTRIAL RESEARCH AND DEVELOPMENT FUNDS, BY GEOGRAPHIC DIVISION: 1969, 1970, AND 1971

[Amounts in millions of dollars. See headnote, table 857. For States in each division, see fig. I, p. xii]

GEOGRAPHIC DIVISION	1969		1970		1971			
	Total	Per-cent	Total	Per-cent	Total	Per-cent	Federal	Company
United States.....	18,318	100	18,062	100	18,314	100	7,671	10,643
New England.....	1,835	10	1,854	10	1,886	10	963	933
Middle Atlantic.....	4,260	23	4,479	25	4,612	25	1,505	3,107
East North Central.....	3,670	19	3,622	20	3,867	21	404	3,453
West North Central.....	646	4	766	4	1,018	6	519	490
South Atlantic.....	1,466	8	1,424	8	1,473	8	726	747
East South Central.....	364	2	346	2	349	2	223	126
West South Central.....	658	4	571	3	547	3	102	445
Mountain.....	651	4	687	4	660	4	373	287
Pacific.....	4,868	27	4,313	24	3,912	21	2,866	1,046

Source: U.S. National Science Foundation, *Research and Development in Industry*, annual.

NO. 861. FEDERAL OBLIGATIONS TO UNIVERSITIES AND COLLEGES: 1965 TO 1972

[Money figures in millions of dollars. For years ending June 30. Minus sign (-) denotes decrease]

ITEM	1965	1967	1968	1969	1970	1971	1972 (prel.)
Federal obligations.....	2,306	3,311	3,380	3,453	3,227	3,487	4,131
Percent annual increase.....	41.9	10.0	2.1	2.2	-6.6	8.1	18.4
Academic science obligations.....	1,816	2,324	2,350	2,361	2,188	2,343	2,599
Percent of Federal.....	78.8	70.2	69.5	68.4	67.8	67.2	62.9
Research and development.....	1,095	1,301	1,398	1,475	1,447	1,551	1,853
Research and development plant.....	126	111	96	55	45	30	37
Other science activities.....	595	911	855	832	696	762	709
Non-science activities.....	489	987	1,030	1,092	1,039	1,144	1,532

Source: U.S. National Science Foundation, *Federal Support to Universities, Colleges, and Selected Nonprofit Institutions*, annual.

NO. 862. EXPENDITURES FOR SCIENTIFIC PURPOSES AT INSTITUTIONS OF HIGHER EDUCATION: 1966 TO 1972

[In millions of dollars. "N.e.c." means not elsewhere classified]

TYPE OF EXPENDITURE	UNIVERSITIES AND COLLEGES				FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS			
	1966	1968	1970	1972	1966	1968	1970	1972
Current research and development expenditures.....	1 2,085	1 2,599	1 2,856	1 3,279	630	719	737	754
Basic research.....	1,601	2,011	2,186	2,542	237	276	269	254
Applied research.....	400	492	527	612	207	231	216	220
Development.....	83	95	144	126	196	212	252	280
Source of funds:								
Federal Government.....	1,261	1,572	1,658	1,788	629	715	734	750
State and local governments.....	204	225	273	259	(2)	(2)	-	1
Foundations, vol. health agencies.....	76	96	112	126	-	1	-	(2)
Industry.....	42	55	62	77	-	(2)	-	(2)
Own funds and other sources.....	502	651	752	1,030	(2)	2	2	4
Field of science (excl. development):								
Engineering.....	2,001	2,503	2,712	3,153	434	507	484	474
Physical sciences.....	280	334	346	384	55	75	66	52
Environmental sciences.....	333	363	369	381	298	334	338	334
Mathematics.....	76	135	130	197	24	20	18	27
Life sciences.....	61	79	102	99	23	18	16	16
Psychology.....	981	1,169	1,311	1,522	27	27	27	28
Social sciences ²	55	77	80	110	4	5	1	1
Other sciences, n.e.c.....	168	247	273	342	3	9	5	9
	46	97	100	118	-	17	13	8

- Represents zero. Z Less than \$500,000. ¹ Includes estimates for departmental research and for other research and development costs for which most universities and colleges do not maintain separate records.

² Includes anthropology, economics, history, linguistics, political science, sociology, and social sciences, n.e.c.

Source: U.S. National Science Foundation. Data derived from Surveys of Scientific Activities of Institutions of Higher Education.

**No. 863. NATURAL SCIENTISTS AND ENGINEERS EMPLOYED IN THE UNITED STATES—
TOTAL AND IN RESEARCH AND DEVELOPMENT, BY SECTOR: 1950 TO 1970**
[In thousands. As of January. Excludes social scientists]

SECTOR	1950	1955	1960	1962	1964	1966	1968	1970
All activities, total	556.7	812.6	1,104.0	1,210.3	1,327.0	1,417.5	1,525.0	1,594.7
Industry	396.3	610.1	812.0	878.3	946.6	1,004.2	1,069.8	1,111.2
Federal Government.....	59.7	81.5	97.7	110.6	126.4	134.2	145.4	150.4
State and local government.....	46.8	54.2	70.6	78.0	80.6	84.3	86.5	88.5
Universities and colleges.....	50.3	61.2	114.8	130.9	158.2	178.1	205.8	228.2
Nonprofit organizations.....	3.6	5.6	8.7	12.5	15.2	16.7	17.6	16.4
Research and development, total	157.9	248.8	386.1	441.9	497.9	526.3	552.8	535.4
Industry	102.6	180.4	282.1	318.8	351.1	369.9	386.5	372.2
Federal Government.....	27.4	27.6	44.7	53.1	67.2	72.3	72.4	60.6
State and local government.....	1.9	2.3	3.4	4.2	4.2	4.5	4.0	4.2
Universities and colleges.....	22.9	33.8	48.6	55.2	62.5	65.6	75.3	75.7
Nonprofit organizations.....	3.1	4.7	7.3	10.6	12.9	14.0	14.6	13.7

Source: U.S. Bureau of Labor Statistics, *Employment of Scientists and Engineers in the United States, 1950-70*.

No. 864. NATURAL SCIENTISTS EMPLOYED IN THE UNITED STATES, BY FIELD: 1950 TO 1970
[In thousands]

YEAR	Total	Chemists	Mathematicians	Physicists	Geologists, geophysicists	Other physical scientists	Agricultural scientists	Biological scientists	Medical scientists
1950.....	148.7	51.9	13.6	14.0	13.0	10.2	16.9	19.9	8.8
1955.....	211.2	73.9	21.5	19.9	17.1	17.4	22.2	27.3	12.3
1960.....	302.9	99.7	34.2	29.8	20.4	22.1	30.4	44.8	21.5
1961.....	318.2	102.8	36.3	31.6	20.6	23.8	32.5	46.9	24.1
1962.....	337.1	106.8	39.8	33.9	21.1	24.2	35.3	49.0	27.2
1963.....	358.1	110.0	43.6	36.3	22.5	25.3	38.5	51.3	30.5
1964.....	381.5	115.0	47.2	39.0	23.4	26.3	41.5	54.4	34.6
1965.....	396.4	116.7	50.3	30.9	25.5	27.1	44.1	55.6	37.2
1966.....	417.9	119.6	53.9	42.1	26.2	29.1	46.9	56.9	43.2
1967.....	439.0	122.8	61.9	44.4	28.4	30.2	46.5	62.6	42.0
1968.....	462.6	127.3	67.1	46.2	29.0	33.6	47.2	65.8	46.4
1969.....	482.7	131.0	73.0	48.4	29.4	35.0	47.5	67.7	50.7
1970.....	496.5	132.9	74.3	49.1	30.6	36.2	49.3	71.1	53.0

Source: U.S. Bureau of Labor Statistics, *Employment of Scientists and Engineers in the United States, 1950-70*.

No. 865. SCIENTISTS, ENGINEERS, AND TECHNICIANS IN PRIVATE INDUSTRY, BY FIELD OF EMPLOYMENT, 1961 TO 1970, AND BY INDUSTRY, 1970
[As of January. Excludes psychologists and social scientists]

YEAR AND INDUSTRY	Total ¹	Engineers	Mathematicians	Chemists	Physicists	Metalurgists	Earth scientists	Life scientists	Technicians
1961.....	1,356,900	641,500	15,100	70,800	13,800	12,300	12,000	18,700	570,000
1965.....	1,564,600	748,700	25,000	81,300	14,200	10,400	13,800	20,400	646,500
1967.....	1,747,800	824,000	31,300	85,200	16,200	12,000	16,400	22,400	734,700
1969.....	1,855,000	849,000	39,000	90,500	20,600	15,000	15,900	23,600	772,500
Total, 1970	1,860,400	856,700	39,600	92,200	21,000	15,500	16,200	24,100	786,300
Ordnance and accessories.....	68,700	45,400	3,000	1,200	2,200	300	100	200	16,200
Chemicals and allied prod.....	154,100	46,400	1,900	42,800	2,300	900	200	12,000	46,800
Petroleum refining.....	19,700	9,200	200	3,200	200	100	300	(2)	6,500
Primary and fabricated metal products.....	106,400	47,200	800	3,300	500	7,700	(2)	(2)	46,400
Machinery.....	172,300	85,100	3,800	2,000	1,100	1,300	(2)	200	78,200
Communications equip.....	125,700	72,300	2,500	900	1,800	600	(2)	200	46,000
Other electrical equipment.....	147,900	76,700	1,800	2,100	1,700	800	(2)	100	64,200
Aircraft and parts.....	125,800	83,800	3,300	1,800	1,500	1,000	100	100	34,100
Motor vehicles and equip.....	50,000	30,500	900	1,100	400	900	(2)	(2)	16,100
Instruments, related prod.....	60,900	31,500	700	3,300	1,300	300	(2)	400	23,400
Other manufacturing.....	124,200	55,000	1,800	15,900	500	200	300	3,600	44,900
Mining.....	46,000	17,800	300	1,000	100	300	12,900	(2)	13,500
Contract construction.....	83,700	50,300	500	100	(2)	(2)	400	(2)	32,400
Trans., public utilities, and other nonmanufacturing.....	219,500	81,900	10,200	3,900	400	300	400	1,900	119,900
Services.....	365,500	123,600	7,900	9,600	7,000	800	1,500	5,400	197,700

¹ Less than 50. ² Includes physical scientists, not shown separately.

Source: U.S. Bureau of Labor Statistics, *Scientific and Technical Personnel in Industry*, Bulletin Nos. 1609, 1674 and 1723 and unpublished data.

No. 866. PROFESSIONAL SCIENTIFIC AND TECHNICAL PERSONNEL IN THE FEDERAL GOVERNMENT, BY OCCUPATIONAL GROUP: 1960 TO 1971

[1966 data as of December; all year other as of October]

OCCUPATIONAL GROUP	1960	1966	1968	1969	1970	1971	Percent female	
							1966	1971
Total	153,383	193,607	206,982	210,303	208,257	213,790	16.7	16.8
Scientific personnel.....	53,264	72,471	78,054	79,390	79,292	81,132	8.2	7.9
Physical sciences.....	17,984	27,323	29,517	30,461	29,753	30,364	6.5	6.3
Mathematics and statistics ¹	4,983	7,344	8,858	8,314	8,578	8,835	20.0	16.4
Biological sciences.....	21,636	26,424	27,127	27,993	28,436	29,214	4.7	4.6
Social sciences ²	4,672	6,328	7,116	7,138	7,113	6,918	14.9	16.6
Geography and cartography.....	2,300	3,173	3,403	3,435	3,254	3,170	8.6	8.1
Psychology.....	1,689	1,879	2,033	2,049	2,158	2,367	14.6	13.1
Urban planning.....	(X)	(3)	(3)	(3)	(3)	264	(NA)	9.5
Engineering personnel.....	60,978	76,832	82,765	84,148	82,972	84,249	0.5	0.5
Health professional personnel.....	39,141	44,304	46,163	46,765	45,993	48,409	58.8	60.1
Health officers.....	11,138	13,119	13,583	13,682	12,992	13,253	4.7	5.9
Other.....	28,003	31,185	32,580	33,083	33,001	35,156	81.6	80.5

NA Not available. X Not applicable.

¹ Includes actuary, mathematics, statistic, operations research, and, beginning 1966, mathematical statisticians.

² Includes social science, economics, history, anthropological sciences, and, for 1966 to 1970, urban planning.

³ Not available separately; see footnote 2.

Source: U.S. National Science Foundation. Compiled from data supplied by Civil Service Commission.

No. 867. SCIENTISTS AND ENGINEERS—EMPLOYMENT, BY TYPE OF INSTITUTION AND FIELD OF EMPLOYMENT: 1965 AND 1971

[As of January. Includes full-time and part-time personnel. Excludes graduate students who receive stipends for part-time services as scientists or engineers. R and D—research and development]

FIELD OF EMPLOYMENT	UNIVERSITIES AND COLLEGES		FED. FUNDED R AND D CENTERS		FIELD OF EMPLOYMENT	UNIVERSITIES AND COLLEGES		FED. FUNDED R AND D CENTERS	
	1965	1971	1965	1971		1965	1971	1965	1971
Total ¹	178,904	273,775	11,017	11,339	Mathematicians.....	13,680	24,548	952	1,090
Engineers ¹	21,681	27,130	4,969	5,127	Life scientists.....	75,775	110,274	653	383
Aeronautical.....	1,127	1,469	204	172	Agricultural.....	13,507	18,039	37	—
Chemical.....	1,571	1,843	263	244	Biological.....	24,281	31,808	436	306
Civil.....	3,145	4,129	180	149	Medical.....	37,987	60,427	180	77
Electrical.....	5,478	6,885	2,194	2,239	Psychologists.....	9,430	16,806	109	94
Mechanical.....	4,108	5,387	1,311	1,336	Social scientists ¹	32,853	59,074	87	323
Physical scientists ¹	25,485	35,943	4,247	4,322	Economists.....	7,932	11,263	4	41
Chemists.....	10,684	14,688	1,254	1,203	Sociologists.....	6,261	11,323	13	34
Earth scientists.....	4,005	6,500	1,552	23	Political scientists.....	5,919	8,938	13	13
Physicists.....	9,132	12,195	2,357	2,612	Historians.....	(NA)	15,871	(NA)	10

- Represents zero. NA Not available. ¹ Includes other engineers or scientists not shown separately.

Source: U.S. National Science Foundation. Data derived from the 1966 and 1971 Surveys of Scientific Activities of Institutions of Higher Education.

No. 868. SCIENTISTS AND ENGINEERS EMPLOYED IN UNIVERSITIES AND COLLEGES, SELECTED STATES: 1965, 1967, 1969, AND 1971

[As of January]

STATE	1965	1967	1969	1971		STATE	1965	1967	1969	1971	
				Total	Teaching ¹					Total	Teaching ¹
U.S.	178,904	212,855	246,183	273,775	170,824	N.J.	3,800	4,262	5,308	6,047	4,181
Calif.	19,534	23,010	24,286	27,031	18,288	N.Y.	22,487	27,147	29,674	33,577	18,923
Fla.	3,668	4,391	5,372	5,926	3,822	N.C.	5,432	5,257	6,442	6,823	4,375
Ga.	2,990	3,556	4,280	5,111	3,191	Ohio.....	8,595	10,514	11,567	12,768	7,195
Ill.	8,358	9,621	12,142	12,926	7,555	Pa.	10,660	12,959	16,128	16,914	10,016
Ind.	3,790	3,979	4,570	5,353	3,774	Tenn.	2,986	3,368	4,103	4,535	3,024
Md.	4,842	5,501	6,631	7,227	3,599	Tex.	7,699	9,187	11,263	12,295	7,224
Mass.	8,686	11,290	12,742	13,181	8,174	Va.	2,813	3,181	4,052	4,898	3,586
Mich.	7,059	8,431	8,379	9,591	6,240	Wash.	2,888	3,405	3,936	4,977	3,089
Minn.	3,444	3,861	4,185	4,947	3,826	Wis.	3,535	5,407	7,065	8,237	4,905
Mo.	3,498	4,159	5,427	6,456	3,852	All other States.....	41,840	50,369	58,631	64,955	42,005

¹ Full-time equivalent.

Source: U.S. National Science Foundation, *Resources for Scientific Activities at Universities and Colleges*.

No. 869. SCIENTISTS, 1964 TO 1970, AND BY STATES AND OTHER AREAS, 1970

[For discussion of coverage, see text, p. 522]

YEAR AND STATE OR OTHER AREA	Total	Natural scientists ¹	Social scientists	YEAR AND STATE OR OTHER AREA	Total	Natural scientists ¹	Social scientists
1964.....	223, 854	170, 083	53, 771	Mississippi.....	1, 367	1, 166	201
1966.....	242, 763	186, 598	56, 165	Missouri.....	5, 748	4, 710	1, 038
1968.....	297, 942	248, 781	49, 161	Montana.....	1, 280	1, 159	121
1970.....	312, 644	255, 609	57, 035	Nebraska.....	1, 780	1, 422	358
Alabama.....	2, 611	2, 232	379	Nevada.....	741	641	100
Alaska.....	735	690	45	New Hampshire.....	1, 057	853	204
Arizona.....	2, 692	2, 203	489	New Jersey.....	14, 337	12, 807	1, 530
Arkansas.....	1, 097	892	205	New Mexico.....	2, 718	2, 485	233
California.....	35, 219	28, 462	6, 757	New York.....	32, 391	25, 087	7, 324
Colorado.....	5, 874	5, 037	837	North Carolina.....	4, 912	3, 989	923
Connecticut.....	5, 546	4, 447	1, 099	North Dakota.....	746	636	110
Delaware.....	2, 928	2, 784	144	Ohio.....	13, 404	11, 168	2, 236
District of Columbia.....	8, 857	5, 897	2, 960	Oklahoma.....	3, 647	3, 260	387
Florida.....	5, 727	4, 566	1, 161	Oregon.....	3, 674	3, 075	599
Georgia.....	3, 960	3, 190	770	Pennsylvania.....	17, 094	14, 005	3, 089
Hawaii.....	1, 289	987	302	Rhode Island.....	1, 365	1, 097	268
Idaho.....	1, 318	1, 191	127	South Carolina.....	1, 867	1, 587	280
Illinois.....	16, 020	12, 803	3, 217	South Dakota.....	753	612	141
Indiana.....	6, 641	5, 396	1, 245	Tennessee.....	4, 310	3, 636	675
Iowa.....	3, 364	2, 588	776	Texas.....	15, 671	13, 749	1, 922
Kansas.....	2, 927	2, 268	659	Utah.....	2, 271	1, 941	330
Kentucky.....	2, 488	1, 968	530	Vermont.....	676	540	136
Louisiana.....	4, 382	3, 913	469	Virginia.....	6, 493	5, 300	1, 193
Maine.....	935	757	178	Washington.....	5, 728	4, 767	961
Maryland.....	10, 725	9, 288	1, 437	West Virginia.....	1, 823	1, 568	255
Massachusetts.....	12, 677	10, 329	2, 348	Wisconsin.....	6, 005	4, 691	1, 314
Michigan.....	10, 976	8, 553	2, 423	Wyoming.....	888	800	88
Minnesota.....	5, 616	4, 411	1, 105	Other areas.....	616	505	111
				Foreign.....	4, 778	3, 532	1, 246

¹ Beginning 1968, includes computer, space, and marine sciences.

Source: U.S. National Science Foundation, *American Science Manpower, 1970*. Data derived from the National Register of Scientific and Technical Personnel.

No. 870. SCIENTISTS, ENGINEERS, AND PHYSICIANS ADMITTED AS IMMIGRANTS, BY OCCUPATION: 1966 TO 1972

[For years ending June 30. Includes professors and instructors in each field]

OCCUPATION	1966-1972, total	1966	1967	1968	1969	1970	1971	1972
		7, 205	12, 523	12, 973	10, 255	13, 337	13, 102	11, 323
Scientists and engineers	80, 718							
Engineers ¹	55, 955	4, 915	8, 821	9, 313	7, 150	9, 305	9, 015	7, 436
Aeronautical.....	1, 297	241	369	334	126	105	72	50
Chemical.....	4, 950	325	668	602	796	908	860	791
Civil.....	7, 921	480	840	1, 039	917	1, 509	1, 666	1, 461
Electrical.....	8, 775	680	1, 344	1, 432	1, 128	1, 464	1, 422	1, 305
Industrial.....	2, 030	169	292	375	248	358	286	304
Mechanical.....	9, 393	577	1, 344	1, 580	1, 201	1, 618	1, 603	1, 470
Metallurgical and mining.....	1, 469	139	245	228	163	219	236	239
Natural scientists ¹	20, 809	1, 949	3, 158	3, 110	2, 301	3, 264	3, 456	3, 271
Agricultural scientists ²	2, 220	185	189	179	309	380	460	513
Biologists and medical scientists.....	2, 638	227	377	328	296	388	495	527
Chemists.....	9, 502	874	1, 302	1, 481	1, 282	1, 495	1, 606	1, 972
Geologists, geophysicists.....	947	98	123	174	120	162	134	136
Mathematicians, statisticians, etc.....	2, 217	176	396	351	238	348	383	325
Physicists.....	2, 662	315	540	494	291	401	296	325
Social scientists ¹	3, 954	341	544	550	504	768	631	616
Economists.....	1, 371	164	263	265	249	370	347	313
Psychologists.....	949	97	143	159	123	163	133	131
Physicians and surgeons.....	27, 736	2, 549	3, 325	3, 060	2, 756	3, 155	5, 748	7, 143

¹ Includes occupations not shown separately. ² Includes foresters and conservationists.

Source: U.S. National Science Foundation, *Scientists, Engineers, and Physicians from Abroad*, annual. Based on data from U.S. Immigration and Naturalization Service.

No. 871. UNEMPLOYMENT RATES FOR SCIENTISTS AND ENGINEERS: 1971

(Percent. Data for scientists based on spring survey of National Register of Scientific and Technical Personnel; engineers based on a 20-percent summer sample of members of major engineering professional societies)

AGE AND DEGREE	Scientists		Engineers		AREA	Scientists		Engineers	
	2.6	3.0	5.7	7.4		5.7	7.4	5.7	7.4
Total	2.6	3.0	5.7	7.4	Orange County, Calif.	5.7	7.4	5.7	7.4
24 years and under.....	5.5	5.5	5.6	9.0	Seattle, Wash.	5.6	9.0	4.5	6.6
25-34 years.....	3.8	2.7	4.5	6.6	Los Angeles-Long Beach, Calif.	4.5	6.6	3.8	3.6
35-44 years.....	1.9	2.5	3.8	4.5	San Jose, Calif.	3.8	4.5	3.5	3.0
45-54 years.....	2.1	3.0	3.5	4.5	Boston, Mass.	3.5	4.5	3.3	3.0
55-64 years.....	1.8	4.1	3.2	5.8	Dallas-Ft. Worth, Tex.	3.2	5.8	2.9	2.2
65 years and over.....	3.5	3.4	2.9	2.2	San Diego, Calif.	2.9	2.2	2.9	3.8
Highest degree:			2.9	3.8	St. Louis, Mo.	2.9	3.8	2.8	3.7
Doctorate.....	1.4	1.9	2.8	3.7	Philadelphia, Pa.	2.8	3.7	2.6	1.6
Master's.....	3.7	3.2	2.8	7.1	New York, N.Y.	2.8	7.1	2.4	6.6
Bachelor's.....	3.5	2.8	2.6	1.6	Wichita, Kans.	2.6	1.6	2.4	2.7
Less than bachelor's.....	4.1	4.4	1.7		Atlanta, Ga.	1.7			
					Cape Kennedy, Fla.				
					Huntsville, Ala.				

Source: U.S. National Science Foundation, *Science Resources Studies Highlights* (NSF 71-26 and 33).

No. 872. SCIENTISTS—NUMBER AND MEDIAN ANNUAL SALARIES, 1968 AND 1970, AND BY SELECTED CHARACTERISTICS, 1970

YEAR AND CHARACTERISTIC	Number	Percent	Median salary ¹	CHARACTERISTIC	Number	Percent	Median salary ¹
1968.....	297,942	(x)	\$13,200	Highest degree:			
1970, total.....	312,644	100	15,000	Ph. D.....	125,234	40	\$16,500
Men.....	283,351	91	15,200	Professional medical.....	7,294	2	24,000
Women.....	29,293	9	11,600	Master's.....	98,540	30	13,500
Professional experience:				Bachelor's.....	83,740	27	13,900
1 year or less.....	10,794	3	10,100	Less than bachelor's.....	575	(z)	14,000
2-4 years.....	44,968	14	11,100	Age:			
5-9 years.....	57,757	19	13,100	Under 25 years.....	6,785	2	8,700
10-14 years.....	44,330	14	15,400	25-29 years.....	52,679	17	10,800
15-19 years.....	36,242	12	17,400	30-34 years.....	57,477	18	13,000
20-24 years.....	30,422	10	18,300	35-39 years.....	47,318	15	15,000
25-29 years.....	15,657	5	19,100	40-44 years.....	44,613	14	16,800
30-34 years.....	13,066	4	20,000	45-49 years.....	39,051	13	18,000
35-39 years.....	6,993	2	19,300	50-54 years.....	27,450	9	18,500
40 or more.....	5,703	2	18,500	55-59 years.....	18,464	6	18,500
				60-64 years.....	10,879	4	18,300
				65-69 years.....	4,737	2	18,000
				70 years and over.....	2,263	1	16,000

X Not applicable. Z Less than 0.5 percent. ¹ For definition of median, see preface.

No. 873. SCIENTISTS—NUMBER AND MEDIAN ANNUAL SALARIES, BY TYPE OF EMPLOYER AND WORK ACTIVITY: 1970

TYPE OF EMPLOYER	Total	WORK ACTIVITY							Other
		Research and development			Management or administration		Teaching	Production and inspection	
		Total	Basic research	Applied research	Total	R and D			
Total scientists	312,644	97,078	44,544	40,704	68,708	29,723	72,408	16,086	58,364
Educational institutions.....	130,389	39,843	28,764	10,543	11,938	3,997	70,302	203	8,103
Federal Government.....	31,118	12,860	5,538	6,643	11,417	4,704	355	952	5,534
Other government.....	11,741	3,016	1,062	1,789	4,829	1,433	361	556	2,979
Military.....	7,285	1,422	630	699	2,635	692	404	254	2,570
Nonprofit organizations.....	10,911	4,601	2,173	2,231	3,051	1,520	265	231	2,763
Industry and business.....	97,542	33,803	5,655	18,155	33,321	16,779	274	13,437	16,707
Self-employed.....	6,314	535	147	312	857	265	65	257	4,600
Other.....	2,116	668	366	232	482	175	214	166	586
No report of employer.....	15,228	330	209	100	178	68	168	30	14,522
Median salary ¹	\$15,000	\$15,000	\$14,700	\$15,800	\$19,200	\$20,700	\$12,300	\$13,600	(NA)
Educational institutions ²	15,500	14,500	13,700	16,000	20,500	21,000	15,000	13,700	(NA)
Federal Government.....	16,100	15,800	16,000	15,800	18,000	21,600	15,100	13,800	(NA)
Other government.....	13,000	12,900	13,100	12,600	13,600	14,300	13,000	11,000	(NA)
Nonprofit organizations.....	16,400	15,800	15,000	16,300	20,000	22,000	14,500	11,200	(NA)
Industry and business.....	19,700	16,000	16,700	16,100	20,000	21,000	15,000	13,800	(NA)
Self-employed.....	20,000	17,700	13,500	18,000	18,000	20,000	18,000	16,200	(NA)

NA Not available. ¹ For definition of median, see preface. ² Salaries computed on calendar year basis. Source of tables 872 and 873: U.S. National Science Foundation, *American Science Manpower, 1970*.

No. 874. MEDIAN SALARIES IN SELECTED SCIENCE FIELDS: 1966, 1968, AND 1970

[In dollars. Covers full-time employed civilians reporting to the National Register of Scientific and Technical Personnel. For discussion of coverage, see text, p. 522. For definition of median, see preface]

FIELD	1966	1968	1970	FIELD	1966	1968	1970
All fields.....	12,000	13,200	15,000	Linguistics.....	10,000	11,500	12,500
Agricultural sciences.....	10,000	11,000	12,800	Mathematics.....	(NA)	13,000	14,300
Anthropology.....	11,500	12,700	14,700	Atmospheric and space sciences.....	11,700	13,400	15,200
Biological sciences.....	12,000	13,000	15,000	Physics.....	12,500	14,000	15,900
Chemistry.....	12,000	13,500	15,300	Political science.....	(NA)	12,000	13,100
Computer sciences.....	(NA)	14,100	16,500	Psychology.....	11,500	13,200	15,000
Earth and marine sciences.....	11,400	12,900	14,900	Sociology.....	11,300	12,000	13,000
Economics.....	13,100	15,000	16,300	Statistics.....	12,800	14,900	16,900

NA Not available.

Source: U.S. National Science Foundation, *American Science Manpower, 1966, 1968, and 1970*.

No. 875. MEAN ANNUAL SALARIES OF FEDERAL SCIENTIFIC AND HEALTH PERSONNEL, BY OCCUPATIONAL FIELD, BY SEX: 1971

[In dollars. As of October]

OCCUPATIONAL FIELD	Total	Male	Female	OCCUPATIONAL FIELD	Total	Male	Female
Scientific personnel, total.....	17,349	17,558	14,922	Mathematics and statistics.....	18,139	18,700	15,277
Physical sciences.....	18,980	19,260	14,793	Mathematics.....	16,410	16,804	14,341
General physical.....	21,922	22,115	16,405	Statistics.....	17,841	18,454	15,476
Chemistry.....	16,917	17,427	14,137	Social sciences.....	18,964	19,552	16,018
Physics.....	19,110	19,168	16,746	General.....	18,125	18,899	16,125
Biological sciences.....	15,151	15,224	13,633	Economics.....	19,273	19,714	16,031
General biological.....	17,179	17,868	13,281	History.....	17,711	18,315	14,850
Agricultural sciences.....	14,102	14,096	15,578	Geography and cartography.....	14,934	15,066	13,427
Animal sciences.....	18,280	18,469	15,237	Psychology.....	18,971	19,294	16,833
Microbiology.....	16,388	17,481	13,768	Health personnel, total.....	14,762	19,063	11,904
Plant sciences.....	15,505	15,573	13,253	Health officers.....	21,666	21,466	24,870
				Nursing personnel.....	11,397	12,147	11,374

Source: U.S. National Science Foundation, *Federal, Scientific, Technical, and Health Personnel, 1971 (NSF 73-309)* and unpublished data. Compiled from data supplied by Civil Service Commission.

No. 876. DOCTORATES CONFERRED—TOTAL AND SELECTED SCIENCE FIELDS, BY CHARACTERISTICS: 1972

[Year ending June 30. For definition of median, see preface]

ITEM	All fields, total ¹	Physical sciences ²	Engineering	Life sciences ³	Psychology	Social sciences ⁴
Doctorates conferred.....	33,001	5,507	3,475	4,984	2,262	2,807
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0
Male.....	84.0	93.4	99.4	85.3	73.3	86.5
Female.....	16.0	6.6	.6	14.7	26.7	13.5
U.S. citizens.....	83.1	79.4	66.3	78.0	92.9	80.1
Foreign citizens.....	14.8	19.0	32.7	19.9	5.7	17.2
Citizenship unknown.....	2.0	1.6	1.0	2.1	1.4	2.7
Median age at award.....years.....	31.1	28.9	30.1	29.9	29.3	30.6
Percent with baccalaureate in same field as doctorate.....	59.8	77.8	85.8	43.4	66.4	55.7
Percent with master's degree.....	80.1	59.2	90.9	66.1	76.1	81.0
Median time lapse from baccalaureate to doctorate:						
Total time.....years.....	8.2	6.5	7.5	7.0	6.6	8.0
Registered time.....years.....	5.8	5.7	5.5	5.6	5.4	5.8

¹ Includes arts and humanities, not shown separately.² Includes astronomy, physics, chemistry, earth sciences, and mathematics.³ Includes agriculture, forestry, health sciences, and biological sciences.⁴ Includes anthropology, archaeology, sociology, economics, political science, international relations.Source: U.S. National Science Foundation. Data from National Research Council, *Summary Report, 1972 Doctorate Recipients from United States Universities*.

No. 877. SCIENCE DOCTORATES CONFERRED AND ENROLLMENT FOR ADVANCED DEGREES: 1960 TO 1972

[Doctorates conferred, years ending June 30; enrollment, as of fall term]

FIELD OF SCIENCE	1960	1965	1967	1968	1969	1970	1971	1972
Science doctorates conferred...	6,276	10,528	12,981	14,420	15,993	17,822	19,005	19,095
Life sciences ¹	1,730	2,679	3,116	3,681	4,116	4,564	5,051	4,984
Agricultural and related.....	343	480	517	581	707	809	961	921
Health sciences.....	69	145	176	195	253	300	349	318
Anatomy, cytology, embryology.....	33	139	160	154	206	221	241	230
Physiology and related fields.....	217	403	470	574	579	626	691	690
Botany and phytopathology.....	188	240	215	285	295	281	309	287
Biochemistry.....	259	391	495	573	547	580	653	650
Microbiology.....	184	273	330	357	330	399	407	395
Zoology and entomology.....	270	360	372	466	457	519	572	561
Psychology.....	773	955	1,293	1,452	1,728	1,883	2,116	2,262
Physical sciences.....	1,861	2,859	3,478	3,642	3,901	4,389	4,494	4,220
Physics and astronomy.....	531	1,046	1,295	1,422	1,452	1,657	1,740	1,635
Chemistry.....	1,077	1,439	1,764	1,782	1,947	2,223	2,204	2,011
Earth sciences.....	253	374	419	483	502	509	550	580
Engineering.....	792	2,068	2,581	2,833	3,234	3,432	3,495	3,475
Mathematics.....	291	684	828	970	1,063	1,218	1,236	1,281
Social sciences, selected.....	829	1,283	1,685	1,842	1,951	2,336	2,613	2,807
Sociology.....	162	239	332	362	402	506	583	638
Economics.....	352	561	700	756	799	971	961	980
Pol. science, pub. admin., int'l rel.....	238	391	495	571	559	634	821	911
Anthropology and archeology.....	77	92	158	153	191	225	258	278
Graduate enrollment, all fields.	314,349	535,332	649,697	703,745	756,865	816,207	836,294	827,807
Science fields.....	120,638	195,346	224,468	234,661	243,715	252,159	246,100	(NA)
Agriculture and forestry.....	4,412	6,426	7,306	7,677	8,186	8,651	9,200	(NA)
Biological sciences, incl. general programs.....	15,303	28,323	32,648	33,909	36,017	37,609	38,462	(NA)
Mathematical subjects ²	11,770	21,014	25,066	28,840	29,175	30,608	28,847	(NA)
Physical sciences.....	25,707	36,506	40,447	40,937	39,885	40,113	38,928	(NA)
Engineering.....	36,636	57,516	62,633	63,662	65,048	64,788	59,321	(NA)
Psychology.....	10,677	15,551	19,094	21,643	22,726	25,340	26,712	(NA)
Social sciences.....	16,133	30,010	37,304	39,908	42,678	45,048	44,630	(NA)
Health fields.....	5,842	8,909	10,139	11,373	12,564	14,242	20,596	(NA)
All other fields.....	187,869	331,077	415,090	457,711	500,586	549,806	569,598	(NA)

NA Not available. ¹ Includes fields not shown separately. ² Beginning 1965, includes computer science.

Source: U.S. National Science Foundation. Data from National Research Council, Doctorate Record File; and U.S. Office of Education, *Enrollment for Masters and Higher Degrees*, annual.

No. 878. PATENTS AND TRADEMARKS: 1951 TO 1972

[Covers patents issued to citizens of United States and residents of foreign countries. For information on copyrights, see table 824. See also *Historical Statistics, Colonial Times to 1957*, series W 66-75 and W 77-78]

ITEM	1951-55	1956-60	1961-65	1966-70	1960	1965	1970	1971	1972
Patent applications filed....	379,053	410,389	463,193	504,613	84,475	100,421	109,359	111,095	105,300
Inventions.....	351,649	384,782	436,082	476,239	79,590	94,632	102,868	104,566	98,928
Designs.....	25,951	23,865	25,251	26,260	4,525	5,413	5,996	6,211	5,867
Botanical plants.....	467	584	628	584	131	105	188	155	135
Reissues.....	986	1,158	1,232	1,530	229	271	307	163	370
Patents issued	208,964	251,872	275,443	342,889	49,986	66,647	67,962	81,789	78,183
For. country residents.....	23,352	36,513	49,325	77,886	7,850	12,782	17,872	22,850	23,815
Inventions.....	192,651	237,469	259,971	325,144	47,170	62,857	64,427	78,316	74,800
Individuals.....	78,459	76,589	69,945	73,503	13,069	16,063	13,511	17,299	17,860
For. country residents.....	(NA)	(NA)	48,322	75,986	7,698	12,525	17,354	22,328	23,293
Corporations: U.S.....	100,278	133,948	152,537	190,616	28,187	37,158	36,896	43,022	38,890
Foreign ¹	10,537	21,043	30,992	52,771	4,670	8,092	12,294	16,048	10,414
U.S. Government.....	3,359	5,880	6,497	8,254	1,244	1,540	1,726	1,947	1,844
Designs.....	15,084	13,024	13,862	16,254	2,543	3,424	3,214	3,156	2,901
For. country residents.....	(NA)	(NA)	929	1,843	138	243	506	509	490
Botanical plants.....	441	567	576	426	116	120	52	71	199
For. country residents.....	(NA)	(NA)	74	57	14	14	12	13	32
Reissues.....	788	812	1,034	1,065	157	246	269	246	275
Published applications ²	-	-	-	586	-	-	215	207	201
Certificates of trademarks issued	100,942	108,246	106,635	128,465	22,367	21,666	27,821	27,232	28,889
Trademarks.....	83,311	90,727	91,946	104,181	18,434	18,501	21,745	21,019	23,252
Trademark renewals.....	17,631	17,519	14,689	24,284	3,933	3,165	6,076	6,213	5,637

- Represents zero. NA Not available. ¹ Includes patents assigned to foreign governments.

² Abstracts of the technical disclosure of patent applications published at request of applicant or owner. The current practice, called "Defensive Publications," began in November 1968.

Source: U.S. Patent Office, unpublished data. Fiscal-year figures are published in the *Annual Report of the Commissioner of Patents*.

No. 879. FEDERAL SPACE PROGRAM—EXPENDITURES, BY AGENCY: 1960 TO 1973

[In millions of dollars. For years ending June 30]

YEAR	Total ¹	NASA ²	Dept. of Defense	Atomic Energy Commission	YEAR	Total ¹	NASA ²	Dept. of Defense	Atomic Energy Commission
1960	888	329	518	41	1967	7,208	5,307	1,673	184
1961	1,468	694	710	64	1968	6,647	4,575	1,890	146
1962	2,387	1,226	1,029	130	1969	6,331	4,083	2,095	117
1963	4,079	2,517	1,368	181	1970	5,424	3,565	1,756	103
1964	5,900	4,101	1,564	220	1971	4,999	3,171	1,693	97
1965	6,856	5,005	1,592	232	1972	4,772	3,195	1,470	60
1966	7,689	5,828	1,637	188	1973 (est.)	4,467	2,812	1,567	54

¹ Includes agencies not shown separately.

² National Aeronautics and Space Administration. Excludes amounts for aircraft technology.

Source: 1960-1965, Report to the Congress from the President of the United States, *United States Aeronautics and Space Activities, 1966*; thereafter, U.S. Office of Management and Budget, *The Budget of the United States Government*, annual.

No. 880. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION—EXPENDITURES FOR RESEARCH AND DEVELOPMENT: 1961 TO 1973

[In millions of dollars. For years ending June 30]

PROGRAM	1961	1965	1966	1967	1968	1969	1970	1971	1972	1973 est.
Performance, total¹	438	4,562	5,361	5,137	4,599	4,187	3,699	3,338	3,373	3,008
Manned space flight	232	3,138	3,819	3,477	3,028	2,754	2,195	1,877	1,727	1,399
Space science and applications	15	725	755	782	692	563	648	657	834	932
Space technology	123	401	365	378	369	330	315	270	227	156
Aircraft technology	36	88	101	116	145	162	183	206	221	242
Supporting operations	33	210	321	384	365	378	358	329	314	279
Facilities, total	90	531	572	280	127	65	54	44	50	54
Manned space flight	6	401	391	172	69	27	14	8	13	17
Space science and applications	1	25	23	14	8	7	8	4	6	11
Space technology	19	53	40	33	21	14	13	2	1	-
Aircraft technology	15	-	4	2	4	7	5	4	6	8
Supporting operations	50	52	114	68	25	10	14	26	24	18

- Represents zero. ¹ Includes research and development, and research and program management.

Source: U.S. Office of Management and Budget, *The Budget of the United States Government*, annual.

No. 881. SPACECRAFT LAUNCHINGS: 1957 TO 1972

[Criterion of success is attainment of earth orbit or earth escape, respectively]

YEAR	UNITED STATES				U.S.S.R. successful launchings	YEAR	UNITED STATES				U.S.S.R. successful launchings
	Earth orbit		Earth escape				Earth orbit	Earth escape			
	Suc-cess	Fail-ure	Suc-cess	Fail-ure					Suc-cess	Fail-ure	
Total	708	104	46	13	682	1964	69	8	4	-	38
1957	-	1	-	-	2	1965	94	8	3	-	73
1958	5	8	-	4	1	1966	95	12	5	1	51
1959	9	9	1	2	3	1967	77	4	10	-	67
1960	16	12	1	2	3	1968	61	3	3	-	74
1961	35	12	-	12	3	1969	50	1	8	-	70
1962	54	12	4	1	21	1970	29	1	1	-	81
1963	60	11	-	-	18	1971	26	2	3	1	84
						1972	23	-	3	-	89

- Represents zero. ¹ Attained earth orbit and included in earth orbit success totals.

Source: Report to the Congress from the President of the United States, *U.S. Aeronautical and Space Activities*, annual.

NO. 882. ORBITAL MANNED SPACECRAFT: 1961 THROUGH DECEMBER 1972

COUNTRY, VEHICLE, AND ASTRONAUT	Launch- ing date	PAYLOAD		EARTH ORBITS			Life- time (hr.: min.)
		Dimensions ¹ (ft.)	Liftoff weight (lb.)	Perigee (statute miles)	Apogee (statute miles)	Revolu- tions ²	
UNITED STATES							
Mercury Atlas: ³							
6..... Glenn	2-20-62	4 26H-6D	4,265	100	162.2	3	4:55
7..... Carpenter	5-24-62	4 26H-6D	4,244	99.9	166.8	3	4:56
8..... Schirra	10-3-62	4 26H-6D	4,325	100	175.8	6	9:13
9..... Cooper	5-15-63	4 26H-6D	4,000	100.3	165.9	22	34:19
Gemini: ⁴							
3..... Grissom and Young	3-23-65	19H-10D	7,136	100	139	3	4:52
4..... McDivitt and White	6-3-65	19H-10D	7,879	100	184	62	97:56
5..... Cooper and Conrad	8-21-65	19H-10D	7,879	100	207	120	190:55
6..... Schirra and Stafford	12-15-65	19H-10D	7,817	100	193	16	25:51
7..... Borman and Lovell	12-4-65	19H-10D	8,076	100	204	206	330:35
8..... Armstrong and Scott	3-16-66	19H-10D	8,351	99	186	6, 6	10:41
9..... Cernan and Stafford	6-3-66	19H-10D	8,100	100	194	45	72:21
10..... Young and Collins	7-18-66	19H-10D	8,295	100	476	43	70:46
11..... Conrad and Gordon	9-12-66	19H-10D	8,374	99	853	44	71:17
12..... Lovell and Aldrin	11-11-66	19H-10D	8,296	100	187	59	94:34
Apollo: ⁷							
7..... Schirra, Eisele, and Cunningham	10-11-68	4 82H-21.7D	36,419	104	282	163	260:08
8..... Borman, Lovell, and Anders	12-21-68	4 82H-21.7D	87,382	119	119	8, 2	147:00
9..... McDivitt, Scott, Schweickart	3-8-69	4 82H-21.7D	95,231	112	312	151	241:00
10..... Stafford, Young, and Cernan	5-18-69	4 82H-21.7D	98,273	115	118	9, 2	192:03
11..... Armstrong, Collins, and Aldrin	7-16-69	4 82H-21.7D	100,756	118	118	10, 2	195:18
12..... Conrad, Gordon, and Bean	11-14-69	4 82H-21.7D	101,127	115	118	11, 2	244:36
13..... Lovell, Swigert, and Haise	4-11-70	4 82H-21.7D	101,281	115	115	12, 2	142:55
14..... Shepard, Mitchell, and Roosa	1-31-71	4 82H-21.7D	102,084	113.7	117.3	18, 2	216:20
15..... Scott, Worden, and Irwin	7-26-71	4 82H-21.7D	107,142	105	106	14, 2	295:11
16..... Young, Mattingly, and Duke	4-16-72	4 82H-21.7D	107,158	104	109	15, 2	265:51
17..... Cernan, Evans, and Schmitt	12-7-72	4 82H-21.7D	107,193	106	105	16, 2	292:32
U.S.S.R.							
Vostok (East):							
I..... Gagarin	4-12-61	20H	10,418	108.8	187.7	1	1:48
II..... Titov	8-6-61	20H-12-14D	10,480	110.3	115.3	17.5	25:18
III..... Nikolayev	8-11-62	(NA)	10,400	107.4	137.2	64+	94:35
IV..... Popovich	8-12-62	(NA)	10,400	111	155	48+	70:57
V..... Bykovsky	6-14-63	(NA)	10,360	99	120	81	119:06
VI..... Tereshkova	6-16-63	(NA)	10,360	108	135	48	70:50
Voskhod (Sunrise):							
I..... Komarov, Yegorov, and Feoktistov	10-12-64	(NA)	16,000	111	254	16	24:17
II..... Belyayev and Leonov	3-18-65	(NA)	107.2	306.9		17	27:02
Soyuz (Union):							
I..... Komarov ¹⁷	4-23-67	(NA)	(NA)	122.6	137.9	18	26:45
III..... Beregovoy	10-26-68	(NA)	(NA)	(NA)	(NA)	61	94:51
IV..... Shatalov	1-14-69	(NA)	(NA)	(NA)	(NA)	48	71:14
V..... Volynov, Yeliseyev, Krunov	1-15-69	(NA)	(NA)	(NA)	(NA)	49	72:46
VI..... Shonin, Kubasov	10-11-69	(NA)	14,500	(NA)	(NA)	75	118:21
VII..... Filipchenko, Volkov, Gorbazko	10-12-69	(NA)	14,500	(NA)	(NA)	75	118:43
VIII..... Shatalov, Yeliseyev	10-13-69	(NA)	14,500	(NA)	(NA)	75	118:51
IX..... Nikolayev, Sevastianov	6-1-70	37.9H-11.2D	14,500	(NA)	(NA)	286	424:59
X..... Shatalov, Yeliseyev							
XI..... Rukavishnikov	4-22-71	37.9H-11.2D	14,500	129.3	152.9	32	47:46
XI..... Deobrovolsky, Volkov, Patsayev ¹⁸	6-6-71	31H-10D	14,500	142.4	147.7	361	570:23

NA Not available. ¹H=height; D=diameter. ²A revolution is the distance a spacecraft must travel to return to a specified line of earth longitude. ³Vehicle lift-off weight, 260,000 lb.; dimensions, 93H-16D. ⁴Dimensions and weight cover Apollo spacecraft command service and lunar modules including escape tower. ⁵Recovery weight (in lb.): 2,400, 2,480, 2,440, and 2,460, respectively. ⁶Vehicle lift-off weight, 340,000 lb.; dimensions, 109H-10D; payload recovery weight, 4,700 lb. ⁷Vehicle lift-off weight, 6,500,000 lb.; maximum dimensions, 363H-33D; payload recovery weight, 11,700 lb. ⁸2 earth and 10 lunar orbits, 70 statute miles above the moon. ⁹2 earth orbits plus 30.8 lunar orbits by the command and lunar excursion modules; time in lunar orbit, 61 hours, 41 minutes. For the command module, the low and high points in lunar orbit were 68.6 and 196.1 statute miles, respectively; for the lunar excursion module, 9.7 and 219.8 miles. ¹⁰Two earth revolutions and 30 lunar revolutions at 70 miles; first manned lunar landing; 47.6 lb. of rocks returned; astronauts on lunar surface 21 hrs. 36 min. ¹¹Two earth revolutions and 44.5 lunar revolutions at 70 miles; second manned lunar landing; about 75 lb. of rocks returned; astronauts on surface 31.5 hours. ¹²Two earth orbits; spacecraft made one pass around moon and returned to earth. ¹³Two earth revolutions and 34 moon revolutions; 33½ hours on surface of moon. ¹⁴Two earth orbits and 74 lunar revolutions; 66 hours and 55 minutes on lunar surface; 170 pounds of lunar rocks returned; first use of lunar rover vehicle. ¹⁵Two earth revolutions and 65 lunar revolutions; 213 pounds of lunar rocks returned; astronauts on surface for 71 hours and 12 minutes. ¹⁶Two and one-third earth revolutions and 75 moon revolutions; 267 pounds of lunar material returned; astronauts on surface for 75 hours. ¹⁷Cosmonaut killed when spacecraft crashed when landing. ¹⁸Cosmonauts killed during Soyuz XI reentry.

Source: U.S. National Aeronautics and Space Administration, *Space Activities Summary*, various dates. (For U.S.S.R., based on unofficial data from U.S. and Soviet press and radio.)

Section 21

Transportation—Land

This section presents statistics relating to the mileage, control, and financing of public roads and to the transportation of persons and goods by land. The modes of transport included are passenger car, truck, railroad, bus and streetcar, and pipeline.

The principal compiler of data on public roads and on ownership and operation of motor vehicles is the Department of Transportation's Federal Highway Administration. The annual *Highway Statistics* and the historical *Highway Statistics, Summary to 1965*, are publications of the Federal Highway Administration; *Accidents of Large Motor Carriers of Property* and *Accidents of Class I Motor Carriers of Passengers*, which present data on accidents involving intercity trucks and buses, respectively, are annual publications of the Bureau of Motor Carrier Safety. The department's Federal Railroad Administration presents data on accidents involving railroads in its annual *Accident Bulletin*.

Another major source of data on land transport is the Interstate Commerce Commission. Among its publications are the monthly *Transport Economics* and the *Annual Report*, containing operating data on all types of domestic transport, and the annual *Transport Statistics in the United States*, which is issued in separate parts. Part 1 is devoted to railroads, part 6 to oil pipelines, and part 7 to motor carriers. *Statistics of Railways in the United States*, published annually from 1887 through 1953, is a source of historical data.

Various censuses conducted by the Bureau of the Census also provide data relating to transportation. Data from the 1963 and 1967 censuses of transportation are presented in *Commodity Transportation Survey*, *National Travel Survey*, and *Truck Inventory and Use Survey*. The *Annual Survey of Manufactures* and reports of the Census of Manufactures and the Census of Business contain statistics on the motor-vehicle and equipment industry and on retail, wholesale, and services aspects of this industry. Additional data from those reports are included in sections 28 and 29.

Nongovernmental data can be found in the weekly and annual *Cars of Revenue Freight Loaded* and the annual *Yearbook of Railroad Facts*, both published by the Association of American Railroads, Washington, D.C.; *Bus Facts*, issued annually by the National Association of Motor Bus Owners, Washington; the *Transit Fact Book*, containing street railway and motorbus statistics, published annually by the American Transit Association, Washington; and *Transportation Facts and Trends*, issued by the Transportation Association of America, Washington. Useful annual handbooks in the field of motor-vehicle transport are *Automobile Facts and Figures* and *Motor Truck Facts*, both issued by the Automobile Manufacturers Association, Detroit; *American Trucking Trends*, issued by the American Trucking Association, Washington; and *Accident Facts*, issued by the National Safety Council, Chicago.

Highway systems.—The Federal-Aid Highway Act of 1916 provides for the sharing of highway construction costs between the States and the Federal Government with the initiative retained by each State for choosing projects and carrying them out. The planning and development of Federal-aid systems began in 1921. Federal funds share with State funds in costs of engineering, construction, and right-of-way acquisition on the designated systems while other charges, such as maintenance and policing, are borne entirely by the States and local agencies.

The Federal-aid primary system connects all of the principal cities, county seats, ports, manufacturing areas, and other traffic generating areas. In general, these are the same as the State trunklines. The Federal-aid secondary system consists of important feeder roads linking the farms, factories, distribution outlets, and smaller communities with the primary system.

Motor carriers.—Prior to 1950, class I for-hire motor carriers were classified by the Interstate Commerce Commission as those with \$100,000 or more of gross annual operating revenue. For 1950–1958, class I carriers classified as having gross operating revenue of \$200,000 for 3 year period. Beginning 1969, class I carriers classified as having gross operating revenue of \$1,000,000 for 3 year period.

Railroads.—The total railroad mileage of the United States comprises companies reporting to the Interstate Commerce Commission, grouped as follows: (1) Regular line-haul (intercity) railroads (and their nonoperating subsidiaries); (2) switching and terminal railroads; (3) private railroads prior to 1964 (identified by the Commission as “circular” because they reported on brief circulars); and (4) unofficial railroads, so designated when their reports are received too late for tabulation). For the most part, circular, unofficial, and switching and terminal railroads, are not included in the statistics.

Nonoperating subsidiaries comprise proprietary companies, which are covered by the reports of operating carriers, and lessor companies, which have no traffic and whose reports appear only in statistics of capitalization, dividends, and investment.

Operating railroads are classified on the basis of operating revenues. Prior to 1956, the classification was as follows: Class I, those having more than \$1,000,000 gross annual operating revenue; class II, from \$100,000 to \$1,000,000; and class III, less than \$100,000. From 1956 to 1964, the following classification was in effect: Class I, \$3,000,000 or more; and class II, under \$3,000,000. Effective January 1965, the classification was changed to the following: Class I, \$5,000,000 or more; and class II, under \$5,000,000.

Historical statistics.—Tabular headnotes provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

No. 883. OPERATING REVENUES, BY TYPE OF TRANSPORT: 1940 TO 1971

[Excludes Alaska and Hawaii, except as noted]

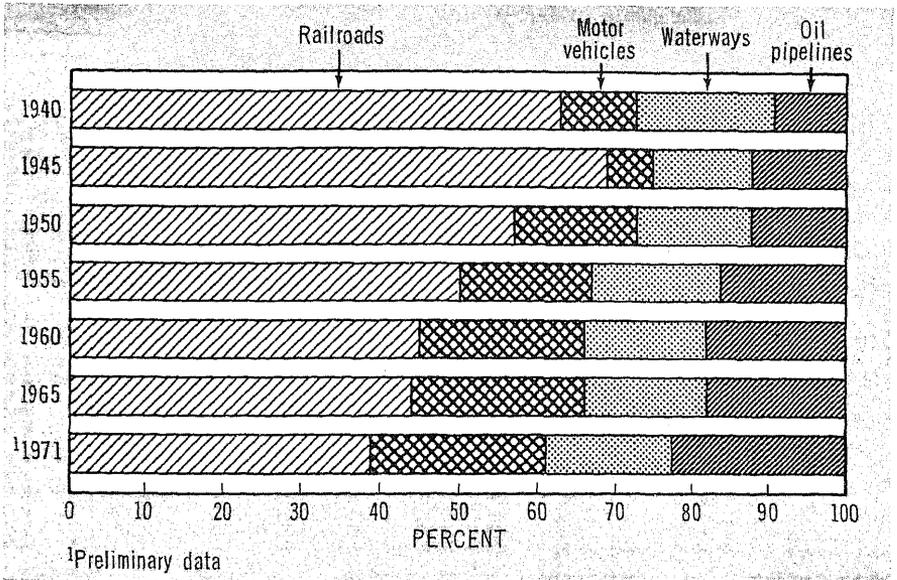
TRANSPORT AGENCY	1940	1945	1950	1955	1960	1965	1969	1970	1971
REVENUES (mil. dol.)									
Electric railways.....	53	87	79	60	23	13	13	11	11
Railway Express ¹	120	284	223	241	248	316	270	313	263
Railroads ²	4,519	9,284	9,924	10,590	9,955	10,738	11,951	12,511	13,321
Waterlines ⁴	113	173	330	452	427	426	460	502	525
Pipelines (oil) ⁵	226	304	442	678	770	904	1,103	1,188	1,249
Domestic scheduled air carriers ⁶	77	215	558	1,215	2,129	3,609	6,857	7,131	(NA)
Motor carriers of property ³	898	1,840	3,737	5,535	7,214	10,068	13,958	14,585	(NA)
Motor carriers of passengers.....	176	652	539	552	667	885	1,007	782	791
INDEX (1967=100)									
Railroads ²	42	85	91	97	92	99	110	115	117
Pipelines (oil).....	23	31	44	68	77	91	111	119	121
Domestic scheduled air carriers ⁶	2	4	11	25	44	74	140	146	(NA)
Motor carriers of property ³	8	16	33	49	64	89	123	127	129
Motor carriers of passengers.....	19	69	57	58	71	94	107	110	113

NA Not available. ¹ Through 1969, data are after deducting payments to others for express privileges. ² Includes Pullman (for 1940 to 1965), line-haul, and switching and terminal companies. ³ Beginning 1960, includes Alaska and Hawaii. ⁴ Includes only revenues from domestic traffic of carriers under jurisdiction of Interstate Commerce Commission. ⁵ Beginning 1960, includes 1 pipeline operating in Alaska. ⁶ Source: U.S. Federal Aviation Administration, *FAA Statistical Handbook of Aviation*. Beginning 1955, includes Alaska and Hawaii. Revenues for scheduled passenger cargo operations. ⁷ Excludes Class II and III passenger carriers.

Source: Except as noted, U.S. Interstate Commerce Commission, *Annual Report, Statistics of Class I, II, and III Motor Carriers, 1939-1966* (Statement No. 589); *Transport Economics*, monthly; and unpublished data.

FIG. XXXVI. PERCENT DISTRIBUTION OF TON-MILES OF DOMESTIC INTERCITY FREIGHT TRAFFIC, BY TYPE OF TRANSPORTATION: 1940 TO 1971

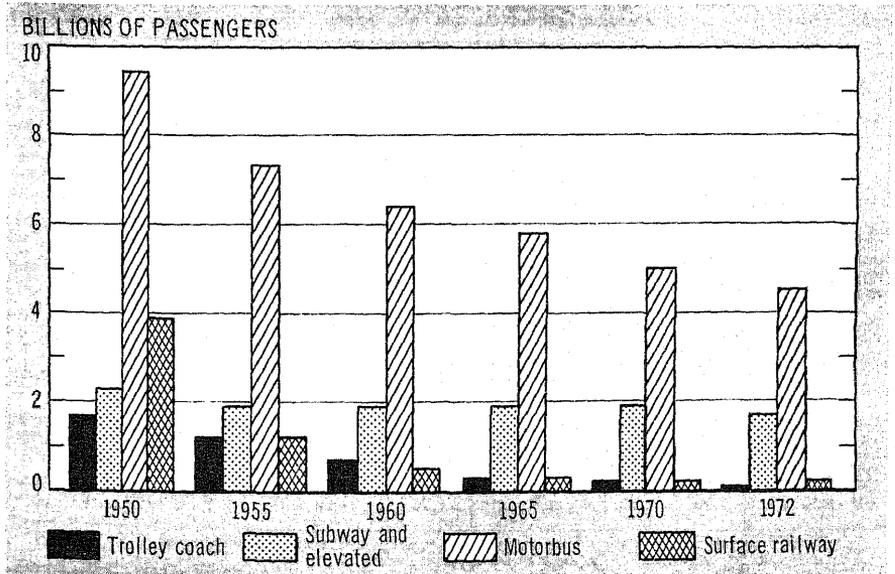
[Airways not shown separately—less than 1 percent. See table 884]



Source: Chart prepared by U.S. Bureau of the Census. Data from U.S. Interstate Commerce Commission.

FIG. XXXVII. PASSENGERS CARRIED BY PUBLIC TRANSPORTATION: 1950 TO 1972

[See table 919]



Source: Chart prepared by U.S. Bureau of the Census. Data from American Transit Association, Washington, D.C.

No. 884. VOLUME OF DOMESTIC INTERCITY FREIGHT TRAFFIC, BY TYPE OF TRANSPORT: 1940 TO 1971

[In billions of ton-miles, except percent. Motor vehicles and airways, prior to 1959, and other types of transportation, prior to 1960, exclude Alaska and Hawaii, except as noted. A ton-mile is the movement of 1 ton (2,000 pounds) of freight for the distance of 1 mile. Comprises public and private traffic, both revenue and nonrevenue. See also *Historical Statistics, Colonial Times to 1967*, series Q 1-I-1]

YEAR	Total traffic, volume	RAILROADS ¹		MOTOR VEHICLES		INLAND WATERWAYS ²		OIL PIPELINES		AIRWAYS ³	
		Volume	Percent of total	Volume	Percent of total	Volume	Percent of total	Volume	Percent of total	Volume	Percent of total
1940.....	651	412	63.24	62	9.53	118	18.13	59	9.10	(2)	0.002
1945.....	1,072	736	68.64	67	6.24	143	13.31	127	11.80	0.1	0.008
1950.....	1,094	628	57.44	173	15.80	163	14.93	129	11.81	0.3	0.029
1955.....	1,298	655	50.43	223	17.20	217	16.68	203	15.66	0.6	0.037
1958.....	1,231	675	46.68	256	20.76	189	15.35	211	17.16	0.6	0.047
1959.....	1,303	599	46.01	279	21.41	197	15.09	227	17.43	0.7	0.057
1960.....	1,330	595	44.73	285	21.46	220	16.56	229	17.19	0.8	0.058
1961.....	1,326	586	44.17	296	22.36	210	15.82	233	17.59	0.9	0.068
1962.....	1,387	616	44.38	309	22.30	223	16.08	238	17.14	1.3	0.093
1963.....	1,469	644	43.82	336	22.89	234	15.94	253	17.26	1.3	0.088
1964.....	1,556	679	43.65	356	22.90	250	16.08	269	17.27	1.5	0.096
1965.....	1,651	721	43.67	359	21.76	262	15.89	306	18.56	1.9	0.116
1966.....	1,750	762	43.33	381	21.66	281	15.95	333	18.93	2.3	0.128
1967.....	1,778	742	41.79	389	21.88	281	15.85	361	20.33	2.6	0.145
1968.....	1,839	757	41.16	396	21.55	291	15.85	391	21.28	2.9	0.157
1969.....	1,895	774	40.84	404	21.32	303	15.98	411	21.69	3.2	0.168
1970.....	1,936	771	39.83	412	21.28	319	16.46	431	22.26	3.3	0.170
1971 (prel.).....	1,930	746	38.64	430	22.28	307	15.90	444	23.00	3.4	0.176

² Less than 50 million ton-miles. ¹ Includes electric railways, express, and mail.

³ Includes Great Lakes. Includes Alaska for all years and Hawaii beginning 1959.

³ Domestic revenue service only. Includes express, mail, and excess baggage.

Source: U.S. Interstate Commerce Commission, *Annual Report*; Statement No. 6103, *Intercity Ton-Miles, 1959-1966*; and *Transport Economics*, monthly.

No. 885. VOLUME OF DOMESTIC INTERCITY PASSENGER TRAFFIC, BY TYPE OF TRANSPORT: 1950 TO 1971

[In billions of passenger-miles, except percent. Airways, prior to 1959, and other types of transportation, prior to 1960, exclude Alaska and Hawaii. A passenger-mile is the movement of 1 passenger for the distance of 1 mile. Comprises public and private traffic, both revenue and nonrevenue]

YEAR	Total traffic, volume	PRIVATE AUTOMOBILES		AIRWAYS ¹		BUS (excludes schoolbus)		RAILROADS ²		INLAND WATERWAYS ³	
		Volume	Percent of total	Volume	Percent of total	Volume	Percent of total	Volume	Percent of total	Volume	Percent of total
1950.....	508	438	86.20	10	1.98	26	5.20	32	6.39	1.2	0.23
1955.....	716	637	89.01	23	3.18	25	3.56	29	4.01	1.7	0.24
1958.....	760	685	90.14	29	3.75	24	2.73	24	3.11	2.1	0.27
1959.....	765	687	89.89	33	4.26	20	2.60	22	2.93	2.0	0.26
1960.....	784	706	90.10	34	4.33	19	2.47	22	2.75	2.7	0.34
1961.....	791	714	90.18	35	4.37	20	2.56	20	2.59	2.3	0.30
1962.....	818	736	89.95	37	4.58	22	2.66	20	2.47	2.7	0.33
1963.....	853	766	89.83	43	5.02	23	2.64	19	2.19	2.8	0.32
1964.....	896	802	89.53	49	5.49	23	2.61	18	2.05	2.8	0.32
1965.....	920	818	88.86	58	6.31	24	2.58	18	1.91	3.1	0.34
1966.....	971	856	88.19	69	7.14	25	2.53	17	1.78	3.4	0.35
1967.....	1,021	890	87.18	87	8.55	25	2.44	15	1.50	3.4	0.33
1968.....	1,079	936	86.80	101	9.38	25	2.27	13	1.23	3.4	0.32
1969.....	1,138	977	85.85	120	10.54	25	2.19	12	1.08	3.8	0.33
1970.....	1,185	1,026	86.60	119	10.01	25	2.14	11	0.92	4.0	0.34
1971 (prel.).....	1,230	1,071	87.11	120	9.76	26	2.07	9	0.73	4.1	0.33

¹ Includes domestic commercial revenue service and private pleasure and business flying.

² Includes electric railways. ³ Includes Great Lakes.

Source: U.S. Interstate Commerce Commission, *Annual Report*, and *Transport Economics*, monthly.

Employment—Transport Companies—Highway Construction 539

No. 886. EMPLOYMENT IN TRANSPORTATION, BY TYPE OF TRANSPORT: 1960 TO 1972
[Annual averages]

TYPE OF TRANSPORT	NUMBER (1,000)					PERCENT				
	1960	1965	1970	1971	1972	1960	1965	1970	1971	1972
Total	2,550	2,532	2,681	2,619	2,631	100.0	100.0	100.0	100.0	100.0
Railroad.....	885	735	627	599	575	34.7	29.0	23.4	22.9	21.9
Local and interurban passenger.....	284	269	279	274	268	11.2	10.6	10.4	10.4	10.2
Trucking and warehousing.....	856	964	1,083	1,077	1,102	33.6	38.1	40.4	41.1	41.9
Air.....	191	229	351	343	345	7.5	9.0	13.1	13.1	13.1
Pipeline.....	23	20	18	18	18	0.9	0.8	0.7	0.7	0.7
Water.....	310	230	215	199	217	12.2	9.1	8.0	7.6	8.2
Other.....		85	108	109	106		3.4	4.0	4.2	4.0

Source: U.S. Bureau of Labor Statistics, *Employment and Earnings*, monthly.

No. 887. LARGEST TRANSPORTATION COMPANIES—REVENUES AND ASSETS, BY RANK OF OPERATING REVENUES: 1960 TO 1972

[In billions of dollars, except percent. As of December 31 or calendar year, as applicable. Companies listed derive at least 50 percent of their operating revenues from carrier operations; excludes companies primarily engaged in freight forwarding, express shipping, or vehicle rental]

OPERATING REVENUE GROUP	1960		1965		1970		1972	
	Revenues ¹	Assets ²						
50 largest	11.8	30.7	15.7	35.6	23.0	46.4	26.8	45.9
Lowest ten.....	0.7	1.3	0.9	1.9	1.0	1.8	1.2	1.4
Second ten.....	1.1	1.9	1.3	1.7	1.4	1.7	1.9	3.2
Third ten.....	1.8	5.5	2.3	5.7	2.5	3.8	3.2	4.0
Fourth ten.....	2.7	7.6	3.7	8.3	5.6	12.7	6.7	13.1
Highest ten.....	5.5	14.4	7.6	17.9	12.6	26.4	13.8	24.3
Percent of total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lowest ten.....	6.1	4.2	5.9	5.4	4.4	3.8	4.5	3.0
Second ten.....	9.4	6.2	8.0	4.9	5.9	3.6	7.1	7.0
Third ten.....	15.1	18.1	14.4	16.0	10.8	8.3	11.9	8.7
Fourth ten.....	23.0	24.7	23.5	23.4	24.1	27.4	25.0	28.5
Highest ten.....	46.3	46.8	48.2	50.4	54.8	56.9	51.5	52.9

¹ Gross receipts from transportation (including consolidated subsidiaries) for year.

² Total assets employed in business, net of depreciation.

Source: Fortune, New York, N.Y.; adapted from *The Fortune Directory*. (Copyright, by Time Inc.)

No. 888. HIGHWAY CONSTRUCTION—CONTRACTS AWARDED: 1950 TO 1972

[In millions of dollars. Prior to 1960, excludes Alaska and Hawaii. Covers federally and State owned highways only; includes force-account construction authorized to start]

OWNERSHIP AND SOURCE OF FUNDS	1950	1955	1960	1965	1967	1968	1969	1970	1971	1972
Total	1,528	2,619	4,030	4,935	5,522	5,305	6,625	6,520	6,327	6,505
Federally owned highways.....	36	59	129	135	78	84	38	52	171	206
State owned highways.....	1,492	2,560	3,901	4,800	5,444	5,220	6,587	6,468	6,156	6,299
Federally aided projects:										
Total value.....	798	1,256	3,097	3,896	4,112	3,711	5,048	4,877	4,595	4,876
Federal funds.....	415	667	2,218	2,976	3,077	2,766	3,784	3,619	3,422	3,598
Independent State projects:										
Total value.....	694	1,304	804	904	1,332	1,610	1,539	1,591	1,561	1,423
Toll facilities.....	228	695	165	49	213	63	78	49	159	99

Source: U.S. Bureau of the Census. In U.S. Bureau of Competitive Assessment and Domestic Policy, *Construction Review*.

No. 889. RURAL AND MUNICIPAL HIGHWAY MILEAGE, BY GOVERNMENTAL CONTROL: 1940 TO 1971

[In thousands. As of December 31. Prior to 1960, excludes Alaska and Hawaii. Municipal roads are those within incorporated places, densely populated New England towns, and certain of the more populous unincorporated areas. All other roads are classed as rural. See *Historical Statistics, Colonial Times to 1957*, series Q 246, and, for similar but not exactly comparable data, series Q 247 and Q 251]

MILEAGE AND CONTROL	1940	1950	1955	1960	1965	1967	1968	1969	1970	1971
Total mileage	(NA)	3,313	3,418	3,546	3,690	3,705	3,684	3,710	3,730	3,759
Rural mileage.....	2,990	2,990	3,045	3,116	3,183	3,184	3,152	3,162	3,169	3,166
Under State control.....	524	581	619	659	687	699	702	704	707	713
Under local control.....	2,466	2,326	2,333	2,345	2,346	2,321	2,275	2,275	2,275	2,256
Under Federal control.....		73	93	112	150	164	175	183	187	197
Municipal mileage.....	(NA)	323	373	430	507	521	532	548	561	593
Under State control.....	27	36	42	50	65	68	69	72	74	77
Under local control.....	(NA)	287	331	380	442	453	463	476	487	516

NA Not available.

No. 890. HIGHWAY MILEAGE OF RURAL ROADS: 1940 TO 1971

[In thousands. As of December 31. Prior to 1960, excludes Alaska and Hawaii. For definition of rural roads, see headnote, table 889. See *Historical Statistics, Colonial Times to 1957*, series Q 247-250, for similar but not exactly comparable data]

TYPE AND CONTROL	1940	1950	1960	1965	1967	1968	1969	1970	1971
All rural roads	2,990	2,990	3,116	3,183	3,184	3,152	3,162	3,169	3,166
Primary State highways.....	329	363	403	414	424	425	406	408	408
Secondary State highways.....	81	88	105	112	112	113	121	121	122
County roads under State control.....	114	122	136	137	138	139	152	152	153
County and local roads ¹	2,466	2,417	2,472	2,520	2,510	2,475	2,483	2,488	2,483
Surfaced rural roads	1,340	1,679	2,165	2,302	2,336	2,362	2,391	2,411	2,416
Primary State highways.....	302	351	399	410	420	421	403	405	405
Secondary State highways.....	65	73	100	108	108	109	117	118	118
County roads under State control.....	55	83	111	118	120	122	135	135	137
County and local roads ¹	918	1,172	1,555	1,666	1,688	1,710	1,736	1,753	1,756

¹ Includes mileage in national and State parks, forests, reservations, etc., not included as part of State or local systems.

Source of tables 889 and 890: U.S. Federal Highway Administration, *Highway Statistics*, annual.

No. 891. MILEAGE AND COST OF DESIGNATED FEDERAL-AID HIGHWAY SYSTEMS: 1930 TO 1972

[Prior to 1960, excludes Alaska; includes Puerto Rico. See also *Historical Statistics, Colonial Times to 1957*, series Q 261-264]

YEAR	MILES OF HIGHWAY (1,000)		COST ³ (mil. dol.)			YEAR	MILES OF HIGHWAY (1,000)		COST ³ (mil. dol.)		
	Total exist-ent ¹	Com-pleted during year ²	Total	Federal funds	State funds		Total exist-ent ¹	Com-pleted during year ²	Total	Federal funds	State funds
1930.....	193	10	237	100	137	1965.....	909	17	4,569	3,430	1,139
1935.....	214	13	242	218	24	1966.....	911	16	5,362	4,151	1,211
1940.....	234	12	269	150	119	1967.....	911	14	5,178	4,039	1,139
1945.....	233	3	101	76	25	1968.....		12	4,192	3,167	965
1950.....	641	20	753	390	364	1969.....	915	11	4,820	3,706	1,120
1955.....	742	23	1,287	666	621	1970.....	919	11	4,623	3,515	1,110
1960.....	867	21	3,264	2,273	992	1971.....	931	11	4,788	3,623	1,165
1964.....	901	19	4,560	3,385	1,175	1972.....	941	10	4,714	3,602	1,112

NA Not available.

¹ Through 1945, total existing mileage of Federal-aid primary system; beginning 1950, includes secondary system. Through 1955, data as of June 30; thereafter, as of Dec. 31.

² Comprises construction and reconstruction mileage.

³ Represents actual expenditures of funds on calendar-year basis. Beginning 1935, includes money spent on public works and defense highways. Beginning 1940, includes secondary highways. ⁴ Estimated.

Source: U.S. Federal Highway Administration, *Highway Statistics*, annual, and other releases.

No. 892. MUNICIPAL AND RURAL HIGHWAY MILEAGE—STATES: 1971

[As of December 31. For definition of municipal and rural roads, see headnote, table 989. Compiled for latest available year from reports of State authorities and planning survey data.]

STATE	Total municipal and rural	Municipal	RURAL					
			Total	Type		Governmental control		
				Surfaced	Nonsurfaced	State ¹	Local	Federal ²
United States	3,758,942	593,047	3,165,895	2,415,878	750,017	712,785	2,256,271	196,839
Alabama	79,036	11,462	67,574	61,835	5,739	19,938	47,361	275
Alaska	7,817	862	6,955	3,696	3,259	4,811	1,713	631
Arizona	47,085	6,166	40,919	18,415	24,504	4,464	10,034	16,421
Arkansas	78,680	9,231	69,449	52,303	17,146	12,948	54,656	1,842
California	165,990	45,997	119,993	77,483	42,510	13,953	71,490	34,550
Colorado	81,870	7,581	74,289	44,586	29,703	8,350	65,888	51
Connecticut	18,531	13,163	5,368	5,289	79	1,517	3,846	-
Delaware	5,104	766	4,338	4,325	13	4,338	-	-
Dist. of Columbia	1,087	1,087	(X)	(X)	(X)	(X)	-	(X)
Florida	93,310	22,275	71,035	46,027	25,008	17,041	52,942	1,052
Georgia	100,214	15,028	85,186	56,635	28,551	15,576	68,512	1,098
Hawaii	3,591	998	2,593	2,413	180	824	1,678	91
Idaho	57,144	2,963	54,181	27,777	26,404	4,747	26,304	23,130
Illinois	130,187	27,763	102,424	96,092	6,342	13,324	89,110	-
Indiana	90,908	15,507	75,401	71,789	3,612	10,261	65,140	-
Iowa	112,831	13,663	99,168	93,043	6,125	9,066	90,101	1
Kansas	134,182	11,088	123,094	89,137	33,957	9,966	113,123	-
Kentucky	69,123	5,852	63,271	55,700	7,571	23,537	38,998	436
Louisiana	53,340	10,993	42,347	38,628	3,719	14,202	27,859	286
Maine	21,424	2,449	18,975	17,428	1,547	10,962	7,851	162
Maryland	26,522	4,146	22,376	22,321	55	4,988	17,243	145
Massachusetts	29,355	21,858	7,497	7,311	186	1,242	6,206	49
Michigan	115,064	20,115	94,949	77,312	17,637	7,977	86,970	2
Minnesota	127,744	17,201	110,543	98,890	11,713	11,375	97,330	1,838
Mississippi	66,766	6,599	60,167	57,936	2,231	9,713	49,924	530
Missouri	115,544	15,386	100,158	93,436	6,722	30,050	69,419	689
Montana	77,920	2,333	75,587	40,953	34,634	12,129	53,315	10,143
Nebraska	98,765	6,681	92,084	70,592	21,522	9,581	81,966	537
Nevada	49,702	1,919	47,783	14,564	33,219	6,167	41,616	-
New Hampshire	14,926	4,816	10,110	7,987	2,123	3,041	6,949	120
New Jersey	32,237	17,512	14,725	13,234	1,491	1,722	12,998	5
New Mexico	68,371	4,836	63,535	17,185	46,350	11,711	45,746	6,078
New York	106,490	40,618	65,872	62,239	3,633	12,830	53,007	35
North Carolina	86,473	13,885	72,588	66,079	6,514	70,776	-	1,817
North Dakota	106,530	3,130	103,400	66,525	36,875	6,617	95,490	1,293
Ohio	109,240	23,563	85,677	84,092	1,585	16,902	68,775	-
Oklahoma	107,872	14,246	93,626	68,194	25,432	11,473	82,123	30
Oregon	97,453	6,348	91,105	55,250	35,855	9,152	35,217	46,736
Pennsylvania	115,658	24,171	91,487	73,935	17,552	44,166	46,599	722
Rhode Island	5,461	4,444	1,017	946	71	493	524	-
South Carolina	59,829	6,838	52,991	34,747	18,044	31,865	20,673	453
South Dakota	84,078	2,973	81,105	57,303	23,802	8,707	70,733	1,665
Tennessee	80,290	11,926	68,364	66,642	1,722	8,283	58,875	1,206
Texas	248,340	49,476	198,864	136,954	61,910	61,425	136,441	998
Utah	40,981	4,412	36,569	18,974	17,595	4,779	22,190	9,600
Vermont	14,612	1,004	13,608	11,576	2,032	2,541	10,795	172
Virginia	61,608	8,636	52,972	52,128	744	40,921	853	2,098
Washington	80,219	9,965	70,254	54,820	15,434	14,023	39,546	16,685
West Virginia	35,941	3,612	32,329	23,261	9,068	31,742	-	687
Wisconsin	103,352	14,222	89,130	83,647	5,483	10,803	78,259	88
Wyoming	40,540	1,287	39,253	16,364	22,889	5,866	20,875	12,512

- Represents zero. X Not applicable.

¹ Includes 27,114 miles of State park, forest, institutional, and other roads, and 2,940 miles of toll facilities that are not a part of the State or local highway system. Also includes mileage of county roads under State control in all counties of Delaware, North Carolina, and West Virginia; 10 counties in Alabama; all but 2 counties in Virginia; some county mileage in Kentucky and Nevada; farm-to-market mileage in Louisiana; and the State-aid system in Maine.

² Mileage in Federal parks, forests, and reservations that are not a part of the State highway system.

Source: U.S. Federal Highway Administration, *Highway Statistics, 1971*.

No. 893. FEDERAL-AID PAYMENTS TO STATE AND LOCAL GOVERNMENTS FOR HIGHWAY CONSTRUCTION—STATES AND PUERTO RICO: 1960 TO 1972

[In millions of dollars. For years ending June 30]

STATE OR OTHER AREA	1960	1965	1970	1971	1972	STATE OR OTHER AREA	1960	1965	1970	1971	1972
Total	2,942	4,018	14,524	14,802	14,822	Mont.	31	59	62	78	74
U.S.	2,935	4,011	4,520	4,793	4,816	Neb.	27	37	38	36	29
Ala.	51	91	82	104	106	Nev.	10	42	35	30	36
Alaska	16	53	40	62	56	N.H.	20	16	21	25	24
Ariz.	31	66	68	64	72	N.J.	53	65	110	131	133
Ark.	32	39	43	30	45	N. Mex.	26	48	55	55	60
Calif.	172	324	503	495	409	N.Y.	217	198	256	259	249
						N.C.	59	51	62	78	81
Colo.	36	61	57	84	96	N. Dak.	33	31	24	37	32
Conn.	29	48	65	59	64	Ohio	159	186	243	205	185
Del.	8	17	10	9	17	Okla.	33	58	56	59	49
D.C.	16	26	32	36	33	Oreg.	54	77	70	98	107
Fla.	75	88	69	94	132	Pa.	117	142	238	216	199
						R.I.	13	25	28	15	19
Ga.	61	81	64	87	91	S.C.	47	35	35	45	41
Hawaii	4	10	33	30	32	S. Dak.	26	45	39	34	31
Idaho	26	40	37	34	39	Tenn.	67	108	102	115	113
Ill.	200	209	185	225	241	Tex.	198	216	227	262	247
Ind.	74	93	100	104	107	Utah	34	61	71	58	72
						Vt.	17	25	28	34	27
Iowa	68	53	63	71	60	Va.	53	163	112	148	125
Kans.	51	51	50	52	55	Wash.	44	75	93	97	115
Ky.	66	60	96	83	88	W. Va.	47	56	116	153	165
La.	70	103	110	100	109	Wis.	61	54	42	55	55
Maine	20	24	21	33	30	Wyo.	26	48	38	34	36
						Undist. to States, etc.	2	17	-	-	-
Md.	27	50	66	70	65	P.R.	7	7	4	9	6
Mass.	67	78	94	79	79						
Mich.	96	133	160	159	194						
Minn.	65	105	108	99	102						
Miss.	36	58	57	69	59						
Mo.	76	114	106	107	131						

- Represents zero.

¹ Includes following amounts for 1970, 1971, and 1972, respectively, in millions of dollars; Appalachian highways, 129, 144, and 145; highway beautification, 8, 7, and 6; landscaping and scenic enhancement, 3, 2, and 2; and highway safety, 48, 66, and 74. ² Deduct.

 Source: U.S. Dept. of the Treasury, 1960 and 1965, *Annual Report of the Secretary of the Treasury on the State of the Finances*; thereafter, *Federal Aid to States*.

No. 894. PUBLIC HIGHWAY DEBT—LONG-TERM HIGHWAY OBLIGATIONS OF STATE AND LOCAL GOVERNMENTS: 1950 TO 1973

 [In millions of dollars. State data are for calendar years; local data are for varying fiscal years. 1950 excludes Alaska and Hawaii. Excludes duplicated and interunit obligations, except as noted. Municipal obligations include data for all municipalities and other political subdivisions urban in character. See *Historical Statistics, Colonial Times to 1867*, series Q 279, for State obligations outstanding]

ITEM	1950	1955	1960	1965	1968	1969	1970	1971	1972 (prel.)	1973 est.
Total debt issued ¹	652	1,174	1,206	1,070	1,991	2,022	1,886	3,284	2,383	1,911
State.....	400	646	680	586	1,377	1,351	1,305	2,649	1,696	1,216
County and local rural.....	90	205	190	169	241	241	174	178	182	185
Municipal.....	162	323	336	315	373	430	407	487	505	510
Total debt redeemed ²	322	421	616	855	1,071	1,122	1,252	1,298	1,419	1,481
State.....	143	191	300	459	657	705	782	815	924	973
County and local rural.....	83	89	96	123	136	137	152	158	165	173
Municipal.....	96	141	220	273	278	280	318	325	330	335
Total debt outstanding	4,436	9,658	13,166	15,316	17,672	18,572	19,107	21,093	22,057	22,487
State.....	2,096	6,619	9,384	10,905	12,734	13,380	13,903	15,737	16,509	16,752
County and local rural.....	872	1,027	1,280	1,363	1,554	1,658	1,685	1,705	1,722	1,734
Municipal.....	1,468	2,012	2,502	3,048	3,384	3,534	3,519	3,651	3,826	4,001

¹ Excludes refunding issues. ² Excludes redemptions by refunding.

Source: U.S. Federal Highway Administration, releases.

Federal-Aid Highway Systems

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No. 895. DESIGNATED FEDERAL-AID HIGHWAY SYSTEMS, 1971, AND PROJECTS, 1972—STATES AND PUERTO RICO

[Systems as of December 31, and projects as of June 30. Projects comprise those financed from the Federal-aid primary, secondary, urban, rural, TOPICS (urban traffic operations program to increase capacity and safety), and interstate funds. See text, pp. 535 and 536]

STATE OR OTHER AREA	SYSTEMS (miles), 1971					PROJECTS, 1972 ¹					
	Primary				Secondary	Completed during fiscal year			Under construction		
	Total	National system of interstate highways		Federal-aid, urban, Type II		Miles	Total cost (mil. dol.)	Federal funds (mil. dol.)	Miles	Total cost (mil. dol.)	Federal funds (mil. dol.)
		Total	Open to traffic								
Total.....	271,714	42,502	32,988	22,231	649,493	11,572	4,674	3,506	18,304	16,847	13,093
U.S.....	271,156	42,502	32,988	22,231	648,401	11,562	4,665	3,502	18,279	16,803	13,071
Ala.....	6,594	898	638	570	16,032	150	73	53	281	473	383
Alaska.....	3,246	-	-	67	2,617	277	53	49	415	125	114
Ariz.....	3,685	1,173	912	178	4,029	124	64	55	148	146	132
Ark.....	4,121	526	475	26	14,470	233	61	39	351	159	113
Calif.....	9,794	2,281	1,846	6,476	16,198	256	344	279	491	1,253	1,048
Colo.....	4,639	976	757	956	4,381	285	92	72	164	190	156
Conn.....	1,333	347	270	96	1,251	9	32	19	20	289	214
Del.....	602	41	29	6	1,480	9	10	6	32	109	86
D.C.....	168	30	11	-	126	7	28	22	8	190	155
Fla.....	5,975	1,398	876	-	15,150	291	114	81	215	297	240
Ga.....	9,061	1,150	789	261	20,421	228	96	73	638	416	308
Hawaii.....	602	52	22	92	515	10	30	24	21	162	124
Idaho.....	3,274	612	500	85	5,581	348	85	71	163	64	55
Ill.....	14,186	1,723	1,397	96	15,081	516	245	173	722	629	488
Ind.....	5,939	1,129	954	592	19,006	91	114	92	236	284	204
Iowa.....	10,340	781	600	495	33,258	774	108	75	1,046	149	104
Kans.....	7,894	822	694	517	24,493	458	59	36	685	155	117
Ky.....	4,650	736	584	295	15,124	55	57	42	184	303	228
La.....	3,495	718	413	668	8,748	94	168	137	271	515	424
Maine.....	1,976	312	278	16	2,562	57	46	34	78	71	51
Md.....	2,449	358	328	533	7,779	42	50	38	159	358	282
Mass.....	2,351	470	413	256	2,367	60	152	110	116	421	319
Mich.....	6,930	1,175	962	345	27,130	420	229	179	711	649	517
Minn.....	8,159	914	600	1,025	30,976	665	151	113	852	377	291
Miss.....	6,524	683	536	217	16,586	403	97	72	501	184	132
Mo.....	8,508	1,146	906	1,074	23,682	228	173	124	362	332	280
Mont.....	6,385	1,189	734	159	5,972	296	65	55	422	221	189
Nebr.....	6,010	481	433	172	17,733	439	76	54	534	74	44
Nev.....	2,302	535	412	95	3,809	92	30	28	77	119	111
N.H.....	1,250	214	183	165	1,794	28	24	17	68	68	49
N.J.....	2,138	384	208	31	1,847	33	63	51	134	741	551
N. Mex.....	3,985	999	847	264	6,061	97	35	29	157	121	103
N.Y.....	11,868	1,947	1,161	191	19,398	96	174	107	102	804	579
N.C.....	4,746	842	556	468	29,282	111	74	45	434	397	277
N. Dak.....	4,725	571	469	158	13,783	814	37	26	1,151	84	61
Ohio.....	8,507	1,534	1,364	470	21,601	91	123	89	247	690	532
Okla.....	7,834	809	743	105	15,065	231	72	47	329	215	161
Oreg.....	4,083	734	663	1,228	8,504	70	50	37	198	370	311
Pa.....	8,577	1,574	1,384	134	13,880	72	96	72	419	1,270	937
R.I.....	431	100	63	117	572	6	13	10	21	92	66
S.C.....	5,399	758	545	5	21,444	281	58	37	915	142	100
S. Dak.....	5,915	679	501	168	13,731	382	33	22	664	105	81
Tenn.....	6,905	1,045	777	861	11,977	280	83	66	592	416	329
Tex.....	17,732	3,168	2,428	243	41,493	1,066	373	278	1,219	674	483
Utah.....	2,611	937	527	60	4,279	153	52	46	311	186	171
Vt.....	1,586	320	232	17	2,020	71	45	34	50	50	42
Va.....	4,636	1,073	831	685	20,055	173	159	130	332	498	412
Wash.....	3,942	763	592	598	12,225	126	62	50	418	427	352
W. Va.....	2,619	512	298	37	10,811	25	35	27	131	515	435
Wis.....	6,580	569	456	746	19,272	252	51	41	305	146	93
Wyo.....	3,905	914	791	103	2,770	238	43	36	224	48	42
P. R.....	553	-	-	-	1,092	10	8	4	25	44	22

- Represents zero.

¹ Excludes highway planning and research work financed with 1½ percent Federal-aid highway funds available pursuant to 23 U.S.C. 307(c)(2). (Completed, \$99 million total cost, \$70 million Federal funds; underway, \$271 million total cost, \$199 million Federal funds.)

Source: U.S. Federal Highway Administration, *Federal Aid and Allied Highway Programs, 1972.*

No. 896. DISBURSEMENTS OF STATE HIGHWAY FUNDS—TOTAL, 1950 TO 1971, AND BY PURPOSE, 1971, STATES

[In millions of dollars. Comprises disbursements, whether from current revenues or proceeds of loans, for construction, maintenance, interest and principal payments on highway bonds, transfers to local units, and miscellaneous purposes. Includes transactions by State toll authorities. Beginning 1965, excludes amounts allocated for collection and nonhighway purposes, and bonds redeemed by refunding. See also *Historical Statistics, Colonial Times to 1867*, series Q 273-278]

STATE	1950	1955	1960	1965	1970	Total	1971			For county and local roads and streets ⁴
							For State-administered highways			
							Capital outlay, roads and bridges ¹	Maintenance and traffic services ¹	Other ²	
United States ⁴	3,562	6,034	8,957	11,465	16,535	17,747	9,417	2,087	3,180	3,063
Alabama.....	49	87	174	228	290	315	187	32	46	70
Alaska.....	(NA)	(NA)	19	71	99	111	62	19	27	3
Arizona.....	20	33	72	106	168	176	102	13	26	34
Arkansas.....	46	55	95	119	145	173	97	19	23	34
California.....	268	558	786	1,110	1,527	1,466	703	104	225	374
Colorado.....	38	56	91	129	177	208	127	21	19	41
Connecticut.....	38	79	161	216	293	308	138	37	118	15
Delaware.....	32	26	36	87	73	77	32	1	32	2
Dist. of Columbia.....	11	24	48	42	68	64	-	-	16	48
Florida.....	93	162	316	316	442	547	360	54	85	48
Georgia.....	74	109	167	208	278	310	158	39	50	63
Hawaii.....	(NA)	(NA)	23	35	74	62	35	7	9	11
Idaho.....	19	27	44	66	81	83	44	12	9	18
Illinois.....	113	229	475	471	889	989	547	86	91	265
Indiana.....	69	200	241	286	380	414	180	43	70	121
Iowa.....	79	109	169	193	291	324	157	27	21	119
Kansas.....	50	110	109	134	177	190	85	36	31	38
Kentucky.....	67	102	138	223	326	412	233	58	95	26
Louisiana.....	71	115	204	240	319	373	217	33	70	63
Maine.....	24	65	62	80	98	122	66	29	24	3
Maryland.....	84	138	166	217	388	432	189	27	85	131
Massachusetts.....	98	203	237	284	368	348	139	45	150	14
Michigan.....	106	249	418	427	570	645	267	49	101	228
Minnesota.....	65	101	167	230	297	322	173	30	34	85
Mississippi.....	42	75	110	160	205	242	134	13	31	64
Missouri.....	53	105	165	241	337	357	229	64	37	27
Montana.....	22	30	54	86	121	122	93	11	9	9
Nebraska.....	36	59	95	97	154	150	70	14	15	51
Nevada.....	9	15	22	58	59	69	46	9	9	5
New Hampshire.....	14	30	50	51	75	78	36	18	19	5
New Jersey.....	188	303	221	291	602	569	307	53	183	26
New Mexico.....	26	39	64	101	116	111	68	21	12	10
New York.....	304	471	652	752	1,237	1,272	623	187	308	154
North Carolina.....	136	141	179	219	396	415	228	96	78	13
North Dakota.....	22	28	50	51	75	80	42	8	6	24
Ohio.....	147	383	523	661	832	861	363	69	204	225
Oklahoma.....	73	113	134	179	237	316	89	30	132	65
Oregon.....	50	79	113	185	211	270	152	23	29	66
Pennsylvania.....	279	350	423	667	1,074	1,176	674	217	204	81
Rhode Island.....	14	30	42	62	54	54	24	9	21	(Z)
South Carolina.....	46	57	109	114	157	178	109	37	19	13
South Dakota.....	20	34	57	68	81	86	51	10	10	15
Tennessee.....	79	108	187	238	304	315	163	25	37	90
Texas.....	178	282	493	513	730	732	499	105	87	41
Utah.....	15	23	49	89	114	109	82	10	9	8
Vermont.....	10	17	43	53	80	76	41	11	17	7
Virginia.....	76	112	211	353	447	489	307	82	79	21
Washington.....	78	127	171	235	372	404	186	44	73	101
West Virginia.....	51	64	110	169	317	399	290	49	60	(Z)
Wisconsin.....	68	109	171	189	268	276	127	32	28	89
Wyoming.....	14	22	44	65	72	71	46	8	7	9

- Represents zero. NA Not available. Z Less than \$500,000.

¹ Includes some administration, engineering, and miscellaneous disbursements. ² Comprises following disbursements, in millions of dollars: Administration and miscellaneous, 856; highway law enforcement, 893; bond interest, 634; and bond redemption, 797. ³ Expenditures on county roads under State control in Ala. (10 counties), Del., N.C., Va. (all except 2 counties), and W. Va. included with those for State-administered highways. ⁴ Prior to 1960, excludes Alaska and Hawaii.

Source: U.S. Federal Highway Administration, *Highway Statistics*, annual.

NO. 897. FEDERAL AND STATE GASOLINE TAX—STATES: 1950 TO 1972

[Cents per gallon. Where 2 figures appear in a cell, the former is tax in effect at beginning of year, the latter is tax at end of year. See also *Historical Statistics, Colonial Times to 1967*, series Q 323-329]

STATE	1950	1960	1965	1970	1972 ¹	STATE	1950	1960	1965	1970	1972 ¹
Federal tax.....	1.5	4	4	4	4	Mississippi.....	6-7	7	7	7-8	8
State average ²	4.65	5.92	6.39	7.02	(NA)	Missouri.....	2	3	5	5	5-7
Alabama.....	6	7	7	7	7	Montana.....	6	6	6	7	7
Alaska.....	(³)	5-7	8	8	8	Nebraska.....	6-5	7	7-7.5	8.5	8.5
Arizona.....	5	5	6-7	7	7	Nevada.....	4.5	6	6	6	6
Arkansas.....	6.5	6.5	6.5-7.5	7.5	7.5	New Hampshire.....	4	7	7	7	9
California.....	4.5	6	7-8-7	7	7	New Jersey.....	3	5	6	7	7-8
Colorado.....	6	6	6-7	7	7	New Mexico.....	7	6	6	7	7
Connecticut.....	4	6	6	8	10	New York.....	4	6	6	7	7-8
Delaware.....	5	5	6-7	7	8	North Carolina.....	7	7	7	9	9
Dist. of Columbia.....	4	6	6	7	7-8	North Dakota.....	4	6	6	7	7
Florida.....	7	7	7	7	8	Ohio.....	4	7	7	7	7
Georgia.....	7	6.5	6.5	6.5	7.5	Oklahoma.....	6.5	6.5	6.5	6.5	6.5
Hawaii.....	4	4.5	4.5	4.5	5	Oregon.....	6	6	6	7	7.5
Idaho.....	6	6	6	7	7-8.5	Pennsylvania.....	5	5	7	7-8	8
Illinois.....	3	5	5	7.5	7.5	Rhode Island.....	4	6-7	7	8	8
Indiana.....	4	6	6	8	8	South Carolina.....	6-7	7	7	7	7-8
Iowa.....	4	6	6-7	7	7	South Dakota.....	4	6	6	7	7
Kansas.....	5	5	5	7	7	Tennessee.....	7	7	7	7	7
Kentucky.....	7	5 ⁷	5 ⁷	5 ⁷	7-9	Texas.....	4	5	5	5	5
Louisiana.....	9	7	7	8	8	Utah.....	4	6	6	7	7
Maine.....	6	7	7	8	9	Vermont.....	5	6.5	6.5	8	9
Maryland.....	5	6	7	7	7-9	Virginia.....	6	6-7	5 ⁷	5 ⁷	7-9
Massachusetts.....	3	5.5	5.5-6.5	6.5	7.5	Washington.....	6.5	6.5	7.5	9	9
Michigan.....	3	6	6	7	7	West Virginia.....	5	7	7	7-8.5	8.5
Minnesota.....	5	5	6	7	7	Wisconsin.....	4	6	6	7	7
						Wyoming.....	4	5	5	7	7

NA Not available. ¹ In effect Dec. 31.

² Weighted average, based on net gallons taxed. Prior to 1960, excludes Alaska and Hawaii.

³ No tax.

⁴ State tax rate per gallon is 8 cents in Hawaii County and 5 cents in other counties.

⁵ Trucks or combinations with more than 2 axles pay motor-fuel tax rate of 9 cents per gallon in Kentucky and Virginia. (Prior to July 1960, the tax in Virginia was 8 cents.)

Source: U.S. Federal Highway Administration, *Highway Statistics*, annual.

NO. 898. MOTOR-VEHICLE TRAVEL, BY TYPE OF VEHICLE: 1940 TO 1971

[In billions of vehicle-miles, except averages. Prior to 1960, excludes Alaska and Hawaii. Estimates based on automatic traffic recorder data. Urban travel includes all travel in municipalities and most travel in unincorporated areas. All other travel is classed as rural. See also *Historical Statistics, Colonial Times to 1967*, series Q 321-327]

ITEM	1940	1950	1955	1960	1965	1968	1969	1970	1971 est.
Total travel	302.2	458.2	603.4	718.8	887.8	1,015.6	1,070.6	1,120.7	1,186.3
TYPE OF VEHICLE									
Passenger vehicles.....	252.3	367.7	492.0	592.4	716.4	819.0	863.9	906.0	959.3
Rural.....	122.0	183.2	265.7	305.5	336.0	378.1	395.6	409.3	431.8
Urban.....	130.3	184.5	226.4	286.9	380.4	440.9	468.3	496.8	527.4
Passenger cars ¹	249.6	363.6	487.5	588.1	711.6	814.0	858.9	901.0	954.2
Rural.....	120.5	181.1	263.1	308.3	333.4	375.3	392.8	406.4	428.9
Urban.....	129.1	182.5	224.5	284.8	378.2	438.7	466.0	494.5	525.2
Buses.....	2.7	4.1	4.5	4.4	4.8	5.0	5.0	5.0	6.1
Rural.....	1.4	2.1	2.6	2.3	2.6	2.7	2.8	2.8	2.9
Urban.....	1.2	2.0	1.9	2.1	2.2	2.2	2.3	2.2	2.2
Trucks and combinations.....	49.9	90.6	111.4	126.4	171.4	196.7	206.7	214.7	227.0
Rural.....	30.2	56.8	70.5	81.7	102.8	124.3	130.4	134.1	141.5
Urban.....	19.7	33.8	40.9	44.7	68.6	72.4	76.3	80.6	85.5
AVERAGE MILES PER VEHICLE									
Passenger vehicles.....	9,129	9,078	9,400	9,474	9,310	9,507	9,650	9,798	9,988
Passenger cars ¹	9,080	9,020	9,359	9,446	9,286	9,488	9,633	9,783	9,926
Buses.....	18,580	20,910	17,658	16,004	15,215	14,122	13,826	13,306	12,819
Trucks and combinations.....	10,626	10,776	10,697	10,583	11,587	11,571	11,565	11,450	11,465

¹ Includes taxicabs and motorcycles.

Source: U.S. Federal Highway Administration, *Highway Statistics*, annual.

No. 899. MOTOR VEHICLES—SUMMARY STATISTICS: 1950 TO 1972

[Excludes Alaska and Hawaii, except as noted]

ITEM	1950	1955	1960	1965	1969	1970	1971	1972
SALES, EXPORTS, IMPORTS, AND SCRAPPAGE ¹								
Passenger car factory sales.....1,000..	6,666	7,920	6,675	9,306	8,224	6,457	8,585	8,824
4-door sedans.....1,000..	3,247	3,044	2,697	2,744	1,811	1,486	1,763	1,894
2-door sedans, coaches and coupes ²1,000..	2,794	1,691	1,094	793	603	709	1,144	1,180
2-door and 4-door "hard-tops".....1,000..	267	2,169	1,517	4,251	4,782	3,596	4,602	4,633
Convertibles (except "hard-top").....1,000..	208	240	305	509	202	92	88	62
Station wagons ³1,000..	142	759	1,059	1,001	821	662	984	1,152
Chassis.....1,000..	9	18	3	7	4	2	4	4
Truck and bus factory sales.....1,000..	1,337	1,249	1,194	1,782	1,923	1,692	2,053	2,447
Passenger cars (new), exported ⁴1,000..	153	254	145	205	417	359	463	471
Passenger cars (new), imported.....1,000..	21	57	444	559	1,847	2,013	2,587	2,486
Exports.....mil. dol.	794	1,367	1,411	2,198	4,069	3,871	4,590	5,296
Passenger cars (new).....mil. dol.	179	380	235	393	1,011	822	1,170	1,303
Trucks and buses (new).....mil. dol.	217	340	382	328	568	636	649	714
Rubber tires and tubes.....mil. dol.	47	82	77	55	53	40	41	52
Parts and access. (incl. used veh.)mil. dol.	350	565	717	1,421	2,487	2,373	2,730	3,227
Imports of new passenger cars.....mil. dol.	21	69	513	640	3,355	3,719	5,134	5,704
Vehicles scrapped ⁵ & ⁶1,000..	3,234	4,392	4,783	7,070	6,841	7,771	(NA)	(NA)
Passenger cars ⁶ & ⁶1,000..	2,598	3,773	4,200	6,163	5,894	6,704	(NA)	(NA)
Trucks and buses ⁶ & ⁶1,000..	636	619	583	907	947	1,067	(NA)	(NA)
PARTS AND CHEMICAL SHIPMENTS								
Tires, passenger car, ⁷ total.....mil.	84.4	93.7	105.7	148.5	177.1	168.6	185.5	195.0
Original equipment.....mil.	36.7	42.6	36.3	51.4	46.2	37.5	48.7	51.3
Replacement.....mil.	47.1	50.2	68.5	94.0	120.1	120.6	135.3	141.7
Export.....mil.	0.6	1.0	0.9	2.2	1.9	1.5	1.6	1.9
Tires, truck and bus, ⁷ total.....mil.	15.2	14.8	13.9	20.4	27.4	25.7	29.1	33.0
Original equipment.....mil.	4.7	4.8	3.9	6.9	9.5	8.6	10.3	12.6
Replacement.....mil.	9.7	9.1	9.2	12.8	17.3	16.7	18.4	20.1
Export.....mil.	0.8	0.9	0.8	0.7	0.6	0.4	0.4	0.4
Replacement automobile batteries ⁸mil.	24.4	25.8	26.3	29.5	35.5	37.9	39.1	43.1
Sealed-beam lamps ¹⁰mil.	35.8	44.9	67.4	85.6	83.0	76.2	82.7	92.4
Other automotive lamps ¹⁰mil.	251.2	331.4	323.4	522.6	617.4	525.9	574.1	681.0
Antifreeze ¹¹mil. gal. ¹²	(NA)	110.0	120.9	143.1	164.2	178.1	192.6	(NA)
Heavy-duty brake fluid ¹¹mil. gal. ¹²	(NA)	5.7	9.4	8.0	9.9	10.6	10.7	(NA)
SPECIAL MOTOR-VEHICLE TAXES ⁶ & ¹³								
Federal excise ¹⁴bil. dol.	1.5	2.7	4.4	5.7	6.7	6.8	7.1	5.1
State motor veh. carrier receipts ¹⁵bil. dol.	.9	1.5	1.9	2.5	3.5	3.8	4.1	4.3
State motor fuel, net ¹⁵bil. dol.	1.7	2.5	3.4	4.5	6.0	6.5	6.9	7.5
MOTOR VEHICLE REGISTRATION ¹⁴								
World.....mil.	70.4	95.9	126.9	178.0	231.5	248.9	(NA)	(NA)
United States ¹⁵mil.	49.2	62.7	73.9	90.4	105.4	108.4	113.0	117.6
Other North and Central America.....mil.	3.2	4.9	6.8	8.2	10.8	11.3	(NA)	(NA)
South America.....mil.	1.3	1.8	3.0	5.1	7.1	8.1	(NA)	(NA)
Europe.....mil.	12.5	19.6	33.8	56.5	77.3	86.8	(NA)	(NA)
Asia.....mil.	1.2	1.8	2.5	3.4	4.3	4.5	(NA)	(NA)
Africa.....mil.	1.2	2.2	3.6	9.7	20.6	24.8	(NA)	(NA)
Oceania.....mil.	1.8	2.8	3.5	4.7	5.8	5.0	(NA)	(NA)

NA Not available.

¹ Source: Exports and imports from U.S. Dept. of Commerce. ² Includes business coupes.³ Excludes station wagons on commercial vehicle chassis. ⁴ Includes export factory sales. ⁵ Estimated.⁶ Includes Alaska and Hawaii. ⁷ Source: The Rubber Manufacturers Association, Inc., New York, N.Y. Beginning 1965, figures for "Tires, passenger car" include motorcycle tires. ⁸ Source: Battery Council International, Burlingame, Calif. ⁹ Preliminary. ¹⁰ Source: U.S. Bureau of the Census.¹¹ Source: Chemical Specialties Manufacturers Association, Inc., New York, N.Y.¹² Figures represent fluid compounded rather than sold.¹³ Special taxes on motor-vehicle users. Excludes income and property taxes on motor vehicle, body, parts and tire factories; garages; dealers; repair shops; terminal and truck, including taxicab and bus, operating companies.¹⁴ Source: U.S. Dept. of the Treasury and U.S. Dept. of Transportation. Includes amounts collected on use of vehicles over 28,000 pounds as follows, in millions of dollars: 1960, 45; 1965, 103; 1969, 134; 1970, 141; 1971, 152; and 1972, 163.¹⁵ Source: U.S. Dept. of Transportation.¹⁶ Includes cars, trucks, and buses. Source: Through 1968, U.S. Dept. of State and overseas sources; thereafter, U.S. Bureau of Domestic Commerce, *World Motor Vehicles Production & Registration, 1970-72*.Source: Motor Vehicle Manufacturers Association of the United States, Inc., Detroit, Mich., *Automobile Facts and Figures*. Includes data compiled from sources cited in footnotes.

No. 900. MOTOR VEHICLES—FACTORY SALES AND REGISTRATIONS: 1910 TO 1972

[Prior to 1960, registrations exclude Alaska and Hawaii, except as noted. See also *Historical Statistics, Colonial Times to 1957*, series Q 310-317]

YEAR	FACTORY SALES ¹						REGISTRATIONS ⁵ (1,000)				
	Number (1,000)			Wholesale value ³			Total cars, trucks, buses	Passenger cars and taxis ⁶	Trucks and buses ⁷	Motor-cycles	
	Total cars, trucks, buses	Pas-senger cars	Trucks and buses ²	Passenger cars		Trucks and buses ²					
				Total (mil. dol.)	Average ⁴	Total (mil. dol.)					Average ⁴
1910.....	187	181	6	215	\$1,188	10	\$1,667	7,470	458	10	-
1920.....	2,227	1,906	322	1,809	949	423	1,314	7,925	8,131	1,108	239
1930.....	3,363	2,787	575	1,644	590	391	680	7,28,794	23,035	3,715	108
1940.....	4,472	3,717	755	2,371	638	568	752	7,32,525	27,466	4,987	136
1950.....	8,003	6,666	1,337	8,468	1,270	1,708	1,277	7,49,300	40,339	8,823	454
1960.....	7,869	6,675	1,194	12,164	1,822	2,351	1,969	73,869	61,682	12,187	570
1965.....	11,057	9,306	1,752	18,380	1,975	3,734	2,131	90,341	75,241	15,100	1,382
1967.....	8,976	7,437	1,539	15,653	2,105	3,592	2,334	96,887	80,838	16,499	1,953
1968.....	10,718	8,822	1,896	19,352	2,194	4,670	2,463	100,876	83,596	17,280	2,089
1969.....	10,147	8,224	1,923	18,751	2,280	4,937	2,507	105,076	86,865	18,221	2,316
1970.....	8,239	6,847	1,392	14,630	2,235	4,820	2,848	108,375	89,280	19,145	2,824
1971.....	10,638	8,585	2,053	21,410	2,494	5,964	2,905	112,999	92,799	20,200	3,345
1972.....	11,271	8,824	2,447	22,896	2,595	7,400	3,024	117,606	96,397	21,209	3,787

- Represents zero. ¹ Beginning 1965, excludes tactical vehicles. ² A substantial part of the trucks and buses reported comprises chassis without body; hence, excludes the value of bodies for these chassis. ³ Beginning 1940, includes value of standard equipment. ⁴ Averages do not indicate price changes since total values may reflect changes in number of makes, models, and/or body types from year to year. ⁵ Includes publicly owned vehicles. Excludes vehicles owned by military services. ⁶ Prior to 1930, buses included with passenger cars. ⁷ Total includes, components exclude, Hawaii. ⁸ Estimate.

Source: Factory sales—Motor Vehicle Manufacturers Association of the United States, Inc., Detroit, Mich., *Automobile Facts and Figures*, annual; registrations—U.S. Federal Highway Administration, *Highway Statistics*, annual.

No. 901. MOTOR VEHICLES—ESTABLISHMENTS, SALES, PAYROLL, AND EMPLOYMENT FOR SELECTED KINDS OF BUSINESS: 1963 AND 1967

KIND OF BUSINESS	ESTABLISHMENTS ¹ (1,000)		SALES OR RECEIPTS ² (mil. dol.)		ANNUAL PAYROLL ³ (mil. dol.)		PAID EMPLOYEES ⁴ (1,000)	
	1963	1967	1963	1967	1963	1967	1963	1967
	RETAIL TRADE							
Automotive dealers.....	98.5	105.5	45,376	55,631	4,111	5,257	794.2	906.6
Motor vehicle dealers—new and used cars... Motor vehicle dealers—used cars only..... Tire, battery, and accessory dealers..... Misc. automotive dealers.....	33.3 28.0 25.9 11.3	62.0 14.3	{ 37,375 3,087 3,336 1,579	{ 48,636 4,236 2,760	{ 3,326 184 474 127	{ 4,232 185 604 236	{ 612.1 44.3 110.5 27.2	{ 696.3 38.6 129.6 42.2
Gasoline service stations.....	211.5	216.1	17,760	22,709	1,510	1,898	519.8	575.2
WHOLESALE TRADE								
Motor vehicles and auto equipment..	29.4	31.2	36,789	46,122	1,671	2,127	295.7	341.1
Automobiles and other motor vehicles..... Automotive equipment..... Tires and tubes.....	4.6 22.7 2.2	4.8 23.3 3.1	25,958 8,644 2,187	31,330 11,614 3,178	507 1,019 146	641 1,261 225	79.9 191.2 24.6	91.9 214.1 35.1
SERVICES								
Auto repairs, services, and garages..	139.6	139.2	5,444	7,028	1,135	1,468	288.0	316.2
Automobile repair shops..... Automobile parking..... Car, truck rental and leasing; other serv.....	114.5 11.3 13.9	109.9 10.6 18.7	3,588 416 1,440	4,086 484 2,489	778 114 242	943 129 396	184.4 34.9 68.7	187.9 33.5 95.0
MANUFACTURING								
Motor vehicles and equipment.....	2.8	2.7	12,781	13,666	5,194	5,930	693.8	739.4
Motor vehicles..... Motor vehicle parts and accessories..... Truck and bus bodies..... Truck trailers.....	2.0 0.6 0.2	{ 0.2 1.7 0.6 0.2	{ 12,346 230 206	{ 7,354 5,712 332 269	{ 4,947 133 113 147	{ 2,700 2,891 192 147	{ 649.9 24.5 19.4	{ 321.2 364.9 30.4 22.9

¹ As of Dec. 31; represents all establishments, except for wholesale trade and manufacturing, which represent only establishments employing one or more workers at any time during the year.

² For manufacturing, data represent value added in manufacture. ³ Comprises salaries, wages, commissions, bonuses, vacation pay, and other remuneration. ⁴ Workweek ended nearest Nov. 15, 1963, and week including Mar. 12, 1967, except quarterly average for manufacturing.

⁵ Data corrected only at level significantly affected; therefore, breakdown will not add to total.

Source: U.S. Bureau of the Census, *Census of Business: 1967*, vols. II, VI, and VIII; and *Census of Manufactures: 1967*, vol. I.

No. 902. MOTOR-VEHICLE REGISTRATIONS, 1950 TO 1972, AND DRIVERS LICENSES, 1971, BY STATES

(In thousands, except as indicated. Motor-vehicle registrations include publicly, privately, and commercially owned vehicles; for uniformity, figures have been adjusted to a calendar-year basis as registration years in States differ; figures represent net numbers where possible, excluding re-registrations and nonresident registrations)

STATE	AUTOMOBILES, TRUCKS, AND BUSES							Motor-cycles (incl. official), ¹ 1972	DRIVERS LICENSES, 1971		
	1950	1960	1965	1970	1972		Total ²		Percent		
					Total	Private and commercial			Male drivers	Drivers under 25 years	
						Auto-mobiles (incl. taxicabs)					Trucks and buses
U.S. ³	49,300	73,869	90,341	108,375	118,618	96,949	20,455	3,345	114,397	56.2	22.0
Ala.....	686	1,282	1,063	1,966	2,227	1,747	456	52	1,801	56.8	21.4
Alaska.....	(NA)	81	109	139	149	101	43	10	147	53.7	25.6
Ariz.....	271	624	825	1,093	1,302	972	315	43	1,173	55.8	24.8
Ark.....	477	708	914	1,043	1,070	732	326	24	1,051	56.8	21.0
Calif.....	4,620	7,799	9,989	11,901	12,852	10,560	2,170	615	12,130	55.0	20.9
Colo.....	564	924	1,158	1,442	1,680	1,271	388	57	1,475	59.4	27.0
Conn.....	716	1,107	1,415	1,733	1,860	1,695	150	43	1,760	53.2	21.1
Del.....	108	192	244	312	323	270	51	6	340	54.1	21.4
D.C.....	195	206	236	257	260	239	16	4	345	62.3	16.1
Fla.....	985	2,367	3,037	4,120	4,836	4,132	656	122	4,084	54.3	18.6
Ga.....	898	1,512	1,990	2,584	2,959	2,372	557	66	2,731	56.8	21.4
Hawaii.....	138	231	310	405	447	392	51	10	524	59.7	23.2
Idaho.....	272	375	434	474	550	382	156	32	501	57.7	26.0
Ill.....	2,651	3,776	4,437	5,238	5,644	4,904	702	135	5,903	56.3	22.5
Ind.....	1,435	2,046	2,427	2,818	2,909	2,307	584	89	2,804	54.1	23.9
Iowa.....	1,072	1,325	1,549	1,790	1,917	1,450	440	79	1,689	53.9	26.1
Kans.....	853	1,163	1,369	1,548	1,692	1,220	452	75	1,496	53.2	24.1
Ky.....	784	1,198	1,500	1,763	1,968	1,516	432	30	1,626	58.8	21.6
La.....	707	1,177	1,442	1,742	1,942	1,518	410	34	1,813	56.8	21.7
Maine.....	276	374	424	510	565	451	100	13	540	55.6	21.1
Md.....	635	1,155	1,481	1,872	2,130	1,832	283	35	2,073	55.1	21.9
Mass.....	1,280	1,803	2,104	2,575	2,822	2,543	255	53	3,060	54.0	21.7
Mich.....	2,433	3,306	3,991	4,569	5,011	4,265	698	104	5,213	54.7	24.3
Minn.....	1,169	1,592	1,890	2,207	2,368	1,872	472	89	2,368	57.1	23.4
Miss.....	484	723	921	1,117	1,249	920	312	20	1,300	58.5	22.3
Mo.....	1,261	1,720	2,085	2,408	2,618	2,027	572	68	2,719	55.7	23.2
Mont.....	265	373	420	485	584	375	201	30	421	55.6	22.3
Nebr.....	569	734	849	974	1,081	778	291	38	1,033	53.7	25.3
Nev.....	77	175	266	355	399	298	93	19	354	55.4	20.7
N.H.....	172	267	314	362	436	368	63	13	441	55.3	21.1
N.J.....	1,579	2,401	2,980	3,586	3,859	3,463	346	57	4,074	55.7	20.0
N. Mex.....	238	426	525	637	711	500	201	27	600	55.8	25.1
N.Y.....	3,735	5,067	5,939	6,718	7,119	6,359	689	78	8,278	55.1	18.9
N.C.....	1,056	1,720	2,156	2,826	3,220	2,530	626	60	2,835	55.1	25.4
N. Dak.....	276	345	396	423	464	290	167	13	341	60.5	19.7
Ohio.....	2,795	4,087	4,985	5,974	6,224	5,487	694	152	5,948	53.8	23.7
Okla.....	831	1,184	1,438	1,713	1,887	1,326	537	71	1,657	59.1	16.3
Oreg.....	689	919	1,119	1,369	1,496	1,227	250	70	1,360	59.1	21.6
Pa.....	3,010	4,287	4,968	5,818	6,311	5,460	822	147	6,312	58.6	21.6
R.I.....	251	341	406	488	536	475	58	13	527	55.0	21.1
S.C.....	579	879	1,094	1,360	1,497	1,203	275	19	1,460	57.5	19.3
S. Dak.....	290	354	393	426	463	312	141	14	419	55.1	26.3
Tenn.....	853	1,307	1,655	2,030	2,294	1,819	449	58	2,088	55.2	23.2
Tex.....	2,908	4,457	5,010	6,093	7,316	5,563	1,673	186	6,595	55.0	23.5
Utah.....	247	417	525	664	741	538	192	38	572	60.0	20.8
Vt.....	121	152	175	229	261	216	43	9	268	55.2	21.0
Va.....	913	1,426	1,800	2,263	2,603	2,167	409	41	2,463	57.0	22.6
Wash.....	924	1,377	1,659	2,102	2,242	1,702	507	75	1,966	54.7	23.1
W. Va.....	482	601	696	801	874	669	195	47	982	59.2	24.3
Wis.....	1,201	1,600	1,839	2,181	2,379	1,971	381	60	2,466	56.0	23.0
Wyo.....	145	207	225	247	274	174	95	12	232	57.8	25.5

NA Not available.

¹ Excludes vehicles owned by military services.

² Estimated from data reported by States for current and previous years; allowance has been made for deaths, emigration, or revocation by some States.

³ Incomplete data for some States.

Source: U.S. Federal Highway Administration, *Highway Statistics*, annual; *Drivers Licenses*, annual; and unpublished data.

Automobiles

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No. 903. NEW PASSENGER CAR PRODUCTION AND IMPORTS: 1963 TO 1972

ITEM	1963	1965	1966	1967	1968	1969	1970	1971	1972
Value of production:									
Gross auto product ¹ bil. dol.	25.1	31.8	30.0	28.9	36.3	36.6	30.7	40.9	43.1
Gross national product ² bil. dol.	590.5	684.9	749.9	793.9	884.2	930.3	976.4	1,050.4	1,151.8
Gross auto product as percent of GNP.....	4.3	4.6	4.0	3.6	4.2	3.9	3.1	3.9	3.7
Production and imports:									
Total..... 1,000 units.....	8,053	9,894	9,518	8,434	10,469	10,071	8,563	11,371	11,314
Domestic production..... 1,000 units.....	7,644	9,335	8,605	7,413	8,849	8,224	6,550	8,584	8,828
Imports..... 1,000 units.....	409	559	913	1,021	1,620	1,847	2,013	2,587	2,486
Percent of total.....	5.1	5.6	9.6	12.1	16.5	18.3	23.5	23.2	22.0

¹ Value of domestically produced cars plus net value added by distribution of new, used, and imported cars. ² For definition, see text, p. 317.

Source: U.S. Bureau of the Census and U.S. Bureau of Economic Analysis, unpublished data.

No. 904. AUTOMOBILES—FACTORY INSTALLED EQUIPMENT: 1960 TO 1972

[Refers to model-year production. For certain items, such as air conditioning, a significant number of units are installed on new vehicles after they leave the factory]

EQUIPMENT	UNITS INSTALLED (1,000)					PERCENT OF CARS PRODUCED				
	1960	1965	1970	1971	1972	1960	1965	1970	1971	1972
Automatic transmission.....	4,306	7,134	7,213	6,675	8,222	71.6	80.7	91.0	90.2	91.9
Manual transmission.....	1,706	1,709	709	728	725	28.4	19.3	8.9	9.8	8.1
V-8 engine.....	3,409	6,492	6,674	5,989	7,146	56.7	73.4	84.2	78.8	79.9
6-cylinder engine.....	2,603	2,350	1,247	1,006	952	43.3	26.6	15.7	13.2	10.7
Power brakes.....	1,948	2,856	4,437	4,485	6,025	32.4	32.3	56.0	59.3	67.4
Power steering.....	2,357	5,270	6,433	6,026	7,541	39.2	59.6	81.2	79.7	84.3
Power windows ¹	376	1,261	1,319	1,097	2,058	6.3	14.3	16.7	14.5	23.0
Air conditioning.....	414	2,061	4,825	4,612	6,138	6.9	23.3	60.9	61.0	68.6
Tinted glass ²	1,668	4,572	5,507	5,246	6,695	27.7	51.7	69.6	69.4	74.8

¹ Includes power operated station wagon rear windows. ² Covers windshield and other glass.

Source: Chilton Company, Radnor, Pa. *Annual Statistical Issue, Automotive Industries*. (Copyright.)

No. 905. AUTOMOBILE OWNERSHIP, AGE, AND FINANCING: 1950 TO 1971

[Excludes Alaska and Hawaii. For definition of family unit, see headnote, table 661]

ITEM	1950	1955	1960	1965	1968	1969	1970	1971
Total number of families in U.S. ¹ millions.....	45.2	49.1	53.4	58.4	61.2	62.1	63.7	65.1
Families owning automobiles..... percent.....								
Owning 1 automobile.....	59	70	77	79	79	79	82	83
Owning 2 or more automobiles.....	41	30	23	21	21	21	18	17
Automobiles owned, by age:²								
Less than 2 years old..... percent.....	17	12	14	16	14	15	16	11
2 and 3 years old..... percent.....	19	22	20	21	24	22	21	25
4-7 years old..... percent.....	6	43	41	33	36	41	42	40
8 years old and over..... percent.....	58	23	25	30	26	22	21	24
Total automobiles purchased³..... millions.....								
New cars.....	13.6	14.1	18.3	19.2	20.5	19.8	18.3	18.3
Average price paid..... dollars.....	4.4	5.2	7.2	6.9	7.5	8.3	8.3	5.9
Used cars.....	(NA)	2,730	3,140	3,140	3,290	3,510	3,690	3,690
Average price paid, gross..... dollars.....	9.2	9.1	11.1	12.3	13.0	11.5	11.5	12.4
Method of financing purchases:								
All passenger cars ⁴ percent.....	100	100	100	100	100	100	100	100
Full cash (including trade-in allowance)..... percent.....	47	38	38	48	42	47	47	50
Installment credit and other borrowing..... percent.....	52	60	62	52	58	53	53	50
New passenger-car buyers ⁵ percent.....	100	100	100	100	100	100	100	100
Full cash (including trade-in allowance)..... percent.....	54	39	33	40	31	34	34	43
Installment credit and other borrowing..... percent.....	46	60	67	60	69	66	66	57
Used passenger cars ⁶ percent.....	100	100	100	100	100	100	100	100
Full cash (including trade-in allowance)..... percent.....	41	37	41	53	50	51	52	50
Installment credit and other borrowing..... percent.....	57	60	59	47	50	49	48	50

NA Not available. ¹ At time of survey, early in year indicated.

² Age is determined by subtracting model year from year of survey. ³ Covers family units buying cars during preceding calendar year and still owning them at time of survey (January-February of year indicated).

⁴ Data may be unreliable due to an unusually small sample.

⁵ Refers to purchases during preceding year. Includes cars received as gifts, whether cash or credit purchased. Buyers for whom method of financing was not ascertained are excluded from the detail on purchases.

Source: The University of Michigan, Survey Research Center, Ann Arbor, Mich., *Survey of Consumer Finances*.

No. 906. HOUSEHOLD EXPENDITURES ON NEW AND USED CARS: 1968 TO 1973

(Seasonally adjusted. Annual figures are averages of quarterly rates, except purchases per 100 households. Expenditures and prices are net of trade-in allowances and State and Federal taxes. Based on sample)

YEAR AND QUARTER	PURCHASES PER 100 HOUSEHOLDS		EXPENDITURES, ANNUAL RATE (bil. dol.)			AVERAGE PRICE (dollars)	
	New cars	Used cars	Total	New cars	Used cars	New car	Used car
1968.....	13.2	22.2	35.1	23.2	11.9	2,912	888
1969.....	13.0	20.8	36.4	24.4	12.0	3,031	941
1970.....	11.1	19.6	33.3	21.3	12.0	3,018	959
1971.....	12.4	22.4	41.7	26.0	14.8	3,308	1,021
1972.....	12.8	22.5	44.8	28.8	16.0	3,380	1,066
1973, Jan.-Mar.....	13.9	24.9	52.6	32.4	20.2	3,426	1,190

Source: U.S. Bureau of the Census, *Current Population Reports*, series P-65, Nos. 39, 45, and 46.

No. 907. ESTIMATED COST OF OPERATING AN AUTOMOBILE: 1960, 1970, AND 1971

(1971 estimates based on a 4-door sedan, costing \$4,379, with an assumed life-span of 10 years, 100,000 miles. Similar specifications used in 1960 and 1970)

ITEM	10 YEAR TOTAL COSTS			CENTS PER MILE COST, 1971 (January)					
	1960 (Oct.)	1970 (Jan.)	1971 (Jan.)	10-year average	1st year (14,500 miles)	3d year (11,500 miles)	5th year (9,900 miles)	7th year (9,500 miles)	10th year (5,700 miles)
Total.....	\$9,761	\$11,890	\$13,553	13.55	16.04	14.39	13.62	13.18	10.43
Costs excluding taxes.....	8,595	10,537	12,234	12.23	13.79	13.30	12.47	12.01	9.04
Depreciation.....	2,542	3,185	4,379	4.38	8.46	5.87	3.80	1.99	.84
Repairs and maintenance ¹	1,722	1,521	2,147	2.15	.56	2.11	2.78	4.19	.51
Replacement tires and tubes ²	181	385	400	.40	.12	.21	.44	.53	.74
Accessories ³	140	28	52	1.00	.02	.02	.03	.09	.10
Gasoline ⁴	1,453	1,733	1,978	1.98	1.98	1.98	1.98	1.98	1.98
Oil ⁵	187	158	119	.12	.08	.10	.13	.14	.12
Insurance ⁶	1,290	1,722	1,350	1.35	1.13	1.36	1.49	1.22	2.04
Garaging, parking, tolls, etc. ⁷	1,030	1,805	1,809	1.81	1.44	1.65	1.82	1.87	2.71
Taxes and fees ⁷	1,166	1,353	1,319	1.32	2.25	1.09	1.15	1.17	1.39

¹ For 1971, includes lubrications, repacking wheel bearings, flushing cooling system, and aiming headlamps; replacement of minor parts such as spark plugs, fan belts, radiator hoses, distributor cap, fuel filter, and pollution control filters; minor repairs such as brake jobs, water pump, carburetor overhaul and universal joints; and major repairs such as a complete "valve job."

² For 1971, covers 7 new regular tires and 4 new snow tires during life of car.

³ For 1971, includes a set of vinyl floor mats and seat covers. ⁴ For 1971, gasoline use set at 13.6 miles per gallon; associated oil use at 1 gallon oil to 186 gallons gas.

⁵ For 1971, includes \$50,000 combined public liability (\$15,000/\$30,000 bodily injury, and \$5,000 property damage), \$1,000 medical payments, uninsured motorist coverage, and full comprehensive coverage for the 10-year period; \$100 deductible collision insurance was assumed for the first 5 years.

⁶ For 1971, includes monthly charges of \$10 for garage rental or cost of owner's garaging facility, parking fee average of \$54 per year, and toll average of \$6.94 per year. ⁷ For 1971, includes Federal excise taxes on tires of 10 cents per pound, lubricating oil of 6 cents per gallon, and gasoline of 4 cents per gallon; plus the Maryland tax on gasoline of 7 cents per gallon, titling tax of 4 percent of retail price, and registration fee of \$20.00 for 3,700 pounds or less shipping weight, or \$30.00 for vehicles over 3,700 pounds.

Source: U.S. Federal Highway Administration, *Cost of Operating an Automobile*.

No. 908. CARS AND TRUCKS IN USE, BY AGE: 1955 TO 1972

[As of July 1. Prior to 1960, excludes Alaska and Hawaii. Excludes vehicles for which age was not known]

AGE	1955		1960		1965		1970		1972	
	Number (1,000)	Per cent								
Total cars.....	47,123	100.0	56,935	100.0	68,935	100.0	80,427	100.0	86,412	100.0
Under 3 years.....	14,448	30.7	14,186	24.9	21,578	31.3	24,403	30.3	24,934	28.9
3-5 years.....	15,164	32.2	18,346	32.2	18,013	26.1	24,923	31.0	25,216	29.2
6-8 years.....	10,146	21.5	12,380	21.7	13,571	19.7	18,441	22.9	21,434	24.8
9-11 years.....	7,365	15.6	9,189	16.2	9,862	14.3	7,735	9.6	9,880	11.4
12 years and over.....			2,825	5.0	5,911	8.6	4,925	6.1	4,947	5.7
Total trucks.....	9,111	100.0	10,771	100.0	13,106	100.0	17,672	100.0	19,748	100.0
Under 3 years.....	2,039	22.4	2,046	19.0	3,222	24.6	4,680	26.5	5,164	26.1
3-5 years.....	2,767	30.4	2,418	22.4	2,476	18.9	4,250	24.1	4,693	23.8
6-8 years.....	2,319	25.5	2,077	19.3	1,950	14.9	2,955	16.7	3,735	18.9
9-11 years.....	702	7.7	2,332	21.7	1,844	14.1	1,862	10.5	2,124	10.8
12 years and over.....	1,285	14.1	1,898	17.6	3,614	27.6	3,925	22.2	4,027	20.4

Source: R. L. Polk & Co., Detroit, Mich. Further reproduction prohibited without Polk permission.

No. 909. MOTOR FUEL CONSUMPTION, BY USE: 1950 TO 1971

[In millions of gallons, except averages. Prior to 1960, excludes Alaska and Hawaii. Comprises all fuels under State motor fuel laws. Excludes exports and Federal purchases for military use. See *Historical Statistics, Colonial Times to 1957*, series Q 318-320, for highway and nonhighway usage]

ITEM	1950	1955	1960	1965	1968	1969	1970	1971
Total consumption ¹	40,280	53,116	63,714	71,104	82,938	88,122	92,328	97,547
Passenger vehicles.....	25,037	34,319	41,996	51,169	59,456	63,395	66,728	70,461
Passenger cars ²	24,305	33,548	41,169	50,275	58,524	62,448	65,784	69,514
Buses ³	732	771	827	894	932	947	944	947
Trucks and combinations.....	10,566	13,308	15,882	19,935	23,482	24,727	25,600	27,086
Average gallons consumed per vehicle.....	728	759	777	775	804	821	880	838
Passenger cars ²	603	644	661	656	682	700	722	723
Buses ³	3,752	3,021	3,040	2,844	2,640	2,600	2,491	2,382
Trucks and combinations.....	1,257	1,278	1,330	1,347	1,382	1,384	1,365	1,368
Average mileage per gallon, per vehicle.....	12.87	12.67	12.42	12.49	12.25	12.15	12.14	12.16
Passenger cars ²	14.95	14.53	14.28	14.15	13.91	13.75	13.58	13.73
Buses ³	5.57	5.85	5.26	5.35	5.33	5.32	5.34	5.38
Trucks and combinations.....	8.57	8.37	7.96	8.60	8.37	8.36	8.39	8.38

¹ Through 1960, includes nonhighway usage and losses allowed for evaporation, handling, etc.; thereafter, highway usage only. ² Includes taxicabs and motorcycles. ³ Includes school buses.

Source: U.S. Federal Highway Administration, *Highway Statistics*, annual.

No. 910. SPEED OF MOTOR VEHICLES: 1950 TO 1971

[Excludes Alaska and Hawaii. Based on actual speed of each vehicle recorded on tangent sections of main rural highways during off-peak hours]

ITEM	1950	1955	1960	1965	1967	1968	1969	1970	1971
Number of vehicles recorded.....1,000.....	280	395	459	552	478	480	388	488	430
Average speed, all vehicles.....m.p.h.....	47.6	50.5	52.6	56.4	58.0	59.0	60.0	59.2	60.6
Passenger cars.....m.p.h.....	48.7	52.0	53.8	57.8	59.5	60.4	61.3	60.6	62.0
Trucks.....m.p.h.....	43.0	45.0	48.2	51.8	53.1	54.0	54.9	54.7	56.1
Buses.....m.p.h.....	49.8	52.3	55.5	57.4	59.4	60.5	59.4	58.8	60.2
Vehicles exceeding—									
40 m.p.h.....percent.....	77	87	92	95	96	97	98	97	98
45 m.p.h.....percent.....	58	72	80	88	91	92	93	93	95
50 m.p.h.....percent.....	37	50	58	73	79	81	82	83	86
55 m.p.h.....percent.....	20	29	37	50	64	66	67	68	71
60 m.p.h.....percent.....	8	14	16	34	44	45	46	47	50
65 m.p.h.....percent.....	(NA)	(NA)	(NA)	(NA)	24	26	27	27	30
70 m.p.h.....percent.....	(NA)	(NA)	(NA)	(NA)	12	12	13	12	14

NA Not available.

Source: U.S. Federal Highway Administration, *Traffic Speed Trends*, and unpublished data.

No. 911. AUTOMOBILE INSURANCE: 1950 TO 1972

[Money figures in millions of dollars. Prior to 1960, excludes Alaska and Hawaii. 1950, net basis; 1955, direct writing basis; 1960 and 1965, direct premiums earned and direct losses incurred; 1969, premiums written basis; 1970-1972, premiums earned basis]

ITEM	1950	1955	1960	1965	1969	1970	1971	1972
Total insurance:								
Premiums written.....	2,625	4,644	6,448	8,358	12,906	14,612	15,999	17,739
Losses paid ¹	1,069	2,122	3,645	5,221	7,715	11,198	11,920	12,237
Percent of premiums written.....	40.7	45.7	56.5	62.5	59.8	76.6	74.5	69.0
Automobile liability, bodily injury:								
Premiums written.....	931	1,735	2,841	3,948	5,892	6,723	² 10,528	² 11,394
Losses paid ¹	396	820	1,697	2,459	3,093	5,256	² 8,333	² 8,255
Percent of premiums written.....	42.5	47.3	59.7	62.3	52.5	78.2	² 79.2	² 72.5
Automobile liability, property damage:³								
Premiums written.....	482	896	1,219	1,587	2,544	2,836	(²)	(²)
Losses paid ¹	231	415	675	1,025	1,693	2,291	(²)	(²)
Percent of premiums written.....	47.9	46.3	55.4	65.4	66.5	80.8	(²)	(²)
Physical damage:⁴								
Premiums written.....	1,212	2,013	2,388	2,843	4,470	5,053	5,471	6,345
Losses paid ¹	442	887	1,273	1,737	2,929	3,651	3,587	3,982
Percent of premiums written.....	36.5	43.6	53.3	61.1	65.5	72.3	65.6	62.8

¹ Beginning 1970, includes adjusting expenses. ² Property damage included with bodily injury.

³ Covers real property against damage by autos. ⁴ Covers auto fire, theft, collision, and comprehensive.

Source: The Spectator, Philadelphia, Pa., 1950, *Insurance Yearbook: 1955 through 1965, Insurance by States; 1967-1969, Property Liability Insurance Review*, annual, (copyright). Beginning 1970, The National Underwriter Co., Cincinnati, Ohio, *Argus F.C. & S. Chart*, annual, (copyright).

No. 912. TRAFFIC ACCIDENTS, INJURIES, DEATHS, AND ECONOMIC LOSS: 1930 TO 1972

[Estimates based on official reports from a representative cross-section of States. Includes all motor vehicle accidents regardless of place of occurrence and all injuries regardless of length of disability]

ITEM	1930	1940	1950	1960	1965	1970	1971	1972
Accidents.....1,000.....	9,859	10,339	10,418	11,429	14,733	22,116	22,650	24,850
Injuries.....1,000.....	1,373	1,440	1,799	3,078	3,982	4,983	4,994	5,190
Deaths.....1,000.....	32.9	34.5	34.8	38.1	49.2	54.8	54.7	56.3
Economic loss ¹mil. dol.	1,830	1,920	3,720	7,600	11,158	16,207	16,879	19,036

¹ Wage loss, medical expense, insurance administrative costs, and property damage.

Source: Insurance Information Institute, New York, N.Y., *Traffic Accident Experience in the United States*, March 1973. Data on deaths from National Safety Council.

No. 913. AUTOMOBILE ACCIDENT VICTIMS—ECONOMIC LOSSES, BY TYPE: 1967

[In dollars, except as indicated. Excludes Alaska and Hawaii. Seriously injured persons defined as those meeting any of the following conditions: Hospitalized 2 weeks or more; \$500 or more in medical costs other than hospital; 1 working, missed 3 weeks of work; if not working, missed 6 weeks of normal activities. Based on a sample of police reported injuries and fatalities due to automobile accidents]

TYPE OF LOSS	PER SERIOUSLY INJURED PERSON				PER FAMILY WITH SERIOUSLY INJURED MEMBER OR FATALITY			
	Average total loss	Loss for those sustaining loss		Percent with loss	Average total loss	Loss for those sustaining loss		Percent with loss
		Average	Median ¹			Average	Median ¹	
Total	8,290	8,290	2,544	100.0	10,390	10,395	2,805	100.0
To date of interview.....	4,203	4,203	(NA)	100.0	4,233	4,235	(NA)	(NA)
Medical.....	1,604	1,610	892	99.6	1,592	1,654	918	94.4
Hospital.....	813	1,213	729	67.0	812	1,221	716	68.5
Other.....	790	798	492	99.0	760	803	494	93.4
Property Damage.....	535	873	710	61.2	574	967	782	59.4
Wage loss.....	1,951	2,838	948	68.8	1,839	2,854	950	64.4
Other losses.....	113	306	297	36.8	258	590	385	43.7
Expected future losses.....	4,087	(NA)	(NA)	(NA)	6,157	(NA)	(NA)	(NA)
Future earnings.....	4,011	40,006	25,507	10.0	6,088	48,157	35,879	12.6
Medical and other costs.....	76	1,098	677	6.9	69	1,105	683	6.2

NA Not available.

¹ For definition of median, see preface.

Source: U.S. Dept. of Transportation, *Economic Consequences of Automobile Accident Injuries*, vol. I, April 1970. (Automobile Insurance and Compensation Study.)

No. 914. MOTOR-VEHICLE ACCIDENTS—NUMBER AND DEATHS, BY TYPE OF ACCIDENT: 1950 TO 1972

ITEM	1950	1955	1960	1965	1968	1969	1970	1971	1972 (prel.)
Motor-vehicle accidents.....1,000.....	8,300	9,900	10,400	13,200	14,600	15,500	16,000	16,400	16,800
Accidents per 10,000 vehicles.....	1,688	1,577	1,397	1,439	1,416	1,443	1,435	1,413	1,400
Traffic deaths¹	34,763	38,426	38,137	49,163	54,862	56,000	54,800	54,700	56,300
Noncollision accidents.....	10,600	12,100	11,900	14,900	17,400	² 15,600	² 14,200	² 13,700	14,100
Collision accidents:									
With other motor vehicles.....	11,650	14,500	14,800	20,800	22,400	23,800	23,300	23,300	23,800
With pedestrians.....	9,000	8,200	7,850	8,900	9,900	9,900	10,400	10,600	10,900
With fixed objects.....	3,490	3,605	3,610	4,560	5,160	² 6,700	² 6,900	7,100	7,500
Traffic death rates:									
Per 100,000 population.....	23.0	23.4	21.2	25.4	27.5	27.7	26.9	26.5	27.0
Per 10,000 motor vehicles.....	7.1	6.1	5.1	5.4	5.3	5.2	4.9	4.8	4.7
Per 100 million vehicle miles.....	7.6	6.3	5.3	5.5	5.4	5.2	4.9	4.7	4.5

¹ Totals may not quite equal sum of various types because the estimates are generally made only to nearest 10 deaths, and to nearest 50 deaths for certain types. ² Not comparable with earlier years.

Source: National Safety Council, Chicago, Ill., *Accident Facts*, annual. (Copyright.)

No. 915. MOTOR-VEHICLE ACCIDENTS—PERSONS KILLED OR INJURED: 1960 TO 1972

[Estimates based on summaries of motor vehicle accidents prepared by various States]

ITEM	PERSONS KILLED					PERSONS INJURED ¹				
	1960	1965	1970	1971	1972	1960	1965	1970	1971	1972
Number of persons.....1,000..	38	49	55	54	56	3,078	4,100	5,100	4,700	4,850
Driver action.....1,000..	30	42	45	46	(NA)	2,600	3,682	4,513	4,136	(NA)
Pedestrian action.....1,000..	8	9	10	10	10	256	275	301	319	277
Percent distribution.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Driver action:										
Exceeding speed limit.....	36.1	41.1	39.3	36.1	(NA)	38.5	42.2	21.9	22.7	(NA)
On wrong side of road.....	17.0	16.4	13.8	14.1	(NA)	6.7	6.8	9.3	5.1	(NA)
Had not right-of-way.....	12.8	13.0	14.0	14.6	(NA)	22.5	18.9	15.7	19.9	(NA)
Drove off roadway.....	16.6	10.5	14.5	15.6	(NA)	8.3	6.9	11.2	10.9	(NA)
Reckless driving.....	12.5	14.9	14.3	12.6	(NA)	13.5	19.2	37.0	36.2	(NA)
Other ²	5.0	4.1	4.1	7.0	(NA)	10.5	6.0	4.9	5.2	(NA)
Pedestrian action:										
Crossing at intersection.....	29.2	20.8	22.4	21.1	20.0	32.7	26.2	31.4	31.2	29.7
Crossing between intersections.....	37.1	40.8	41.8	42.9	37.6	32.2	31.6	26.4	26.9	24.3
Children playing in street.....	5.3	3.3	3.1	2.2	3.0	6.6	6.3	5.5	5.1	5.3
At work in road.....	2.9	2.8	2.0	2.2	2.5	2.2	1.8	2.0	2.0	2.2
Coming from behind parked car.....	6.2	6.9	3.1	3.3	2.8	15.7	16.8	9.3	8.7	10.3
Walking on rural highway.....	10.0	15.6	14.3	14.3	18.9	2.4	7.6	12.1	8.8	10.2
Not on roadway.....	4.2	4.7	4.1	4.1	6.3	4.5	3.6	4.4	4.7	4.8
Other ³	5.1	5.1	9.2	9.9	8.9	3.7	6.1	8.9	12.6	13.2
Collision with—										
Automobile.....	39.5	41.2	40.6	39.6	40.2	74.9	72.5	73.2	72.7	71.4
Pedestrian.....	20.0	18.6	17.8	18.2	17.8	8.3	6.7	5.9	6.8	5.7
Fixed object.....	10.7	10.5	10.1	9.9	11.8	4.8	5.1	5.7	5.8	7.7
Other ⁴	4.8	4.5	3.8	4.0	4.2	2.1	2.4	1.9	2.2	2.7
Noncollision.....	25.0	25.2	27.7	28.3	26.0	9.9	13.3	13.3	12.5	12.5
Weather condition:										
Clear.....	87.4	84.8	84.1	83.3	83.3	83.9	78.6	80.7	80.1	80.5
Fog.....	1.2	2.0	2.0	3.7	2.3	0.7	1.5	1.4	1.6	1.4
Rain.....	9.0	11.0	12.1	11.1	12.4	10.6	15.4	14.2	13.3	14.3
Snow.....	2.4	2.2	1.8	1.9	2.0	4.8	4.5	3.7	5.0	3.8
Road condition:										
Dry.....	79.2	77.4	78.8	75.9	77.0	71.5	69.1	71.7	68.0	70.2
Wet.....	15.1	17.9	17.2	18.5	18.3	16.5	22.4	20.4	22.2	21.2
Snowy or icy.....	5.7	4.7	4.0	5.6	4.7	12.0	8.5	7.9	9.8	8.6
Day of accident:										
Sunday.....	17.7	18.7	17.6	17.2	16.3	15.2	13.6	13.7	13.2	12.6
Monday.....	11.6	10.9	11.4	11.5	11.7	13.5	13.2	13.2	13.0	13.4
Tuesday.....	11.6	10.0	10.5	10.7	10.2	12.2	11.9	12.2	12.6	12.6
Wednesday.....	10.5	11.2	11.2	10.9	11.0	12.1	12.9	13.4	12.8	12.9
Thursday.....	11.2	11.9	12.2	12.6	12.0	13.5	13.9	13.2	13.9	13.9
Friday.....	16.0	16.4	16.3	16.5	17.1	16.0	16.5	16.6	17.1	17.6
Saturday.....	21.5	21.9	20.8	20.6	21.7	17.5	18.0	17.7	17.4	17.0
Hour of accident:										
Midnight-6 a.m.....	22.3	22.2	21.6	21.5	21.4	10.9	10.7	11.8	11.1	10.5
6 a.m.-noon.....	15.6	14.8	15.6	15.7	15.1	22.0	21.8	20.7	20.8	21.6
Noon-6 p.m.....	27.8	28.7	28.4	28.5	28.1	40.5	39.7	40.0	40.7	41.1
6 p.m.-midnight.....	34.3	34.3	34.4	34.3	35.4	26.6	27.8	27.5	27.4	26.8
Age of victims:										
Under 10 years.....	(NA)	7.6	(NA)	6.9	7.2	(NA)	8.9	(NA)	8.3	7.8
10-19 years.....	(NA)	15.9	(NA)	18.9	19.9	(NA)	21.4	(NA)	22.3	23.8
20-34 years.....	(NA)	28.4	(NA)	29.6	31.9	(NA)	31.6	(NA)	35.0	36.4
35-54 years.....	(NA)	24.3	(NA)	21.7	19.6	(NA)	25.7	(NA)	22.5	20.9
55 years and over.....	(NA)	23.8	(NA)	22.9	21.4	(NA)	12.4	(NA)	11.9	11.1

NA Not available.

¹ Includes persons injured attributable to action of both parties and those for whom action could not be determined.

² Cutting in; improper passing; no or improper signalling; movement of driverless car; miscellaneous.

³ Standing on safety isle; getting on or off other vehicle; riding or hitching on vehicle; miscellaneous.

⁴ Railroad train; bicycle; other vehicle; miscellaneous.

Source: The Travelers Insurance Companies, Hartford, Conn., *The Travelers Book of Street and Highway Accident Data*, annual.

NO. 916. DEATHS FROM MOTOR-VEHICLE ACCIDENTS—PLACE OF DEATH, BY STATES: 1950 TO 1969

STATE	1950	1955	1960	1965	1969	STATE	1950	1955	1960	1965	1969
U.S.-----	34,859	38,521	38,137	49,163	55,791	Mo.-----	902	1,079	1,078	1,387	1,556
Ala.-----	859	859	926	1,248	1,386	Mont.-----	209	244	231	289	338
Alaska-----	22	31	43	57	73	Nebr.-----	317	331	310	411	443
Ariz.-----	333	384	507	555	763	Nev.-----	122	186	182	215	246
Ark.-----	365	447	449	635	590	N.H.-----	103	110	103	148	191
Calif.-----	3,082	3,524	3,837	4,804	5,288	N.J.-----	715	815	764	1,104	1,243
Colo.-----	415	455	443	557	673	N.Mex.-----	340	383	427	517	566
Conn.-----	287	353	303	415	401	N.Y.-----	1,961	2,163	2,034	2,798	3,127
Del.-----	84	112	91	126	136	N.C.-----	1,163	1,222	1,281	1,723	1,841
D.C.-----	102	99	82	99	133	N.Dak.-----	105	153	166	176	201
Fla.-----	882	1,048	1,303	1,702	2,141	Ohio.-----	1,850	2,089	1,933	2,333	2,702
Ga.-----	928	1,122	1,079	1,403	1,835	Okla.-----	504	569	686	780	846
Hawaii.-----	74	64	111	110	148	Oreg.-----	461	434	469	717	729
Idaho.-----	243	184	231	262	321	Pa.-----	1,658	1,872	1,685	2,167	2,465
Ill.-----	1,953	1,877	1,564	2,197	2,516	R.I.-----	87	94	60	102	147
Ind.-----	1,136	1,189	1,164	1,550	1,705	S.C.-----	627	696	690	847	1,001
Iowa.-----	620	613	644	831	820	S.Dak.-----	193	200	241	282	297
Kansas.-----	546	613	535	684	769	Tenn.-----	801	968	899	1,285	1,500
Ky.-----	753	907	808	943	1,078	Tex.-----	2,499	2,602	2,316	3,067	3,584
La.-----	585	703	849	1,122	1,151	Utah.-----	199	211	269	314	324
Maine.-----	161	177	181	227	266	Vt.-----	69	87	104	136	137
Md.-----	480	500	527	710	779	Va.-----	929	909	782	1,072	1,305
Mass.-----	492	621	621	888	915	Wash.-----	534	514	597	768	863
Mich.-----	1,627	2,036	1,634	2,134	2,413	W.Va.-----	400	398	371	507	550
Minn.-----	558	613	750	897	1,018	Wis.-----	857	954	926	1,056	1,136
Miss.-----	525	562	669	723	914	Wyo.-----	149	145	182	184	231

Source: U.S. Public Health Service, *Vital Statistics of the United States*, annual.

NO. 917. CLASS I INTERCITY MOTOR CARRIERS OF PASSENGERS: 1950 TO 1971

[Carriers subject to ICC regulations. Prior to 1960, excludes Alaska and Hawaii. See text, p. 536, for class limits]

ITEM	1950	1955	1960	1965	1969	1970	1971
Carriers reporting ¹number.....	172	146	143	156	70	71	71
Operating revenue.....mil. dol.....	351	362	463	607	677	722	753
Passenger revenue ²mil. dol.....	325	315	382	467	496	524	553
Special bus revenue and other.....mil. dol.....	27	47	81	141	181	198	205
Expenses.....mil. dol.....	315	331	405	514	594	639	664
As percent of operating revenue.....	89.7	91.4	87.5	84.7	87.7	88.5	87.6
Net operating revenue.....mil. dol.....	36	31	58	90	83	83	94
Ordinary income before income taxes.....mil. dol.....	35	29	55	90	96	88	103
Net income after income taxes.....mil. dol.....	19	16	28	52	56	52	65
Passenger vehicles in service ³number.....	14,566	13,127	12,680	13,287	12,992	13,282	12,896
Owned end of year ⁴number.....	13,200	11,547	10,946	11,295	10,063	10,158	9,900
Intercity.....number.....	13,621	12,057	11,142	10,106	9,084	9,249	9,042
Vehicle-miles, passenger ²mil.....	959	859	843	947	869	871	856
Number of revenue passengers carried.....mil.....	390	293	268	219	178	174	167
Miles per vehicle, average ⁴	65.411	64.128	65.667	67.689	61.646	60.396	60,874
Average fare per passenger, per carrier (intercity).....	\$1.01	\$1.37	\$2.12	\$2.73	\$3.55	\$3.81	\$4.19
Passenger revenue per vehicle-mile, regular-route.....	\$0.35	\$0.38	\$0.49	\$0.56	\$0.65	\$0.69	\$0.74
Expense per vehicle-mile.....	\$0.33	\$0.33	\$0.48	\$0.54	\$0.68	\$0.73	\$0.78
Number of employees, average.....1,000.....	40	36	35	35	34	34	35
Compensation of employees.....mil. dol.....	139	159	196	250	293	317	334

NA Not available. ¹ Excludes carriers subject to ICC jurisdiction engaged preponderantly in local or suburban service and carriers engaged in transportation of both property and passengers. ² Regular route intercity and local. ³ Vehicles owned, leased, and operated under "purchased transportation" arrangements, operated in all revenue service. ⁴ Owned and leased vehicles, intercity service.

Source: U.S. Interstate Commerce Commission, *Transport Statistics in the United States*, Part 7, annual.

NO. 918. INTERCITY BUS LINES—SUMMARY OF OPERATIONS: 1960 TO 1972

ITEM	1960	1965	1968	1969	1970	1971	1972 (est.)
Operating companies.....	1,150	1,100	1,050	1,050	1,000	1,000	1,000
Buses.....	20,974	20,600	22,100	22,700	23,100	23,000	22,700
Miles of highway served (Dec. 31) ¹1,000.....	265	263	264	266	267	267	267
Employees (Dec. 31) ²1,000.....	45	45	47	48	50	50	49
Total bus miles.....millions.....	1,092	1,157	1,190	1,195	1,209	1,202	1,181
Revenue passengers.....millions.....	366	373	398	396	401	395	387
Revenue passenger-miles.....millions.....	19,300	23,800	24,500	24,900	25,300	25,500	25,600
Operating revenue, all services.....mil. dol.....	556	701	798	846	901	953	972
Operating expenses.....mil. dol.....	495	600	709	752	812	852	880
Net operating revenue ³mil. dol.....	61	101	89	94	89	101	92

¹ Includes duplication between carriers. ² Operating companies only. ³ Before income taxes.

Source: National Association of Motor Bus Owners, Washington, D.C., *Bus Facts*, and unpublished data.

No. 919. TRANSIT INDUSTRY—SUMMARY: 1950 TO 1972

[Money figures in millions of dollars, except as indicated. Prior to 1960, excludes Alaska and Hawaii. Comprises all privately and publicly owned organized local passenger transportation agencies except taxicabs, suburban railroads, and sightseeing and school buses. Covers (a) local motorbus lines, (b) electric street railways, (c) elevated and subway lines, (d) interurban electric railways and (e) trolley coach lines. Based on financial and statistical reports received by American Transit Association from transit systems representing more than 85 percent of the industry. See also *Historical Statistics, Colonial Times to 1957*, series Q 330-340]

ITEM	1950	1955	1960	1965	1968	1969	1970	1971	1972 (prel.)
Operating systems	1,406	1,483	1,251	1,148	1,094	1,086	1,079	1,063	1,045
Motorbus systems ¹	1,354	1,450	1,236	1,145	1,091	1,082	1,075	1,059	1,040
Miles of route operated (Dec. 31):									
Electric railway—single track.....	10,813	6,197	3,935	2,173	2,045	2,081	2,081	(NA)	(NA)
Surface.....	9,590	4,976	2,692	918	775	762	782	(NA)	(NA)
Subway and elevated.....	1,223	1,221	1,243	1,256	1,270	1,319	1,319	(NA)	(NA)
Trolley coach—negative overhead wire.....	3,482	3,428	2,196	766	616	563	563	(NA)	(NA)
Motorbus—route round trip.....	98,000	99,800	108,700	120,900	121,000	117,300	112,700	(NA)	(NA)
Passenger vehicles owned (Dec. 31):									
Electric railway cars.....	86,310	73,089	65,292	61,717	61,930	61,347	61,350	60,737	60,704
Surface.....	22,986	14,532	11,866	10,664	10,745	10,665	10,600	10,550	10,590
Subway and elevated.....	13,228	5,300	2,856	1,549	1,355	1,322	1,262	1,225	1,176
Trolley coaches.....	9,758	9,232	9,010	9,115	9,390	9,343	9,335	9,325	9,423
Motorbuses.....	6,504	6,157	3,826	1,453	1,185	1,082	1,050	1,037	1,030
.....	56,820	52,400	49,600	49,600	50,000	49,600	49,700	49,150	49,075
Investment (Dec. 31)	3,918	3,821	3,937	4,225	4,533	4,578	4,624	(NA)	(NA)
Electric railway.....	3,060	2,902	3,003	3,243	3,475	3,502	3,537	(NA)	(NA)
Surface.....	913	616	367	165	146	145	147	(NA)	(NA)
Subway and elevated.....	2,147	2,286	2,636	3,078	3,329	3,357	3,391	(NA)	(NA)
Trolley coach.....	144	180	117	49	38	38	38	(NA)	(NA)
Motorbus.....	714	759	817	933	1,020	1,038	1,048	(NA)	(NA)
Operating finances:									
Operating revenue.....	1,452	1,426	1,407	1,444	1,563	1,626	1,707	1,741	1,729
Electric railway.....	578	440	369	366	411	435	440	428	425
Surface.....	362	176	88	56	53	55	55	49	48
Subway and elevated.....	216	264	282	310	358	380	384	379	377
Trolley coach.....	122	131	82	42	36	33	32	32	31
Motorbus.....	752	856	956	1,036	1,116	1,158	1,236	1,280	1,271
Operating expenses.....	1,297	1,277	1,290	1,374	1,628	1,745	1,892	2,040	2,128
Percent of revenue.....	89.3	89.6	91.7	95.2	104.0	107.3	110.8	117.2	123
Net revenue.....	155	149	117	70	2 63	2 119	2 181	2 300	2 400
Taxes (all).....	89	93	87	81	98	101	104	112	113
Operating income.....	66	56	31	2 11	2 181	2 221	2 288	2 411	2 513
Percent of revenue.....	4.6	3.9	2.2	(?)	(?)	(?)	(?)	(?)	(?)
Revenue vehicle-miles operated									
Electric railway..... mil.	3,008	2,448	2,143	2,008	1,989	1,967	1,883	1,846	1,756
Surface..... mil.	907	561	466	437	444	453	441	440	418
Subway and elevated..... mil.	463	178	75	42	38	36	34	33	32
Trolley coach..... mil.	443	353	391	395	407	417	407	407	386
Motorbus..... mil.	206	177	101	43	36	36	33	31	30
.....	1,895	1,710	1,576	1,528	1,508	1,478	1,409	1,376	1,308
Passengers carried mil.	17,246	11,529	9,395	8,253	8,019	7,803	7,332	6,847	6,567
Electric railway..... mil.	6,168	3,077	2,313	2,184	2,181	2,220	2,116	2,000	1,918
Surface..... mil.	3,904	1,207	463	276	253	249	235	222	211
Subway and elevated..... mil.	2,264	1,870	1,850	1,858	1,928	1,980	1,881	1,778	1,707
Trolley coach..... mil.	1,658	1,202	657	305	228	199	182	148	144
Motorbus..... mil.	9,420	7,250	6,425	5,814	5,610	5,375	5,034	4,699	4,605
Revenue passengers carried mil.	13,845	9,189	7,521	6,798	6,491	6,310	5,932	5,497	5,271
Electric railway..... mil.	4,903	2,586	2,005	1,882	1,814	1,840	1,746	1,649	1,581
Surface..... mil.	2,790	845	335	204	187	184	172	165	148
Subway and elevated..... mil.	2,113	1,741	1,670	1,678	1,627	1,656	1,574	1,494	1,434
Trolley coach..... mil.	1,261	860	447	186	152	135	128	113	110
Motorbus..... mil.	7,681	5,734	5,069	4,730	4,525	4,335	4,058	3,735	3,579
Employees, number (avg.) 1,000	240	198	156	145	144	141	138	139	138
Subway and elevated.....	30	41	35	36	38	37	36	(NA)	(NA)
Surface railway—trolley coach and motorbus.....	201	157	121	109	106	104	102	(NA)	(NA)
Payroll, employee.....	835	864	857	964	1,110	1,184	1,274	1,393	1,455
Average annual earnings per employee.....dollars.	3,479	4,364	5,481	6,645	7,727	8,404	9,280	10,014	10,515

NA Not available. ¹ Comprises companies operating motorbuses exclusively and ² companies with combined services such as trolley coach and motorbus, etc. ³ Deficit, not computed as percent of operating revenue.

Source: American Transit Association, Washington, D.C., *Transit Fact Book*, annual.

No. 920. BUS CARRIERS—REVENUE AND EXPENSES, BY TYPE OF SERVICE: 1967

[Money figures in thousands of dollars. Covers carriers with payroll not subject to Interstate Commerce Commission economic regulation. Excludes carriers operated by municipalities or other governmental bodies]

ITEM	Total	TYPE OF SERVICE				
		Local	Inter-city	Charter or special	Sight-seeing	Airport
ALL CARRIERS¹						
Number of carriers.....	1,254	711	176	132	54	74
Operating revenue.....	562,118	455,190	38,741	16,659	14,746	26,113
Payroll, annual.....	304,909	255,518	20,152	6,689	5,507	11,884
Paid employees, week incl. March 12.....	51,580	42,057	3,743	1,746	1,084	2,216
CARRIERS REPORTING REVENUE AND EXPENSES						
Number of carriers.....	832	533	115	97	27	80
Revenue, total.....	460,503	383,350	28,586	12,120	11,768	24,679
Passenger revenue.....	414,269	340,761	27,169	11,600	10,580	24,159
Local service.....	319,926	318,613	379	774	-	160
Inter-city service.....	24,761	449	23,883	404	-	15
Charter and special service.....	29,805	14,853	2,559	9,280	1,719	1,394
Airport service.....	23,008	277	25	69	-	22,415
School and sightseeing service.....	16,779	6,569	323	1,073	8,689	175
Nonpassenger revenue.....	46,234	42,589	1,417	520	1,188	620
Expenses: Payroll, annual.....	255,783	220,746	14,713	4,891	4,312	11,121
Other.....	172,503	136,965	13,199	6,591	6,370	9,378

- Represents zero. ¹ Includes unclassified carriers, not shown separately.

Source: U.S. Bureau of the Census, *U.S. Census of Business: 1967*, Misc. Subjects, BC 67-SS8.

No. 921. CLASS I INTERCITY MOTOR CARRIERS OF PROPERTY: 1950 TO 1971

[Carriers subject to ICC regulations. Prior to 1960, excludes Alaska and Hawaii. See text, p. 536, for class limits]

ITEM	1950	1955	1960	1965	1969	1970	1971
Carriers reporting..... number.....	1,621	2,244	935	1,114	1,311	1,376	1,355
Operating revenue..... mil. dol.....	2,380	4,030	4,763	7,131	10,770	11,137	13,011
Common carrier..... mil. dol.....	2,181	3,622	4,384	6,637	9,801	10,147	11,880
Contract carrier and other..... mil. dol.....	199	408	379	493	968	990	1,131
Expenses..... mil. dol.....	2,215	3,370	4,645	6,760	10,337	10,763	12,238
Net operating revenue..... mil. dol.....	165	160	119	371	433	375	774
Ordinary income before income taxes..... mil. dol.....	159	146	81	329	349	275	692
Net income after income taxes..... mil. dol.....	93	82	37	209	200	150	410
Owned revenue vehicles.....	1,000	191	289	279	355	466	483
Trucks.....	1,000	29	37	31	36	54	54
Truck tractors.....	1,000	61	92	88	105	132	135
Trailers (semi and full).....	1,000	101	159	161	214	280	294
Intercity vehicle-miles.....	5,532	7,559	7,203	9,154	11,699	11,498	12,061
Tons of intercity revenue freight carried..... mil.....	213	314	276	419	561	552	583
Miles per power unit owned.....	53,833	53,008	59,590	65,217	67,518	63,051	67,731
Intercity revenue per intercity vehicle-mile.....	\$0.43	\$0.52	\$0.64	\$0.74	\$0.87	\$0.91	\$0.97
Total expense per intercity vehicle-mile.....	\$0.41	\$0.51	\$0.65	\$0.72	\$0.88	\$0.94	\$0.97
Number of employees, average.....	1,000	224	332	327	375	510	500
Compensation of employees..... mil. dol.....	855	1,690	2,103	2,948	4,762	4,914	5,070

Source: U.S. Interstate Commerce Commission, *Transport Statistics in the United States*, Part 7, annual.

No. 922. TRUCK CARRIERS—REVENUE AND EXPENSES, BY TYPE OF CARRIER: 1967

[Money figures in millions of dollars. Covers only carriers with payroll not subject to Interstate Commerce Commission regulations. Based on a probability sample of all carriers with payroll in the "trucking, except with storage," industry; for details, see source]

TYPE OF CARRIER	ALL CARRIERS			CARRIERS REPORTING OPERATING REVENUE				
	Number	Operating revenue	Payroll, annual	Number	Revenue		Payroll, annual	Other expenses
					Total	Inter-city service		
Total.....	43,628	3,735	1,284	31,168	2,966	1,092	985	1,586
General freight.....	5,240	647	277	4,792	626	238	270	299
Household goods.....	1,963	106	43	1,655	96	28	39	44
Sand and gravel.....	5,598	558	131	5,087	542	149	125	325
Garbage collection.....	4,499	319	118	3,850	300	11	111	139
Retail store delivery.....	894	57	28	778	54	12	27	18
Agriculture and other ICC exempt prod.....	7,921	618	159	7,403	602	335	154	366
Other types and unclassified.....	17,513	1,430	528	7,603	746	319	258	395

Source: U.S. Bureau of the Census, *U.S. Census of Business: 1967*, Misc. Subjects, BC 67-SS8.

No. 923. RAILROADS—SUMMARY STATISTICS: 1940 TO 1971

[As of December 31, 1950 excludes Alaska and Hawaii. Covers class I and II railroads, excluding switching and terminal companies, except as noted. Includes intercorporate duplications. See also *Historical Statistics, Colonial Times to 1867*, series Q, 44-124]

ITEM	1940	1950	1960	1965	1969	1970	1971
Operating companies ¹number..	574	471	407	372	361	351	341
Mileage:							
Road owned, first track ²	233, 670	223, 779	217, 552	211, 384	207, 005	205, 782	204, 696
Track operated:							
Reporting railroads ³	405, 975	396, 380	381, 745	370, 636	364, 915	360, 330	359, 194
First track ³	245, 740	236, 857	230, 169	226, 015	222, 164	220, 107	219, 945
Other main tracks.....	41, 373	40, 456	34, 800	31, 113	29, 564	28, 682	28, 632
Yardtrack and sidings.....	118, 862	119, 067	116, 776	113, 508	113, 187	111, 541	110, 717
Operated by receivers or trustees.....	75, 270	12, 223	1, 259	1, 690	649	23, 190	24, 137
Equipment: ⁴							
Locomotives in service.....number..	44, 333	42, 951	31, 178	30, 061	29, 090	29, 122	29, 185
Average tractive effort ⁵pounds..	50, 905	57, 075	61, 314	63, 096	⁶ 1, 806	⁶ 1, 944	⁶ 1, 938
Cars in service:							
Passenger-train.....number..	38, 308	37, 359	25, 746	20, 022	12, 630	11, 378	8, 869
Freight train ⁷1,000..	1, 684	1, 746	1, 690	1, 515	1, 464	1, 454	1, 441
Average capacity ⁸tons.....	50. 0	52. 6	55. 4	59. 8	65. 8	67. 1	68. 4
Capital and property investment: ⁹							
Road and equipment, book value ¹⁰							
mil. dol.....	25, 646	30, 174	35, 513	35, 489	37, 383	37, 918	38, 022
Depreciation reserve ¹¹mil. dol..	3, 095	6, 629	8, 532	9, 342	9, 689	9, 930	10, 078
Capitalization outstanding ¹²mil. dol..	21, 047	18, 274	16, 134	14, 857	14, 701	14, 339	13, 588
Capital surplus and retained income.....mil. dol..	2, 783	7, 037	11, 356	12, 945	13, 001	13, 002	12, 394
Stock paying dividends.....mil. dol..	3, 741	6, 709	5, 617	4, 845	4, 347	3, 695	3, 598
Dividends declared.....mil. dol..	217	349	412	533	535	486	804
Interest accrued on funded debt.....mil. dol..	547	367	387	403	502	554	575
Income and expenses:							
Operating revenues.....mil. dol..	4, 355	9, 587	9, 642	10, 425	11, 659	12, 209	13, 018
Operating expenses.....mil. dol..	3, 132	7, 135	7, 657	8, 003	9, 209	9, 806	10, 388
Tax accruals.....mil. dol..	403	1, 212	1, 020	949	1, 065	1, 104	1, 138
Net railway operating income.....mil. dol..	691	1, 055	595	980	667	606	629
Net income ⁹mil. dol..	243	855	473	866	¹³ 517	¹³ 126	¹³ 338
Passenger service:							
Passenger revenue.....mil. dol..	418	815	641	556	442	423	384
Passengers carried.....millions.....	456	488	327	306	302	289	276
Passenger-miles.....millions.....	23, 816	31, 790	21, 284	17, 454	12, 214	10, 786	8, 863
Commutation ⁸millions.....	3, 997	4, 990	4, 197	4, 128	4, 546	4, 692	4, 498
Coach ⁸millions.....	12, 485	17, 443	13, 422	11, 069	6, 601	5, 414	3, 887
Parlor and sleeping car ⁸millions.....	7, 288	9, 338	3, 643	2, 191	1, 021	765	516
Revenue per passenger-mile.....cents.....	1. 76	2. 56	3. 01	3. 19	3. 62	3. 92	4. 33
Average journey per passenger.....miles.....	52. 22	65. 14	65. 05	57. 07	40. 49	37. 26	32. 17
Freight service:							
Freight revenue.....mil. dol..	3, 584	7, 934	8, 152	9, 037	10, 538	11, 124	11, 996
Revenue-tons originated.....millions.....	1, 069	1, 421	1, 301	1, 479	1, 558	1, 672	1, 472
Tons carried one mile.....millions.....	375, 369	501, 550	575, 360	705, 705	773, 830	771, 012	745, 828
Revenue ton-miles per mile of road.....1,000..	1, 526	2, 497	2, 497	3, 121	3, 457	3, 468	3, 015
Revenue per ton-mile.....cents.....	0. 955	1. 341	1. 417	1. 281	1. 362	1. 443	1. 608
Haul per ton, U.S. as a system.....miles.....	351. 13	416. 32	442. 14	477. 15	496. 82	490. 41	507. 33
Number of employees, average.....1,000..	1, 046	1, 237	793	655	590	577	555
Compensation of employees.....mil. dol..	1, 991	4, 645	4, 957	4, 887	5, 451	5, 646	5, 990
Accidents: ¹⁴							
Persons killed.....number.....	4, 740	3, 398	2, 248	2, 399	2, 299	2, 225	2, 010
Persons injured.....number.....	29, 606	33, 255	19, 577	25, 789	23, 356	21, 827	18, 972

¹ Includes unofficial companies and, through 1960, circular companies; see text, p. 536.

² Includes lessors, proprietary, unofficial and, through 1960, circular companies.

³ Includes mileage in Canada.

⁴ Includes switching and terminal companies, except average tractive effort and average capacity.

⁵ For 1950, steam locomotives of class I railroads; beginning 1960, all locomotives of class I railroads.

⁶ Represents horsepower. ⁷ Excludes cabocho cars. ⁸ Class I railroads only. ⁹ Includes lessors.

¹⁰ Increase in investment over a period of years cannot be obtained accurately by subtraction of 1 year's investment from that of another owing to reorganization, sale or abandonment, reclassification, etc. Also includes proprietary companies. ¹¹ Includes amortization applicable to proprietary companies.

¹² Comprises common stock, preferred stock, and funded debt unmaturred.

¹³ After extraordinary and prior period items. ¹⁴ Includes highway grade crossing casualties.

Source: U.S. Interstate Commerce Commission, *Transport Statistics in the United States*, Part 1, annual, and *Accident Bulletin*, annual, Beginning 1969, accident data from U.S. Federal Railroad Administration, *Accident Bulletin*, annual.

No. 924. RAILROADS, CLASS I LINE-HAUL—REVENUES AND EXPENSES: 1950 TO 1972

[In millions of dollars, except percent. See text, p. 536, for explanation of class limits. See also *Historical Statistics, Colonial Times to 1957*, series Q 103-117]

ITEM	1950	1955	1960	1965	1969	1970	1971	1972 (prel.)
Operating revenues.....	9,473	10,106	9,514	10,208	11,450	11,992	12,790	13,586
Freight.....	7,817	8,538	8,025	8,836	10,346	10,922	11,786	12,572
Passenger.....	813	743	640	553	439	420	380	407
Mail.....	374	287	331	311	177	161	124	96
Express.....	81	118	100	77	28	22	11	5
Other.....	387	420	417	431	460	466	489	505
Operating expenses.....	7,059	7,646	7,565	7,850	9,067	9,660	10,235	10,847
Maintenance.....	2,995	3,175	2,952	3,011	3,505	3,778	4,214	4,379
Way and structures.....	1,287	1,387	1,192	1,236	1,503	1,613	1,813	1,924
Equipment.....	1,708	1,788	1,760	1,775	2,002	2,165	2,396	2,455
Traffic.....	319	235	258	262	279	285	291	313
Transportation, rail line.....	3,491	3,770	3,833	4,020	4,596	4,873	4,969	5,342
Miscellaneous operations.....	110	108	82	67	50	46	38	42
General.....	271	357	441	490	637	678	723	772
Net revenue from railway operations.....	2,414	2,466	1,951	2,358	2,384	2,332	2,556	2,739
Tax accruals.....	1,195	1,081	999	916	1,029	1,069	1,100	1,160
Railway operating income.....	1,219	1,385	952	1,442	1,355	1,263	1,455	1,579
Net railway operating income.....	1,040	1,128	584	962	655	486	603	689
Ratio of expenses to revenues (percent).....	74.5	75.6	79.5	76.9	79.2	80.6	80.0	79.8
Gross expend. for capital improvements.....	1,065	908	919	1,631	1,508	1,351	1,192	1,241
Equipment.....	779	568	634	1,304	1,089	993	878	875
Roadway and structures.....	286	340	286	327	420	358	314	366

No. 925. RAILROADS, CLASS I LINE-HAUL—SELECTED PASSENGER STATISTICS: 1950 TO 1972

[See text, p. 536, for explanation of class limits. See also *Historical Statistics, Colonial Times to 1957*, series Q 87-89]

ITEM	1950	1955	1960	1965	1970	1971	1972
Average miles of road operated.....	146,468	119,745	94,117	76,993	49,533	40,032	29,398
Passenger revenue.....mil. dol.	813	743	640	553	420	380	407
Revenue per passenger-mile:							
Incl. commutation passengers.....cents.	2.56	2.60	3.01	3.18	3.90	4.27	4.76
Excl. commutation passengers.....cents.	2.74	2.70	3.03	3.14	4.02	4.64	5.31
Revenue passengers carried.....millions.	486	432	326	299	284	273	261
Revenue passenger-miles.....millions.	31,760	28,525	21,268	17,389	10,770	8,901	8,560
Average distance.....miles.	65.3	66.0	65.2	58.2	37.9	32.6	32.8
Revenue passenger-miles per train-mile.....	88.5	95.2	100.9	100.9	117.1	129.0	140.3
Revenue passenger-miles per car-mile.....	17.0	17.8	19.3	19.5	25.8	30.5	33.3
Passenger-train miles.....millions.	353	299	209	172	92	69	61
Passenger-carrying car-miles.....millions.	1,870	1,602	1,101	885	417	292	257
Train-miles per train-hour.....	37.4	39.8	40.7	41.3	40.1	37.1	38.3

No. 926. RAILROADS, CLASS I LINE-HAUL—SELECTED FREIGHT STATISTICS: 1950 TO 1972

[Excludes switching and terminal roads. Tons of 2,000 pounds. See text, p. 536, for explanation of class limits. See also *Historical Statistics, Colonial Times to 1957*, series Q 93]

ITEM	1950	1955	1960	1965	1969	1970	1971	1972
Average miles of road operated.....	225,605	222,901	219,381	212,133	210,986	209,401	209,293	208,012
Freight revenue.....mil. dol.	7,817	8,538	8,025	8,836	10,320	10,913	11,786	12,572
Per ton-mile.....cents.	1.33	1.37	1.40	1.27	1.35	1.43	1.59	1.62
Per ton per road.....dollars.	3.04	3.25	3.51	3.48	3.80	4.18	4.79	4.94
Revenue freight:								
Tons originated.....millions.	1,354	1,393	1,241	1,387	1,473	1,485	1,391	(NA)
Tons carried.....millions.	2,570	2,618	2,261	2,539	2,671	2,614	2,459	2,644
Net ton miles.....millions.	588,578	623,615	572,309	697,736	767,867	762,644	739,391	777,851
Average distance.....miles.	229.0	237.6	250.9	274.8	287.5	291.7	300.7	305.8
Train miles.....millions.	515	476	405	421	433	427	430	451
Freight car miles, loaded 1. millions.....	19,644	20,099	17,287	17,885	17,965	17,300	16,501	17,134
Empty.....millions.	10,140	11,054	10,872	11,420	12,366	12,627	12,680	13,171
Net ton-miles per train-mile 1.....	1,224	1,374	1,466	1,683	1,804	1,820	1,751	1,774
Net ton-miles per loaded car-mile 1.....	31.7	32.0	33.9	39.7	43.5	44.9	45.6	46.7
Train-miles per train-hour.....	16.8	18.6	19.5	20.1	20.1	20.1	20.4	20.0

NA Not available. 1 Revenue and nonrevenue freight.

Source of tables 924-926: U.S. Interstate Commerce Commission, *Annual Report and Transport Statistics in the United States*, Part 1, related monthly and quarterly reports, and *Financial and Operating Statistics, Class I Railroads*, Statement No. 100, semiannual, and unpublished data.

No. 927. RAILROAD COMPANIES, BY CLASS: 1950 TO 1971

[Prior to 1960, excludes Alaska and Hawaii. See text, p. 536, for explanation of class limits]

CLASS OF COMPANY	1950	1955	1960	1965	1968	1969	1970	1971
Total	1 1,038	1 935	1 842	763	738	721	708	700
Class I line-haul operating.....	127	126	106	76	75	73	71	70
Lessors to class I.....	179	155	128	116	115	112	114	112
Class II line-haul operating.....	171	155	304	302	287	282	273	269
Lessors to class II.....	6	8	8	15	14	14	14	14
Switching and terminal ²	253	237	221	205	197	193	190	189
Proprietary ³	100	67	53	45	44	41	39	38
Unofficial.....	9	6	1	4	6	6	7	8

¹ Includes class III railroads for 1950 and 1955, and circular railroads through 1960, not shown separately.

² Includes operating, lessor, proprietary, and unofficial companies, and through 1960, circular.

³ Excludes those in systems which file consolidated reports combining mileage, investment, and other items on a net system basis.

Source: U.S. Interstate Commerce Commission, *Statistics of Railways in the United States*, annual, and, beginning 1955, *Transport Statistics in the United States*, Part 1, annual.

No. 928. RAILROADS—EQUIPMENT IN SERVICE: 1950 TO 1971

[Prior to 1960, excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1957*, series Q 53-65]

ITEM	1950	1955	1960	1965	1969	1970	1971
Locomotives	42,951	33,533	31,178	30,061	29,090	29,122	29,185
Steam.....	26,680	6,266	374	89	—	—	—
Electric.....	827	639	498	365	278	270	255
Diesel.....	15,396	26,563	30,240	29,552	28,711	28,773	28,831
Other.....	48	65	66	55	101	79	99
New units installed ¹	3,215	1,097	389	1,387	601	271	708
Freight cars ² 1,000	1,746	1,724	1,690	1,515	1,464	1,469	1,456
Box..... 1,000	718	724	700	593	597	590	582
Gondola and hopper..... 1,000	875	846	831	754	726	724	721
Other..... 1,000	153	154	159	168	141	155	153
Aggregate capacity ¹ 1,000 tons	90,465	91,229	91,948	88,323	94,346	95,556	96,488
Average capacity ¹ tons	52.6	53.7	55.4	59.8	65.8	67.1	68.4
New units installed ¹	40,032	29,070	54,032	62,859	37,842	37,261	36,500
Passenger-train cars	37,359	32,118	25,746	20,022	12,630	11,378	8,869
Coaches.....	16,488	13,543	10,287	8,086	6,680	6,522	5,681
Average seating capacity ¹	75	75	76	76	87	88	95
Nonpassenger (baggage, express, etc.).....	13,817	13,388	10,077	8,411	4,082	3,227	1,911
Other.....	7,054	5,187	5,382	3,525	1,868	1,629	1,277
New units installed ¹	1,078	412	251	666	240	33	2

- Represents zero. ¹ Class I railroads. ² Excludes caboose cars.

Source: U.S. Interstate Commerce Commission, *Transport Statistics in the United States*, Part 1, annual.

No. 929. RAILROADS, CLASS I LINE-HAUL—FUEL AND POWER CONSUMED AND RAILS AND TIES LAID: 1950 TO 1971

[See text, p. 536, for explanation of class limits. See also *Historical Statistics, Colonial Times to 1957*, series Q 128-137]

ITEM	1950	1955	1960	1965	1969	1970	1971
Fuel and power consumed:							
Coal..... 1,000 short tons..	55,452	11,427	39	4	1	1	1
Fuel oil..... mil. gal.....	2,284	376	89	77	33	—	—
Diesel oil..... mil. gal.....	1,827	3,393	3,472	3,742	3,924	3,808	3,823
Electricity..... mil. kw.-hr..	2,260	2,082	1,641	1,609	1,149	1,341	1,289
Rails and ties laid: ¹							
Rails..... 1,000 short tons..	2,628	2,099	1,066	1,167	1,351	1,174	1,379
Ties:							
Crossties..... 1,000.....	33,091	27,173	16,417	16,982	20,088	19,611	22,777
Switch and bridge ties..... 1,000 board ft..	118,091	99,886	69,373	61,739	61,856	60,002	60,369

- Represents zero.

¹ New and used rails and ties used in replacement, additional tracks, new lines, and extensions.

Source: U.S. Interstate Commerce Commission, *Annual Report and Transport Statistics in the United States*, Part 1.

No. 930. RAILROADS—MILES OF ROAD OWNED, BY GEOGRAPHIC DIVISION: 1950 TO 1971

[As of December 31. Data are for actual length of line owned by line-haul companies in each State without duplication. For composition of divisions, see fig. I, p. xli]

DIVISION	1950	1960	1970	1971	DIVISION	1950	1960	1970	1971
U.S.-----	224,371	217,552	205,782	204,696					
New England.....	6,396	6,088	5,515	5,489	South Atlantic.....	27,924	27,362	25,816	25,675
Middle Atlantic.....	19,180	17,469	15,759	15,610	E. South Central....	15,574	15,233	14,974	14,988
E. North Central....	39,851	38,949	37,230	37,116	W. South Central....	29,771	28,341	26,349	26,230
W. North Central..	47,108	46,367	44,093	43,749	Mountain.....	22,101	21,355	20,593	20,529
					Pacific.....	16,466	16,388	15,453	15,360

Source: U.S. Interstate Commerce Commission, *Statistics of Railways in the United States*, annual, and, beginning 1960, *Transport Statistics in the United States*, Part 1, annual.

No. 931. RAILROADS, CLASS I—CARS OF REVENUE FREIGHT LOADED, 1950 TO 1972, AND BY COMMODITY GROUP, 1972

[In thousands. Figures are 52-week totals. See text, p. 536, for explanation of class limits. "N.e.c." means not elsewhere classified]

Year	Total	Cars loaded ¹	COMMODITY GROUP	Number, 1972	COMMODITY GROUP	Number, 1972
1950.....	38,903	(NA)	Coal.....	4,558	Grain mill products.....	963
1955.....	37,636	168	Metallic ores.....	1,711	Lumber and wood prod., n.e.c. ²	880
1960.....	30,441	554	Crushed stone, gravel and sand.....	1,355	Waste and scrap materials.....	766
1965.....	29,248	1,034	Chemicals and allied products.....	1,396	Farm products, except grain.....	681
1966.....	29,623	1,163	Grain.....	1,356	Petroleum products.....	479
1967.....	28,084	1,207	Food and kindred prod., n.e.c.....	1,246	Nonmetallic minerals, n.e.c.....	515
1968.....	28,253	1,337	Primary forest products.....	1,238	Coke.....	385
1969.....	28,237	1,344	Metals and products.....	1,236	Forwarder and shipper association traffic.....	326
1970.....	27,160	1,257	Motor vehicles and equipment.....	1,231	All other carloads.....	3,475
1971.....	25,266	1,199	Pulp, paper, and allied products.....	1,184	Less than carload.....	26
1972.....	26,061	1,331	Stone, clay, and glass products.....	1,055		

NA Not available. ¹ With highway trailers. ² Except furniture.

Source: Association of American Railroads, Washington, D.C., *Cars of Revenue Freight Loaded*, annual.

No. 932. CLASS I RAILROADS AND MOTOR CARRIERS OF PROPERTY, —REVENUE FREIGHT ORIGINATED, BY COMMODITY GROUP: 1971

[Carloads and tons in thousands; revenue in millions of dollars. See text, p. 536, for explanation of class limits]

COMMODITY GROUP	RAILROADS			MOTOR CARRIERS		
	Carloads	Tons	Revenue ¹	Truckloads	Tons	Revenue ¹
Total.....	25,172	1,390,960	\$12,247	17,871	395,776	\$9,500
Farm products.....	2,066	121,601	1,042	381	7,552	115
Metallic ores.....	1,375	110,404	329	26	570	5
Coal.....	4,646	360,554	1,336	16	455	2
Nonmetallic minerals, except fuels.....	2,113	157,834	430	268	5,679	31
Ordnance and accessories.....	48	2,341	91	31	559	26
Food and kindred products.....	2,547	106,392	1,472	1,649	29,254	658
Basic textiles.....	63	1,241	39	318	4,136	115
Lumber and wood products, exc. furniture.....	2,071	104,687	1,000	216	4,094	52
Furniture and fixtures.....	205	1,730	103	52	477	217
Pulp, paper and allied products.....	1,157	42,166	802	681	10,505	61
Printed matter.....	21	595	19	143	2,057	634
Chemicals and allied products.....	1,488	90,821	1,243	2,122	39,734	405
Petroleum and coal products.....	630	34,185	324	4,521	109,456	141
Rubber and misc. plastic products.....	239	3,839	130	311	3,815	227
Stone, clay and glass products.....	1,186	69,912	557	1,287	26,199	463
Primary metal products.....	1,266	72,088	819	1,598	29,373	151
Fabricated metal products ²	349	10,109	214	445	5,948	197
Machinery, except electrical.....	171	3,821	146	398	5,523	122
Electrical mchy., equip. and supplies.....	309	4,156	179	271	3,030	584
Transportation equipment.....	1,274	29,453	1,029	2,065	23,828	14
Waste and scrap materials.....	746	37,483	250	58	1,022	23
Freight forwarder traffic.....	217	3,828	147	74	852	4,911
Small packaged shipments.....	(X)	727	33	(X)	66,876	329
Other.....	984	20,991	514	941	14,282	

X Not applicable. ¹ Gross. ² Except ordnance, machinery, and transport.

Source: U.S. Interstate Commerce Commission, *Freight Commodity Statistics—Class I Railroads in the United States*, annual, and *Class I Motor Carriers, Property Operating in Intercity Service*, annual.

No. 933. RAILROADS—EMPLOYEES, HOURS, AND COMPENSATION: 1950 TO 1971

[Excludes switching and terminal roads. See also *Historical Statistics, Colonial Times to 1957*, series Q 141-142]

ITEM	1950	1955	1960	1965	1968	1969	1970	1971
Classes I and II line-haul railroads: ¹								
Employees, average.....1,000.....	² 1,237	² 1,071	793	655	602	590	577	555
Compensation of employees.....mil. dol.....	² 4,045	² 5,045	4,957	4,887	5,197	5,461	5,646	5,990
Class I line-haul railroads: ¹								
Employees, average.....1,000.....	1,220	1,058	780	640	591	578	566	544
Man-hours paid for.....mil.....	2,877	2,503	1,841	1,565	1,442	1,414	1,379	1,304
Average hours per employee.....	2,357	2,366	2,358	2,445	2,442	2,446	2,436	2,397
Compensation of employees:								
Total.....mil. dol.....	4,594	4,992	4,894	4,793	5,111	5,363	5,557	5,895
Average per hour.....dol.....	1.60	2.00	2.66	3.06	3.54	3.79	4.04	4.52
Average per year.....dol.....	3,765	4,719	6,270	7,490	8,654	9,279	9,841	10,836

NA Not available. ¹ See text, p. 536, for explanation of class limits. ² Excludes Alaska and Hawaii.

Source: U.S. Interstate Commerce Commission, *Transport Statistics in the United States*, Part 1, annual, and Statement No. A-300, annual.

No. 934. RAILROAD ACCIDENTS—PERSONS KILLED AND INJURED, BY TYPE OF ACCIDENT: 1950 TO 1971

[Prior to 1960, excludes Alaska and Hawaii. Covers all reportable accidents, i.e., those resulting in personal casualty or in damage to railroad property exceeding amounts specified by Federal Railroad Administration. See also *Historical Statistics, Colonial Times to 1957*, series Q 143-144]

TYPE OF ACCIDENT	1950	1955	1960	1965	1968	1969	1970	1971
Killed, number.....	3,398	2,667	2,248	2,399	2,359	2,299	2,225	2,010
Injured, number.....	33,255	27,832	19,577	25,789	24,608	23,356	21,327	18,972
Train: Killed.....	336	259	156	191	142	203	210	171
Injured.....	2,315	1,183	847	864	1,293	1,173	627	694
Train services: Killed.....	2,921	2,316	2,042	2,136	2,141	2,011	1,936	1,792
Injured.....	19,454	16,856	12,877	16,577	15,500	14,986	13,878	12,171
Nontrain: Killed.....	141	92	50	72	76	85	79	47
Injured.....	11,486	9,793	5,853	8,848	7,815	7,197	6,822	6,107

Source: 1950-1965, U.S. Interstate Commerce Commission, *Accident Bulletin*, annual; thereafter, U.S. Federal Railroad Administration, *Accident Bulletin*, annual.

No. 935. HIGHWAY GRADE CROSSINGS—NUMBER AND ACCIDENTS: 1950 TO 1971

[Prior to 1960, excludes Alaska and Hawaii. Covers all railroads, except as noted. See also headnote, table 934. See also *Historical Statistics, Colonial Times to 1957*, series Q 125-127]

ITEM	1950	1955	1960	1965	1968	1969	1970	1971
Highway grade crossings ¹.....	227,364	228,318	224,513	215,961	211,993	211,740	210,954	210,640
Specially protected ²	35,968	39,060	42,267	44,333	45,502	45,961	46,674	47,440
Eliminated by separation of grades.....	61	84	102	59	207	49	95	118
Accidents, number ³.....	4,000	3,846	3,195	3,820	3,816	3,774	3,559	3,392
Persons killed ⁴	1,576	1,446	1,364	1,534	1,546	1,490	1,440	1,356
Persons injured ⁴	4,368	4,014	3,424	3,801	3,774	3,669	3,336	3,332
Involving motor vehicles: ⁴								
Persons killed.....	1,393	1,313	1,254	1,434	1,424	1,362	1,337	1,240
Persons injured.....	4,206	3,886	3,277	3,663	3,645	3,556	3,205	3,229

¹ Class I railroads only. ² Includes crossings with operated gates or watchmen, or both, during at least part of day; and those with audible or visible signals, or both. Excludes those with fixed signs only.

³ Excludes nontrain accidents. ⁴ Excludes motorcycles.

Source: U.S. Interstate Commerce Commission, *Accident Bulletin*, annual, and *Transport Statistics in the United States*, Part 1, annual (formerly *Statistics of Railways in the United States*). Beginning 1968, accident data from U.S. Federal Railroad Administration, *Accident Bulletin*, annual.

No. 936. PETROLEUM PIPELINE COMPANIES—SUMMARY: 1950 TO 1971

[Prior to 1960, excludes Alaska and Hawaii. Refers to pipeline companies operating in interstate commerce and subject to jurisdiction of Interstate Commerce Commission. See *Historical Statistics, Colonial Times to 1867*, series Q 342-344 for miles of line operated and oil originated.]

ITEM	1950	1955	1960	1965	1968	1969	1970	1971
Companies reporting.....number..	76	84	87	89	97	99	101	99
Miles of line operated.....1,000..	129	140	152	161	169	171	176	175
Gathering lines.....1,000..	48	51	49	47	48	46	47	46
Trunk lines.....1,000..	81	90	103	115	122	125	129	129
Investment in carrier property...mil. dol.	1,656	2,586	3,300	4,178	5,139	5,379	5,786	6,805
Investments and special funds...mil. dol.	101	81	114	59	125	147	250	261
Cash.....mil. dol.	65	94	94	110	101	107	104	(NA)
Current assets.....mil. dol.	192	353	393	555	562	644	628	686
Current liabilities.....mil. dol.	126	185	187	301	431	441	480	499
Retained income.....mil. dol.	219	432	701	835	950	1,037	1,124	1,177
Capitalization.....mil. dol.	660	1,282	1,439	1,635	2,130	2,267	2,518	2,964
Capital stock.....mil. dol.	236	331	384	352	431	444	450	440
Long-term debt.....mil. dol.	424	951	1,056	1,283	1,698	1,823	2,068	2,515
Dividends declared.....mil. dol.	51	101	143	197	179	180	217	233
Operating revenues.....mil. dol.	442	678	770	904	1,023	1,103	1,188	1,240
Operating expenses ¹mil. dol.	255	347	418	515	597	643	672	712
Net carrier operating income.....mil. dol.	(?)	(?)	(?)	389	426	461	518	537
Other income and deductions.....mil. dol.	(?)	(?)	(?)	-39	-53	-71	-76	-82
Ordinary income before income taxes.....mil. dol.	(?)	(?)	(?)	349	373	390	440	455
Federal income taxes on ordinary income.....mil. dol.	(?)	(?)	(?)	131	112	125	136	135
Net income.....mil. dol.	81	153	169	218	262	273	312	314
Oil transported:								
Total received into system.....mil. bbl.	2,766	4,058	4,783	5,868	7,289	7,755	8,164	8,342
From connecting carriers.....mil. bbl.	944	1,434	1,636	1,620	1,883	2,034	2,146	2,227
Crude oil.....mil. bbl.	879	1,299	1,402	1,385	1,631	1,638	1,730	1,780
Products.....mil. bbl.	65	134	234	285	352	396	416	447
Originated.....mil. bbl.	1,822	2,624	3,147	4,247	5,407	5,721	6,018	6,114
Crude oil.....mil. bbl.	1,525	2,038	2,239	2,618	3,203	3,405	3,568	3,517
Products.....mil. bbl.	297	586	909	1,629	2,203	2,316	2,449	2,597
Total delivered out of system.....mil. bbl.	2,740	4,039	4,783	5,864	7,269	7,745	8,147	8,188
To connecting carriers.....mil. bbl.	937	1,444	1,639	1,787	2,048	2,243	2,320	2,314
Crude oil.....mil. bbl.	874	1,320	1,400	1,361	1,628	1,696	1,767	1,771
Products.....mil. bbl.	63	115	240	396	520	546	553	543
Terminated.....mil. bbl.	1,803	2,595	3,144	4,107	5,221	5,499	5,827	5,870
Crude oil.....mil. bbl.	1,510	1,992	2,253	2,641	3,188	3,336	3,521	3,537
Products.....mil. bbl.	293	603	891	1,466	2,033	2,164	2,306	2,333
Trunk line movement:								
Crude oil.....mil. bbl.	1,977	2,781	3,091	3,505	4,273	4,446	4,756	4,781
Products.....mil. bbl.	360	717	1,124	1,872	2,560	2,719	2,864	3,017
Barrel-miles, trunk lines:								
Crude oil.....bil.	577	839	976	1,121	1,270	1,322	1,428	1,439
Products.....bil.	107	205	304	627	952	995	1,021	1,045
Employees, average.....1,000..	26	25	21	17	16	16	15	15
Compensation of employees.....mil. dol.	115	142	151	141	153	159	162	172

NA Not available.

¹ Includes pipeline taxes; excludes Federal income taxes.

² Years prior to 1965 based on a different system of accounts; therefore, comparable data not available.

³ After extraordinary and prior period items.

Source: U.S. Interstate Commerce Commission, *Statistics of Oil Pipeline Companies*, annual; and, beginning 1955, *Transport Statistics in the United States*, Part 6, annual.