

Incidental Paper

**Size and Growth
Trends of the Information
Industry, 1970-1983**

Benjamin M. Compaine

Program on Information Resources Policy

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Policy Research

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SIZE AND GROWTH TRENDS OF THE INFORMATION INDUSTRY, 1970-1983
Benjamin M. Compaine
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Benjamin M. Compaine

January 1986

SIZE AND GROWTH TRENDS OF THE INFORMATION INDUSTRY, 1970-1983

The information industry, broadly defined, accounted for revenues of more than \$1.3 trillion in 1983, or about 39% of total Gross National Product. Taking away the \$826.4 billion attributable to financial and legal services, a more conventionally defined information industry is still a \$478 billion, or 14.5%, chunk of GNP. By comparison, in 1975 the more narrowly defined information industry had revenue of about \$153 billion, which was then under 10% of GNP.

Table 1 covers the years 1970 through 1983. The accompanying notes should be considered when evaluating these figures. Although generally reliable figures are available for some categories, others must be viewed as rough estimates at best. As similar procedures have been used through the years to gather these figures, our strongest claim is that they are probably consistent from year to year.

The table includes government expenditures from budgets that are highly information intensive. However, these expenditures cannot be added to the revenues for a "grand total" because, of course, much of these expenditures are already counted as revenue by specifically named industries.

As indicated above, the information industry is growing faster than the economy as a whole. Table 2 and Figure 1 show that the narrowly defined information industry that was 14.5% of GNP in 1983 was up from 9.9% only eight years previously. This growth closely parallels the growth of the financial and legal

TABLE 1
REVENUES AND EXPENDITURES ON THE INFORMATION INDUSTRY, 1970-1983

INDUSTRY OR INSTITUTION	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	% Change 1975-83
(In Billions)															
Communications															
Computer Software and Service Suppliers	\$1.6	\$1.8	\$2.1	\$2.6	\$3.2	\$3.8	\$4.5	\$5.3	\$6.3	\$7.5	\$12.8	\$15.3	\$20.2	\$24.5	-100
Electronic Computing Equipment	b	5.0	6.5	7.4	9.1	8.6	10.4	12.9	14.6	17.5	24.6	32.0	37.4	44.0 *	412
Electronic Components and Accessories	7.3	7.3	8.8	10.8	11.3	18.1	12.4	15.4	17.9	22.7	27.7	30.4	34.5	38.7 *	283
Mobile Radio Systems	2.0 *	2.2 *	2.4 *	2.6 *	2.9 *	3.2 *	3.4 *	4.2 *	5.0 *	5.4 *	2.6	2.4	3.2 *	2.4	-25
Satellite Carriers	0.0 *	0.0 *	0.1 *	0.1 *	0.1 *	0.2 *	0.2 *	0.2 *	0.2 *	0.3 *	0.4 *	0.5 *	0.7 *	0.9 *	330
Teletype	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.6	0.6	0.6	0.7	0.8	0.8	0.7	40
Telephone	18.2	20.8	22.6	25.3	28.3	31.4	35.8	40.1	45.2	49.8	55.6	63.8	70.7	75.0	139
Media and Entertainment															
Advertising	1.4	1.4	1.7	1.8	1.9	2.0	2.3	2.7	3.1	3.3	3.7	4.1	4.5	5.1	155
Broadcasting															
Radio	1.3 *	1.6	1.7	1.8	1.8	2.0	2.4	2.6	3.0	3.3	3.7	4.2	4.7	5.2 *	160
TV	3.6 *	3.9	4.3	4.6	5.0	5.3	6.7	7.5	9.0	10.2	11.4	12.7	14.3	16.1 *	284
Cable TV	0.3	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.4	1.8	2.4	3.5	4.7	6.0	630
Motion Picture Box Office Receipts	1.2 *	1.2 *	1.6	1.3	1.9	2.1	2.6	2.4	2.6	2.8	2.8	3.0	3.5	3.7	74
News Wire Services	0.1 +	0.1 +	0.1 +	0.1 +	0.1 +	0.1 +	0.2 +	0.2 +	0.2 +	0.2 +	0.3 +	0.3 +	0.3 +	0.4 +	380
Printing, Book and Commercial Publishing	0.8	9.0	10.0	11.1	12.0	12.9	14.7	16.4	18.4	20.6	22.8	25.8	29.5	51.4 *	298
Book	2.4	2.7	2.9	3.1	3.3	3.5	4.0	4.8	5.4	5.6	6.1	6.8	7.2	8.3 *	143
Newspaper	7.8	7.4	8.3	8.9	9.6	10.4	11.7	13.1	14.6	16.2	18.0	20.1	21.3	24.1 *	132
Periodical	3.2	3.2	3.3	3.7	4.1	4.4	3.0	6.1	7.2	8.3	9.0	9.8	11.5	12.9 *	193
Radio and TV Communications Equipment	9.3	8.8	9.1	9.7	10.6	11.9	13.3	14.9	16.9	19.6	23.8	27.1	33.2	37.9 *	218
Spectator Sports	1.2	1.2	1.2 *	1.2 *	1.4	1.4	1.7	1.7	1.9	2.1	2.3	2.3	2.4	2.6	86
Theaters	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.4	0.4	380
Video Games	b	b	b	b	b	b	b	b	0.3	0.4	0.6	2.2	3.6	3.0 *	1400 *
Postal															
Postal Service	6.3	6.7	7.9	8.3	9.0	10.0	11.2	13.0	14.1	16.1	17.1	19.1	22.6	23.6	136
Private Delivery Services	0.8 +	1.0 +	1.3 +	1.5 +	1.6 +	2.0 +	2.2 +	2.9 +	3.6 +	4.4 +	5.3 +	6.3 +	6.9 +	8.0 +	300
Financial and Legal															
Banking and Credit	49.6	54.8	61.1	71.8	96.2	98.0	117.9	134.4	165.7	211.9	261.0	329.9	346.9	365.0 *	272
Brokerage Industries	12.9	16.4	18.7	20.4	23.2	23.7	29.2	39.9	52.1	63.0	78.8	82.9	98.4	110.0 *	344
Insurance	64.4	67.7	101.1	110.6	119.2	132.6	157.2	178.3	199.0	231.5	241.7	268.6	293.2	306.4 *	131
Legal Services	8.6	9.6	10.6	12.3	13.7	14.9	16.3	18.4	21.4	24.9	27.2	31.3	39.5	45.0 *	202
Miscellaneous Manufacturing															
Paper and Board	9.5	9.8	11.0	12.9	17.0	16.2	19.8	20.2	21.9	25.4	28.7	32.0	30.9	33.9 *	109
Photographic Equipment and Supplies	4.4	4.7	5.6	6.4	7.5	7.6	8.8	9.9	11.5	13.4	15.9	16.9	17.1	17.2 *	126
Miscellaneous Services															
Business Information Services	0.8	0.9	0.9	1.0	1.1	1.0	b	b	3.0	b	3.5	4.1	b	5.2	189
Management Consulting, Public Relations	b	b	4.3	b	b	0.4 +	0.4 +	0.5 +	0.6 +	0.7 +	0.8 +	0.9 +	1.0 +	1.2 +	201
Marketing and Research Companies	b	b	b	b	b	b	0.4 +	0.5 +	0.6 +	0.7 +	0.8 +	0.9 +	1.0 +	1.2 +	200
TOTAL REVENUE	\$246.7	\$273.4	\$310.3	\$349.0	\$396.3	\$422.1	\$494.5	\$578.5	\$669.8	\$780.8	\$905.9	\$1,044.5	\$1,168.1	\$1,304.0	289
Government Expenditures															
Census Bureau	0.2	0.1	0.0	0.4	b	0.4	b	0.0	0.1 *	0.3	0.7 *	0.2	0.2	0.2	100
Cooperative Extension Work	0.5	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.9	0.9	125
Libraries (Public)	0.7	b	0.8	0.9	b	1.2	1.3	1.6	1.9	1.8	1.5	1.9	2.0	2.3	92 *
National Intelligence Community	5.6 +	5.4 +	5.4	5.7 +	6.4 +	6.4 +	7.4 +	7.4 +	7.9	8.0	9.2	11.3	14.0	17.4	172
Research and Development	15.3	15.5	16.5	17.4	17.4	19.0	20.8	24.0	26.4	29.6 *	29.8	33.1	36.4	38.7 *	104
Schooling	35.8	b	b	16.8	b	95.0	110.6	118.8	129.4	143.0	143.0	158.0	166.1	173.0 *	82
Social Security Administration	2.0	2.9	3.0	4.0	6.3	9.2 *	10.6	13.7	13.5	14.2	16.5	20.2	18.3	42.5	342
TOTAL EXPENDITURES	\$79.9	\$24.2 *	\$26.1	\$26.9	\$30.9	\$30.0	\$146.1	\$157.5	\$168.8	\$183.7	\$202.2	\$225.4	\$237.9	\$275.0	112

TABLE 2

INFORMATION INDUSTRY AND GROSS NATIONAL PRODUCT, 1970-1983
(in billions)

<u>YEAR</u>	<u>GNP</u>	<u>INFO IND REVENUE</u>	<u>INFO IND w/o Fin/Lgl</u>	<u>INFO IND % GNP*</u>	<u>TOTAL INFO IND % GNP</u>
1970	\$993	\$247	\$91	9.2	24.9
1975	1549	422	153	9.9	27.2
1976	1718	495	174	10.1	28.8
1977	1918	579	208	10.8	30.2
1978	2164	670	231	10.7	31.0
1979	2418	781	260	10.8	32.3
1980	2632	906	305	11.6	34.4
1981	2954	1060	347	11.7	35.9
1982	3073	1188	410	13.3	38.7
1983	3305	1304	478	14.5	39.5

* Information industry less financial and legal services

Source: GNP from US Bureau of Economic Analysis. Information Industry revenue from Table 1.

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INFORMATION INDUSTRY REVENUES

As Percent GNP, 1970 - 1983

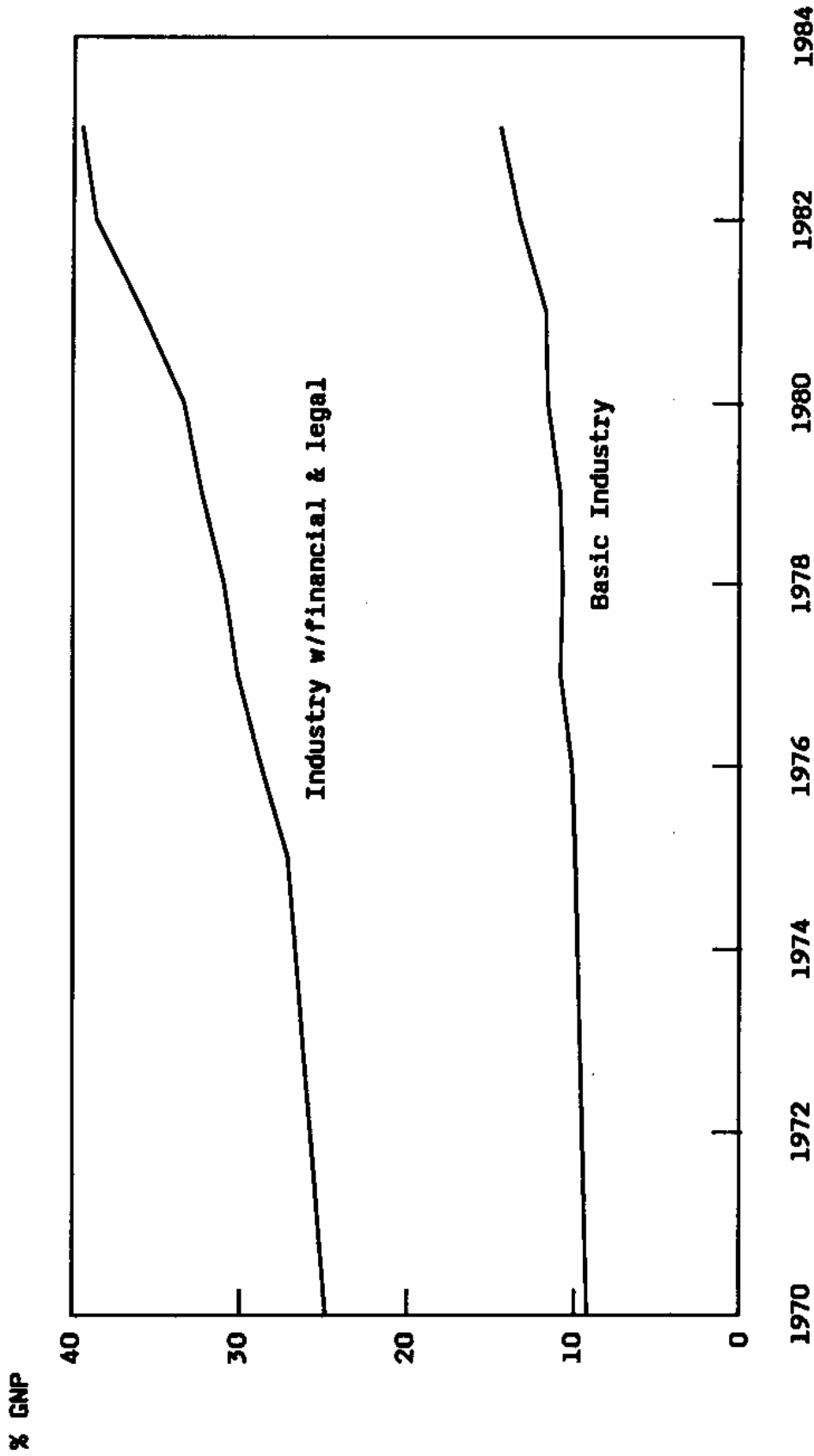


FIGURE 1

services sector, which when combined with the traditional information sector accounts for nearly two-fifths of total GNP. Moreover, the rate of increase has accelerated in the 1980s, increasing 2.8 percentage points from 1981 to 1983.

Table 3 arranges the components of the industry by estimated 1983 revenue. After eliminating the financial sectors leading the list, for the most part electronics manufacturing industries are the largest in dollar revenue. The first service industry among them is "management and other consulting and public relations", a \$25 billion business. This is followed closely by computer software and services, a sector that is growing at a rate more than twice that of consulting.

Within the industry, the components growing the fastest since 1975 are primarily from the electronic area, as seen in Table 4. Video games, though leading the list, were already on the decline in 1983 from the 1982 peak. The real leader is cable television, which traces its ascendancy to favorable court regulatory rulings starting in the mid-1970s. Also, it was in 1975 that Time Inc. began distributing its Home Box Office pay television service via earth satellites to cable operators. For many years HBO and similar services were a major engine for cable industry growth. Ironically, a recent competitor of pay TV, home video cassette recorders, would barely show up in this compilation, as VCRs were all manufactured in Japan up to 1985. Many television sets and almost all radios are likewise manufactured abroad.

The industries growing slower than overall information

TABLE 3

INFORMATION INDUSTRY REVENUE, 1983
By Size of Sector

INDUSTRY OR INSTITUTION	1983 (billion)	% Change 1975-83
Banking and Credit	\$365.0	272
Insurance	306.4	131
Brokerage Industries	110.0	364
Telephone	75.0	139
Printing, Book and Commercial	51.4	298
Legal Services	45.0	202
Electronic Computing Equipment	44.0	412
Electronic Components and Accessories	38.7	283
Radio and TV Communications Equipment	37.9	218
Paper and Board	33.9	109
Management Consulting and Public Relations	25.0	201
Computer Software and Service Suppliers	24.5	545
Newspapers	24.1	132
Postal Service	23.6	136
Photographic Equipment and Supplies	17.2	126
Television	16.1	204
Periodicals	12.9	193
Books	8.5	143
Private Delivery Services	8.0	300
Cable TV	6.0	650
Business Information Services	5.2	189
Radio	5.2	160
Advertising	5.1	155
Motion Picture Box Office Receipts	3.7	76
Video Games	3.0	1400
Spectator Sports	2.6	86
Mobile Radio Systems	2.4	-25
Marketing and Research Companies	1.2	200
Satellite Carriers	0.9	350
Telegraph	0.7	40
News Wire Services	0.4	300
Theaters	0.4	300

Source: Compiled from Table 1.

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TABLE 4

GROWTH IN THE INFORMATION INDUSTRY, 1975-1983

INDUSTRY OR INSTITUTION	% Change 1975-83
Video Games	1400%
Cable TV	650
Computer Software and Service Suppliers	545
Electronic Computing Equipment	412
Brokerage Industries	364
Satellite Carriers	350
Theaters	300
Private Delivery Services	300
News Wire Services	300
Printing, Book and Commercial	298
Electronic Components and Accessories	283
Banking and Credit	272
Radio and TV Communications Equipment	218
TOTAL REVENUE	209
Television	204
Legal Services	202
Management Consulting and Public Relations	201
Marketing and Research Companies	200
Periodicals	193
Business Information Services	189
Radio	160
Advertising	155
Books	143
Telephone	139
Postal Service	136
Newspapers	132
Insurance	131
Photographic Equipment and Supplies	126
GROSS NATIONAL PRODUCT	113
Paper and Board	109
Spectator Sports	86
Motion Picture Box Office Receipts	76
Telegraph	40
Mobile Radio Systems	-25

Source: Table 1.

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industry revenue include many of the mature businesses, including the publishing sectors. However, even these grew faster than the overall economy, as measured by current dollar GNP.

Information Industry Revenues - - Explanatory Notes

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Key:

* estimated	a 1977-1983
+ lower bound	c 1978-1983
b not available	d 1976-1983

COMPUNICATIONS

Computer Software and Service Suppliers: Revenues for services (processing and professional) and software (packaged and systems house) from "Computer Industry Review and Forecast", semiannual, International Data Corporation, Framingham, MA.

Electronic Computing Equipment (SIC 3573): Value of Shipments from U.S. Industrial Outlook, annual.

Electronic Components and Accessories (SIC 367): Value of shipments from U.S. Industrial Outlook, annual.

Mobile Radio Systems: 1970-1978 revenues for common carrier and licensed mobile radio. The latter services are estimates based on data from the FCC Common Carrier Bureau, extrapolated from 1965 data. 1979-1984 figures are for total land mobile radio common carrier equipment and services, except those counted in traditional telephone and telegraph revenues. U.S. Industrial Outlook, annual.

Satellite Carriers: Total operating revenues for COMSAT from the FCC Communication Common Carrier Statistics, annual. 1975-1980 revenues from operational domestic satellite companies estimated by International Resources Development, Inc., Norwalk, CT. 1981-1984 domestic satellite revenues from U.S. Industrial Outlook, annual.

Telegraph: Total operating revenues for domestic telegraph from FCC Statistics of Common Carriers, annual.

Telephone: Total operating revenues for domestic telephone from FCC Statistics of Common Carriers, annual.

MEDIA AND ENTERTAINMENT

Advertising: Ad agency income from U.S. Industrial Outlook, annual.

Broadcast Radio: Estimated advertising expenditures in radio industry, from U.S. Statistical Abstract, annual.

Broadcast Television: Estimated advertising expenditures in TV industry, from U.S. Statistical Abstract, annual.

Cable TV: Revenues from U.S. Statistical Abstract, annual "Cable and Pay TV--Summary and Projections."

Motion Picture Box Office Receipts (SIC 783): Gross domestic box office receipts from U.S. Industrial Outlook, annual.

News Wire Services: Estimated gross annual revenues worldwide from Associated Press and United Press International, from New York Times, United Press International and Associated Press, plus PIRP projections.

Printing, Book (SIC 2732) and Commercial (SIC 2751,2752,2754): Value of shipments from U.S. Industrial Outlook, annual.

Book Publishing (SIC 2731): Value of shipments from U.S. Industrial Outlook, annual.

Newspaper Publishing (SIC 2711): Value of shipments from U.S. Industrial Outlook, annual.

Periodical Publishing (2721): Value of shipments from U.S. Industrial Outlook, annual.

Radio and TV Communications Equipment (3662): Value of shipments from U.S. Industrial Outlook, annual.

Spectator Sports: Personal consumption expenditures for spectator sports from U.S. Statistical Abstract, annual.

Theaters: Gross box office receipts from Broadway and road shows from Variety, weekly. (published in U.S. Statistical Abstract, annual.)

Video Games: Industry revenue for consumer video game consoles, cartridges, and coin operated video games from "Video Games," U.S. Statistical Abstract, annual. 1983 estimated from industry reports.

POSTAL

Postal Services: Operating revenues from the Annual Report of the Post Master General.

Private Delivery Services: Sum of total revenues of United Parcel Service, Federal Express, Purolator and Emery from respective annual reports.

FINANCIAL AND LEGAL

Banking and Credit: Sum of the total operating income for insured Commercial Banks, insured Mutual Savings Banks and all Savings and Loan Associations from Moody's Bank and Financial Manual, annual. 1983 estimated.

Brokerage Industries: Sum of Business Receipts for Sole Proprietorships and Total Receipts for Partnerships and Corporations from Internal Revenue Service, Statistics of Income, annual. 1983 estimated.

Insurance: Sum of total income (total premiums received plus investment income plus other income) for U.S. life insurance companies and income (direct less returns of premiums written plus investment income) of U.S. property/casualty companies.

Legal Services: Sum of business receipts for sole proprietorships and total receipts for partnerships and corporations from Internal Revenue Service, Statistics of Income, annual. 1983 estimated.

MISCELLANEOUS MANUFACTURING

Paper and Board (SIC 262, 263, 266): Value of shipments from U.S. Industrial Outlook, annual.

Photographic Equipment and Supplies (SIC 3861): Value of shipments from U.S. Industrial Outlook, annual.

MISCELLANEOUS SERVICES

Business Information Services: Revenues of newsletters, loose-leaf services, data bases, and research services from The Business Information Market Series, Knowledge Industry Publications, Inc., White Plains, N.Y.

Management, Consulting and Public Relations Services (SIC 7392): Receipts for management, consulting and public relations firms from U.S. Industrial Outlook, annual.

Marketing and Research Companies: The sum of revenues of the top 20 research and marketing companies. From Advertising Age annual survey appearing in late May/early June.

GOVERNMENT EXPENDITURES

U.S. Census Bureau: Total Federal funds from Budget of the U.S. Government, annual.

Cooperative Extension Work: Total funds allotted for cooperative extension work, from U.S. Department of Agriculture.

Libraries (Public): Sum of 50 states, Pacific Islands, Virgin Islands and Puerto Rico total public library income (or expenditures when income not available) including grants-in-aid. From American Library Directory, annual. Edited by Jacques Cattell Press, RR Bowker Co., New York and London.

National Intelligence Community: Budgeted expenditures for military intelligence and communications (which includes the National Security Agency), and the Central Intelligence Agency, from the Budget of the U.S. Government, annual.

Research and Development: Total Federal obligations for research and development (by agency) from U.S. Statistical Abstract, annual.

Schooling: All government expenditures on education from U.S. Statistical Abstract, annual. 1983 estimated.

Social Security Administration: Total Federal funds for Social Security Administration, from the Budget of the U.S. Government, annual.