

*Incidental Paper*

**Size and Growth Trends  
of the Information Industry:  
1975-1987**

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***Program on Information Resources Policy***

Harvard University

Center for Information  
Policy Research

Cambridge, Massachusetts

An incidental paper of the Program on Information Resources Policy.

**Size and Growth Trends of the Information Industry: 1975-1987**

Derrick C. Huang

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This paper describes the size and growth of the information industry from 1975 to 1987 through a collection of revenue data of various businesses. The definition of the information industry, necessarily loose, follows closely that of Benjamin Compaine<sup>1</sup> and John McLaughlin.<sup>2</sup> Here the industry is categorized into six groups<sup>3</sup>: communications (computer + communications), media and entertainment, postal and delivery services, business information services, miscellaneous manufacturing, and financial and legal services. The data are summarized in the tables; the following text discusses some of the key points and implications.

### **Size and Growth, 1975 - 1987**

Tables 1A to 1F present the revenues of the businesses. The total information industry, including financial and legal services, totaled more than \$1,800 billion<sup>4</sup> in 1987 in revenue, or over 40 percent<sup>5</sup> of the (nominal) Gross National Product (GNP). Table 2 summarizes the data. If the financial and legal services are excluded, the largest chunk in monetary terms, the more traditionally defined information industry in 1987 accounted for \$743 billion in revenue, or over 16 percent of the GNP.

The information industry has been growing faster than the GNP: the total information industry posted an average annual growth rate from 1983 to 1987 at 12 percent, the basic industry at 10.3 percent, and the GNP at only 8.2 percent. Figure 1 shows the growth trend in monetary terms from 1975 to 1987, and Figure 2 shows the information industry's growth in terms of percent GNP. The basic industry, for example, grew from 10.1 percent of GNP in 1975, to 15.4 percent in 1983, and to 16.4 percent in 1987. The growth has been very steady.

Table 1A. Group 1: COMMUNICATIONS (in billions of dollars)

INDUSTRY	Telecomm- unication Services	Telephone and Telegraph Equipment	Radio Communication and Detection Equipment	Electronic Components and Accessories	Electronic Computing Equipment	Computer Software and Programming Services	TOTAL
SIC CODE	4811,21	3661	3662	367	3575	7372	=====
1975	36.91	5.49	11.91	10.09	8.56	0.69	73.65
1976	41.58	5.89	13.25	12.43	10.39	0.92	84.46
1977	45.44	7.86	14.89	15.39	12.92	1.11	97.61
1978	51.11	8.83	16.86	17.91	16.56	1.35	112.62
1979	56.66	10.68	19.62	22.71	21.47	1.67	132.80
1980	63.29	12.28	23.75	27.65	26.59	3.87	157.44
1981	73.09	13.27	27.05	30.42	32.03	4.90	180.76
1982	81.21	13.39	33.03	34.52	36.77	7.25	206.17
1983	89.37	13.53	36.40	37.19	41.98	9.45	227.92
1984	102.24	15.78	40.92	47.98	53.52	11.41	271.86
1985	111.51	17.78	47.62	42.92	55.32	12.59	287.72
1986	121.21	15.69	51.75	41.99	52.57	14.39	297.59
1987	133.04 *	16.16 *	54.39 *	47.48 *	53.50 *	16.83	321.39
1988	141.78 +	16.32 *	57.05 +	59.35 *	60.80 *	20.83	356.12
COMPOUND GROWTH							
1975-87	260.5%	194.2%	356.6%	370.6%	525.0%	2339.4%	336.4%
1975-83	142.1%	146.3%	205.6%	268.7%	390.4%	1269.3%	209.5%
1983-87	48.9%	19.5%	49.4%	27.7%	27.5%	78.2%	41.0%
AVERAGE ANNUAL GROWTH							
1975-87	11.3%	10.0%	13.6%	14.4%	17.0%	33.2%	13.2%
1975-83	11.7%	12.4%	15.1%	17.9%	22.1%	42.0%	15.2%
1983-87	10.5%	5.1%	10.6%	7.3%	6.9%	15.6%	9.1%

NOTE: \*: estimated  
+: forecast/projected

Table 1B. Group 2: MEDIA AND ENTERTAINMENT (in billions of dollars)

INDUSTRY	Broadcast TV	Broadcast Radio	Cable TV	Motion Picture	Radio & TV Receiving Sets	Newspaper Publishing	Periodical Publishing	Book Publishing	Misc. Publishing	Book & Commercial Printing	Theater	Spectator Sports	TOTAL
SIC CODE	781,2,3	3651	2711	2721	2731	2741	2752/51/2/4	2761	2771	2781	2791	2801	=====
1975	5.26	1.98	0.80	N/A	4.44	10.43	4.38	3.54	1.19	12.93	0.11	1.30	46.37
1976	6.72	2.33	0.97	N/A	5.06	11.66	5.04	3.97	1.33	14.68	0.12	1.66	53.55
1977	7.61	2.63	1.16	N/A	5.73	13.06	6.06	4.79	1.85	16.39	0.18	1.74	61.21
1978	8.96	3.05	1.42	10.64	6.44	14.56	7.16	5.40	1.90	18.43	0.21	1.93	80.09
1979	10.15	3.31	1.81	11.48	6.57	16.20	8.31	5.57	2.14	20.58	0.28	2.12	88.52
1980	11.37	3.70	2.44	12.51	6.80	17.96	8.97	6.11	2.51	22.88	0.32	2.26	97.82
1981	12.69	4.23	3.46	13.69	7.06	20.05	9.84	6.76	2.68	25.71	0.41	2.26	108.83
1982	14.27	4.67	4.71	13.96	6.06	21.28	11.48	7.74	2.87	29.51	0.47	2.37	119.38
1983	16.13	5.21	6.16	14.63	6.77	23.26	12.44	8.43	3.01	31.55	0.45	2.58	130.61
1984	18.89	5.82	7.42	15.80	8.22	25.30	14.05	9.46	3.22	35.94	0.43	2.90	147.45
1985	19.78	6.49	8.67	17.00	8.89	27.02	15.25	10.20	4.35	38.48	0.43	2.90	159.44
1986	21.43	6.95	9.71	18.21	9.36	29.21	15.72	10.73	4.89	40.46	0.43	3.10	170.19
1987	22.18	7.21	10.59	20.75	9.93	31.53	16.76	11.68	5.43	44.74	0.43	3.30	184.51
1988	N/A	N/A	N/A	22.74	10.67	33.43	18.05	12.78	5.96	49.44	N/A	N/A	N/A
COMPOUND CHANGE													
1975-87	321.4%	263.9%	1216.9%	95.1% <sup>c</sup>	123.4%	202.2%	282.6%	230.1%	355.1%	245.9%	298.3%	153.8%	297.9%
1975-83	206.4%	163.1%	666.2%	37.5% <sup>c</sup>	52.4%	122.9%	183.9%	138.3%	152.7%	144.0%	313.1%	98.3%	181.7%
1983-87	37.5%	38.3%	71.9%	41.9%	46.6%	35.6%	34.7%	38.5%	80.1%	41.8%	-3.6%	28.0%	41.3%
AVERAGE ANNUAL CHANGE													
1975-87	12.9%	11.4%	24.3%	7.8% <sup>c</sup>	7.3%	9.7%	11.9%	10.5%	13.9%	10.9%	13.1%	8.3%	12.3%
1975-83	15.1%	12.9%	29.2%	6.6% <sup>c</sup>	5.8%	10.6%	14.0%	11.6%	12.8%	11.8%	20.2%	9.2%	14.0%
1983-87	8.4%	8.5%	14.6%	9.2%	10.2%	7.9%	7.8%	8.5%	16.3%	9.2%	-0.9%	6.5%	9.0%

NOTE: \*: estimated  
 +: forecast/projected  
 c: 1978 - 1983/87

Table 1C. Group 3: POSTAL AND DELIVERY SERVICES (In billions)

INDUSTRY	U.S. Postal Services	Private Delivery Services	TOTAL =====
SIC CODE			
1975	11.59	2.28 <sup>-</sup>	13.87
1976	12.75	2.52 <sup>-</sup>	15.27
1977	14.62	3.29 <sup>-</sup>	17.91
1978	15.84	3.96 <sup>-</sup>	19.80
1979	18.00	4.85 <sup>-</sup>	22.85
1980	19.11	6.04 <sup>-</sup>	25.15
1981	20.78	7.06 <sup>-</sup>	27.84
1982	23.63	7.66 <sup>-</sup>	31.29
1983	24.70	8.83 <sup>-</sup>	33.53
1984	26.47	10.39 <sup>-</sup>	36.86
1985	28.96	11.98 <sup>-</sup>	40.94
1986	31.02	13.62 <sup>-</sup>	44.64
1987	32.30	15.09 <sup>-</sup>	47.39
1988	N/A	17.48 <sup>-</sup>	N/A
COMPOUND CHANGE			
1975-87	178.7%	562.4%	241.7%
1975-83	113.1%	287.4%	141.7%
1983-87	30.8%	71.0%	41.3%
AVERAGE ANNUAL CHANGE			
1975-87	9.0%	17.2%	10.8%
1975-83	10.0%	18.6%	11.7%
1983-87	7.0%	14.4%	9.1%

Note: <sup>-</sup>: lower bound.

Table 1D. Group 4: BUSINESS INFORMATION SERVICES (in billions of dollars)

INDUSTRY	Advertis- ing	Misc. Commercial Services	Data Processing & Other Computer Services	Management, Consulting and Public Relations	Account- ing	Credit Reporting and Collection Agencies	Electronic Information Services	Airline Computer Reservation Systems	TOTAL =====
SIC CODE	731	733	7374,79	7392	893	732			
1975	N/A	N/A	3.12	N/A	N/A	N/A	N/A	N/A	3.12
1976	N/A	N/A	3.59	N/A	N/A	N/A	N/A	0.00	3.59
1977	N/A	N/A	4.19	N/A	N/A	N/A	N/A	0.00	4.19
1978	N/A	N/A	4.97	N/A	N/A	N/A	N/A	0.01	4.98
1979	N/A	N/A	5.83	N/A	N/A	N/A	N/A	0.02	5.85
1980	N/A	N/A	8.96	N/A	N/A	N/A	N/A	0.06	9.02
1981	N/A	N/A	10.40	N/A	N/A	N/A	N/A	0.11	10.50
1982	N/A	N/A	12.90	22.46	N/A	N/A	N/A	0.16	35.52
1983	11.98	9.41	15.23	24.99	17.11	2.88	1.86 *	0.26	83.72
1984	13.65	10.83	17.20	27.83	18.98	3.46	2.25	0.38	94.59
1985	16.33	10.74	19.50	32.88	22.31	3.39	2.71	0.67	108.53
1986	17.34	11.70	21.41	36.79	24.06	3.65	3.34	0.82	119.11
1987	18.30	13.22	22.44	38.48 *	27.95	4.28	4.02	0.93 +	129.62
1988	19.97	14.78	25.39	40.40 *	31.19	4.48	4.67	1.05 +	141.92
COMPOUND CHANGE									
1975-87	N/A	N/A	620.5%	N/A	N/A	N/A	N/A	186300.0% <sup>a</sup>	4061.2%
1975-83	N/A	N/A	388.8%	N/A	N/A	N/A	N/A	51900.0% <sup>a</sup>	2587.5%
1983-87	52.8%	40.4%	47.4%	54.0%	63.3%	48.7%	116.1%	258.5%	54.8%
AVERAGE ANNUAL CHANGE									
1975-87	N/A	N/A	18.4%	N/A	N/A	N/A	N/A	135.5% <sup>a</sup>	46.6%
1975-83	N/A	N/A	22.5%	N/A	N/A	N/A	N/A	190.3% <sup>a</sup>	64.1%
1983-87	11.3%	9.0%	10.2%	11.5%	13.1%	10.8%	21.3%	39.6%	11.6%

NOTE: \* : estimated  
+ : forecast/projected  
a: 1976 - 1983/87

Table 1E. Group 5: MISCELLANEOUS MANUFACTURING (In billions)

INDUSTRY	Paper and Board	Photo- graphic equipment and Supplies	TOTAL =====
SIC CODE	262/3/6	3861	
1975	16.19	7.63	23.82
1976	19.01	8.85	27.85
1977	20.21	9.95	30.16
1978	21.87	11.54	33.41
1979	25.45	13.41	38.86
1980	28.73	15.87	44.59
1981	31.97	16.93	48.89
1982	30.89	17.04	47.93
1983	32.81	17.37	50.17
1984	37.54	18.70	56.25
1985	35.92	18.11	54.04
1986	37.18	18.58	55.76
1987	41.18 *	19.40 *	60.57
1988	46.46 *	20.40 *	66.86
COMPOUND CHANGE			
1975-87	154.3%	154.4%	154.3%
1975-83	102.6%	127.7%	110.6%
1983-87	25.5%	11.7%	20.7%
AVERAGE ANNUAL CHANGE			
1975-87	8.3%	8.3%	8.3%
1975-83	9.4%	11.0%	9.9%
1983-87	6.1%	2.9%	5.0%

NOTE: \*: estimated

Table 1F. Group 6: FINANCIAL AND LEGAL SERVICES (in billions of dollars)

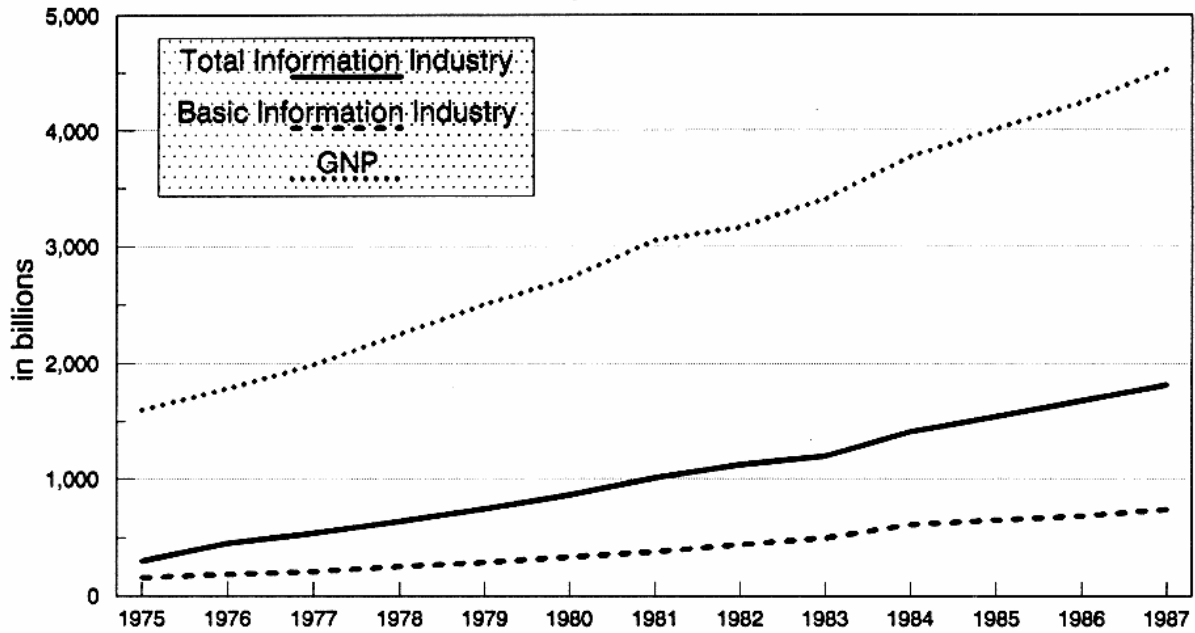
INDUSTRY	Commercial Banks and Savings Institutions	Insurance Companies	Legal Services	Securities Brokers	TOTAL =====
SIC CODE	602	6311/31	81		
1975	N/A	131.09	N/A	7.37	138.46
1976	108.88	152.96	N/A	8.92	270.75
1977	124.25	176.59	18.70	8.60	328.13
1978	154.17	197.51	22.18	11.27	385.13
1979	198.92	219.24	23.76	13.96	455.88
1980	246.92	237.52	27.33	19.98	531.75
1981	313.97	264.37	33.06	24.37	635.76
1982	329.66	288.92	36.93	28.80	684.31
1983	322.50	300.98	42.69	37.14	703.32
1984	377.71	341.93	48.24	39.67	807.55
1985	389.88	397.69	54.66	50.27	892.50
1986	384.48	480.78	62.37	64.95 *	992.57
1987	393.86	531.51	70.62	79.01 +	1075.01
1988	N/A	572.02 *	78.54 *	N/A	N/A
COMPOUND CHANGE					
1975-87	261.7% <sup>a</sup>	305.5%	277.7% <sup>b</sup>	971.6%	676.4%
1975-83	196.2% <sup>a</sup>	129.6%	128.3% <sup>b</sup>	403.8%	407.9%
1983-87	22.1%	76.6%	65.4%	112.7%	52.8%
AVERAGE ANNUAL CHANGE					
1975-87	13.0% <sup>a</sup>	12.5%	14.3% <sup>b</sup>	22.4%	20.3%
1975-83	17.3% <sup>a</sup>	11.0%	14.8% <sup>b</sup>	23.1%	24.9%
1983-87	5.3%	15.3%	13.4%	21.1%	11.2%

NOTE: \*: estimated  
 +: projected  
 a: 1976 - 1983/87  
 b: 1977 - 1983/87

Table 2. INFORMATION INDUSTRY AND GROSS NATIONAL PRODUCT, 1975 - 1987  
(in billions of dollars)

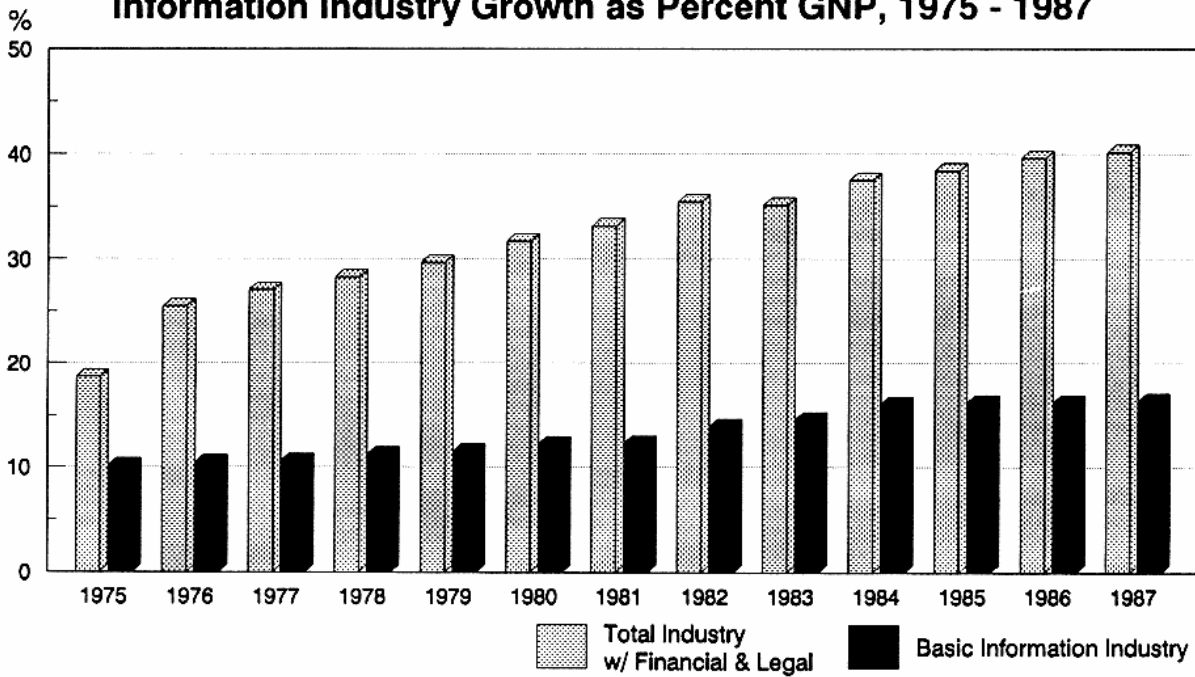
Year	Commu- nications	Media and Enter- tainment	Postal and Delivery Services	Business Info- mation Services	Misc. Manufac- turing	Financial and Legal Services	TOTAL INFOR- MATION INDUSTRY	BASIC INFOR- MATION INDUSTRY	GROSS NATIONAL PRODUCT	TOTAL INFO IND. AS % OF GNP	BASIC INFO IND. AS % OF GNP
1975	73.65	46.35	13.87	3.12	23.82	138.46	299	161	1,598	18.7%	10.1%
1976	84.46	53.55	15.27	3.59	27.85	270.75	455	185	1,783	25.5%	10.4%
1977	97.61	61.21	17.91	4.59	30.16	328.13	540	211	1,991	27.1%	10.6%
1978	112.62	80.09	19.80	5.08	33.41	385.13	636	251	2,250	28.3%	11.2%
1979	132.80	88.52	22.85	5.85	38.86	455.88	745	289	2,508	29.7%	11.5%
1980	157.44	97.82	25.15	9.02	44.59	531.75	866	334	2,732	31.7%	12.2%
1981	180.76	108.83	27.84	10.50	48.89	635.76	1,013	377	3,053	33.2%	12.3%
1982	206.17	119.38	31.29	35.52	47.93	684.31	1,125	440	3,166	35.5%	13.9%
1983	227.92	130.61	33.53	83.72	50.17	703.32	1,229	526	3,406	36.1%	15.4%
1984	271.86	147.45	36.86	94.59	56.25	807.55	1,415	607	3,777	37.5%	16.1%
1985	287.72	159.44	40.94	108.53	54.04	892.50	1,543	651	4,015	38.4%	16.2%
1986	297.59	170.19	44.64	119.11	55.76	992.58	1,680	687	4,240	39.6%	16.2%
1987	321.39	184.51	47.39	129.62	60.57	1075.01	1,818	743	4,527	40.2%	16.4%
COMPOUND CHANGE											
1975-87	336.4%	298.1%	241.7%	4054.5%	154.3%	676.4%	507.6%	362.3%	183.3%		
1975-83	209.5%	181.8%	141.7%	2583.3%	110.6%	408.0%	310.8%	227.1%	113.1%		
1983-87	41.0%	41.3%	41.3%	54.8%	20.7%	52.8%	47.9%	41.4%	32.9%		
AVERAGE ANNUAL CHANGE											
1975-87	13.2%	12.4%	10.8%	46.6%	8.3%	20.3%	16.7%	13.7%	9.1%		
1975-83	15.2%	14.0%	11.7%	64.2%	9.9%	24.9%	19.9%	16.0%	10.0%		
1983-87	9.1%	9.0%	9.0%	11.6%	5.0%	11.2%	10.3%	9.1%	7.4%		

**Figure 1**  
**Information Industry and GNP, 1975 - 1987**



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**Figure 2**  
**Information Industry Growth as Percent GNP, 1975 - 1987**



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The grouping of the businesses follows both the convention adopted in Compaine's paper and the Standard Industrial Classification (SIC). The latter was used mainly to define the Business Information Service group in this study. The accompanying explanatory notes (see Appendix A) should be considered as an integral part of the figures because they define their significance. Although relatively reliable data are available for some businesses, others can be viewed only as rough estimates. But, in general, the data for each category are consistent from year to year since similar definitions and procedures are used throughout the years.

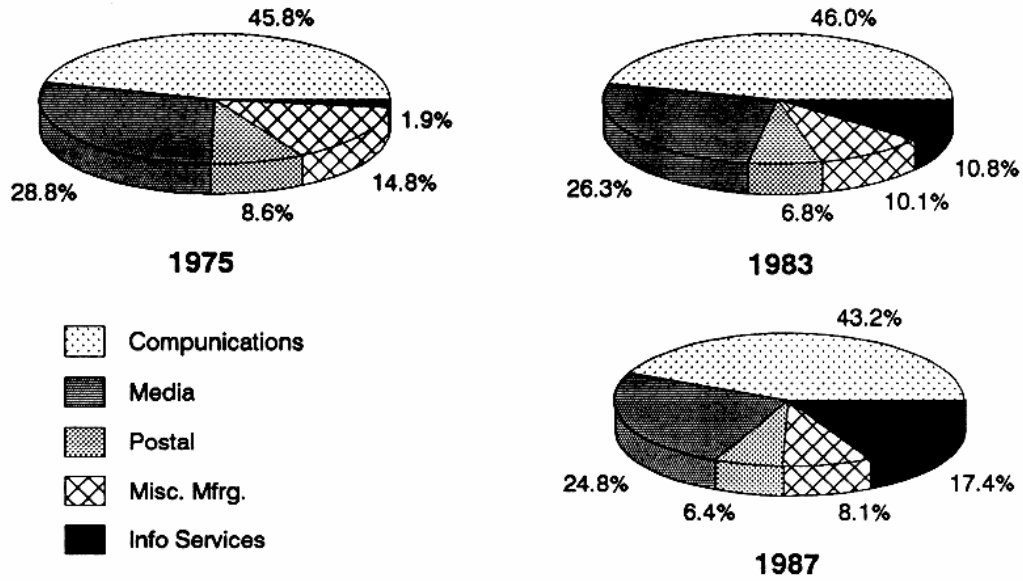
Among all businesses, airline computer reservation systems posted the fastest (39.6 percent) average growth rate from 1983 to 1987, followed by electronic information services and securities brokers, with an annual growth rate of 21.3 percent and 21.1 percent, respectively. Miscellaneous publishing, computer software and programming services, insurance, cable TV, and private delivery services all have more than 14 percent growth rate from 1983 to 1987.

## **Trends**

Figure 3 shows percentage breakdowns of the basic information industry in 1975, 1983, and 1987 into the five groups. Most notable is that the business information services group grew from 1.9 percent in 1975, to 10.8 percent in 1983, and to 17.4 percent in 1987. Due to the lack of reliable statistics for many service businesses in the earlier years, data from 1975 are not directly comparable to those from after 1983. However, as is clearly shown in the yearly breakdown of the industry in Figure 4, the trend of the growing importance of the business information services is hard to miss. This trend, together with the declining growth on the manufacturing side, shows sign of the move toward an information-intensive service-oriented economy that many have claimed. However, the influence of vertical disintegration cannot be ignored.<sup>6</sup> And there are not enough data to show whether

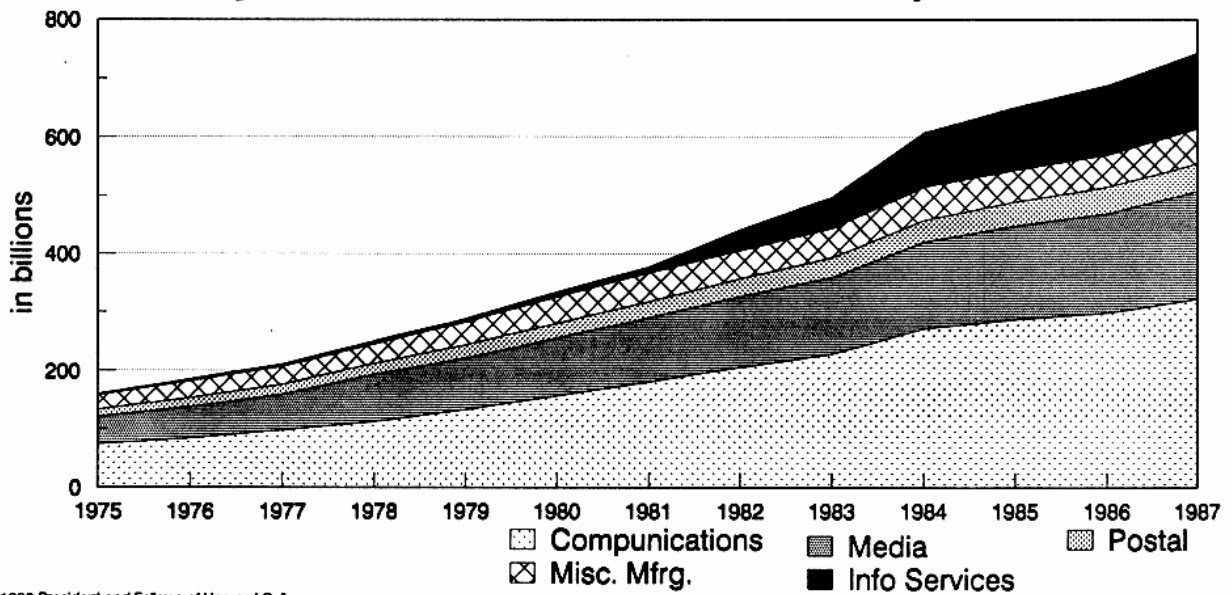


**Figure 3**  
**Basic Information Industry**



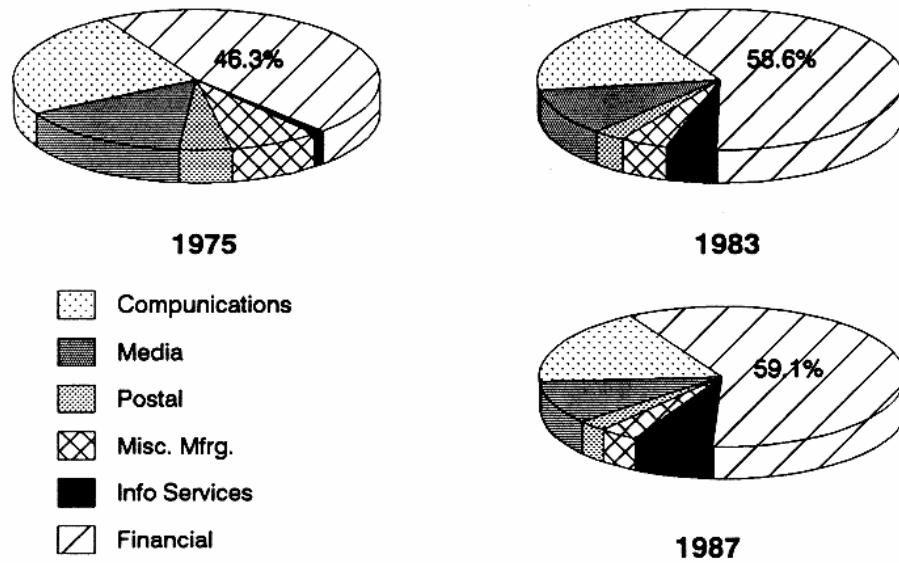
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**Figure 4**  
**Yearly Breakdown: Basic Information Industry, 1975 - 1987**



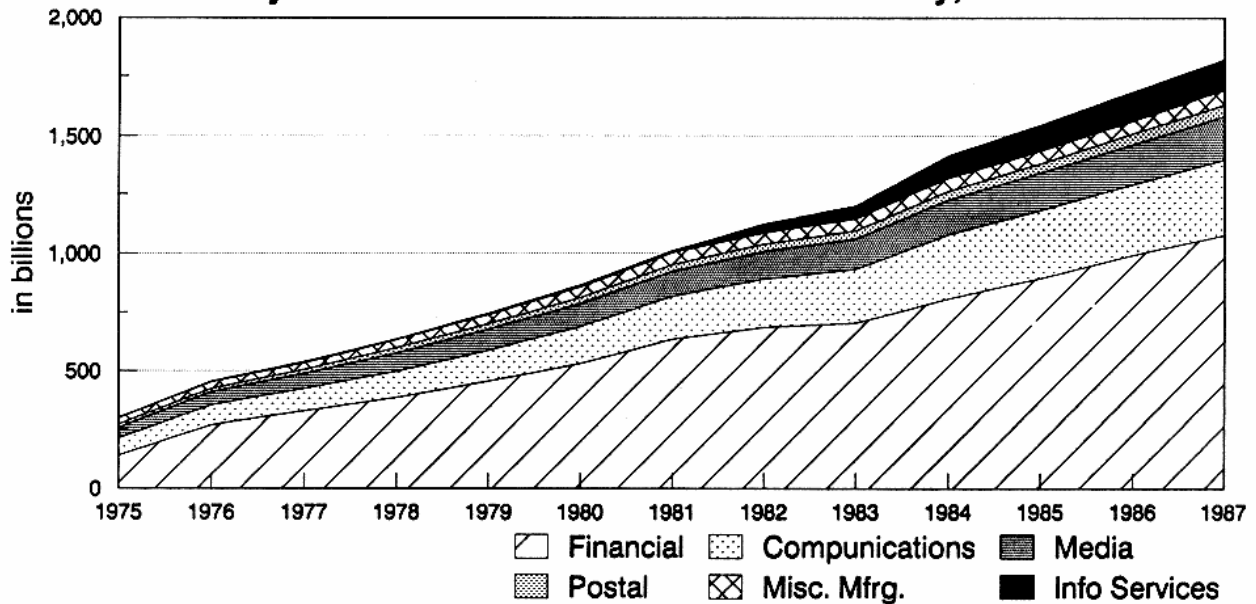
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**Figure 5**  
**Total Information Industry**



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**Figure 6**  
**Yearly Breakdown: Total Information Industry, 1975 - 1987**



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real growth or disintegration is more important. Figures 5 and 6 show the same information with the financial and legal sector included.

The growth of business information services highlights two phenomena. First, in many areas, the processing of information is of much higher value than the information itself. Airline information, properly packaged into Official Airline Guides or Computer Reservation Systems, is a classic example of value-added processing of information into sophisticated forms.<sup>7</sup> The other related phenomenon is that, thanks to the proliferation of information technology and to vertical disintegration, new businesses are constantly created. It is hard to predict what or how many will appear in the future.

Finally, another tendency is that the annual average growth rates from 1983 to 1987 are usually much lower than those from 1975 to 1983, except for several businesses. This is especially obvious for most manufacturing businesses. Though still growing, the information industry seems to be moving toward a more stable and mature state.

## NOTES

1. Benjamin M. Compaine, *Size and Growth Trends of the Information Industry, 1970 - 1983* (Cambridge, Mass.: Program on Information Resources Policy, Harvard University, 1986).
2. John F. McLaughlin with Anne Louise Antonoff, *Mapping the Information Business* (Cambridge, Mass.: Program on Information Resources Policy, Harvard University, 1986). They use the term *information business*, rather than *information industry*.
3. For a detailed definition of the classifications, see Appendix A.
4. All the revenue data in this paper are in current dollars, that is, they are *not* adjusted for inflation.
5. Because total revenues rather than value-added by the firms are used, there is double counting. Thus, the absolute values of the percent GNP might not be meaningful. However, the data serve as indicators of the growth trends from year to year since they are consistent.
6. Vertical disintegration occurs when a company spins off part of its operations to form an independent "supplier." For example, employees in the data processing group of an automobile firm might decide to start their own company. After the spin-off, the same group, now independent of the auto company, still performs the same data processing service for that company. However, the revenue of the group is now counted toward the information industry, but not before the spin-off when it was part of the auto company. This type of disintegration could be a source of the fast growth of the Business Information Services group.
7. For a detailed description, see *Information Industry Factbook* (Stamford, Conn.: Digital Information Group, 1989), p. 222, 283-5.

## Appendix A: Explanatory Notes

This study is intended to be an update of Benjamin Compaine's 1986 paper (see Note 1). Therefore, an effort was made to keep the data consistent with the old definitions whenever possible. Most of the data excerpted from either *U.S. Industrial Outlook* or *Statistical Abstract of the United States* are directly comparable to those of Compaine's.

However, due to the dynamic nature of the information industry, and sometimes simply to assure the availability of reliable data, some new businesses were added to this study, and some new definitions and/or data sources were necessarily adopted in order to keep the statistics correct and up-to-date, especially for the Business Information Services and Financial and Legal Services categories.

This appendix defines and gives the source of statistics for each business included in this paper.

**Gross National Product** From *Statistical Abstract of the United States* (Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, annual), (hereafter, *Statistical Abstract*).

### COMPUNICATIONS

**Telecommunications Services** Operating revenues, including both domestic and international telephone and telegraph services, from *U.S. Industrial Outlook* (Washington, D.C.: U.S. Department of Commerce, annual), (hereafter, *Industrial*

*Outlook*). This category includes independent, BOCs, AT&T, OCCs, VANs, cellular, satellite carriers, and telegraph.

**Telephone and Telegraph Equipment** Values of shipments from *Industrial Outlook*. This category includes manufacturers of switching and switchboard equipment, telephone instruments, teleprinting and telex equipment, and so on. Cellular and facsimile equipment is not included here.

**Radio Communication and Detection Equipment** Values of shipments from *Industrial Outlook*. According to the SIC definition, this category includes the following seven groups:

1. Communications systems and equipment, except broadcast. This includes fiber optics, microwave and satellite communication systems, mobile and cellular radio equipment, and facsimile.
2. Broadcast, studio, and related electronic equipment.
3. Alarm systems.
4. Traffic control equipment.
5. Intercommunications equipment.
6. Search and detection and navigation and guidance equipment.
7. Communications electronic equipment, not elsewhere classified.

**Electronic Components and Accessories** Values of shipments from *Industrial Outlook*.

**Electronic Computing Equipment ("Computer Hardware")** Values of shipments from *Industrial Outlook*.

**Computer Software and Programming Services** Estimated receipts of taxable firms from 1985 to 1988, from *1988 Service Annual Survey* (Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, September 1989), (hereafter,

*Service Annual Survey*). Data of 1983 and 1984 are from Bureau of the Census (unpublished data). Data from 1975 to 1982 are from *Computer Industry Review and Forecast* (Framingham, Mass.: International Data Corp., semi-annual), (hereafter, *Computer Industry Review*).

## **MEDIA AND ENTERTAINMENT**

**Broadcast TV** Estimated advertising expenditures in TV industry, including network, spot (national), and local, from *Statistical Abstract*.

**Broadcast Radio** Estimated advertising expenditures in radio industry, including network, spot (national), and local, from *Statistical Abstract*.

**Cable TV** Revenues from *Statistical Abstract*. 1987 figure is projected from a 1986 datum using the average growth rate from 1984 to 1986 since it has been fairly steady.

**Motion Picture** Estimated annual receipts of taxable firms from 1985 to 1988 from *Service Annual Survey*. Data from 1978 and 1984 are from Bureau of the Census (unpublished data). Both motion picture production, distribution, and allied services (SIC 781 and 782) and Motion picture theaters (783) are included here.

**Radio and TV Receiving Sets** Values of shipments from *Industrial Outlook*.

**Newspaper Publishing** Values of shipments from *Industrial Outlook*.

**Periodical Publishing** Values of shipments from *Industrial Outlook*.

**Book Publishing** Values of shipments from *Industrial Outlook*.

**Miscellaneous Publishing** Values of shipments from *Industrial Outlook*. This category includes catalogs, directories, newsletters, business publications, calendars, shoppers, maps, and so on.

**Book and Commercial Printing** Values of shipments from *Industrial Outlook*.

**Theater** Broadway and road shows box office receipts from *Statistical Abstract*.

**Spectator Sports** Personal consumption expenditures for spectator sports from *Statistical Abstract*.

## **POSTAL AND DELIVERY SERVICES**

**U.S. Postal Services** Operating revenues of U.S. Postal Service from the *Statistical Abstract*.

**Private Delivery Services** Sums of total revenues, including both domestic and overseas operations, of United Parcel Service, Federal Express, Emery Air Freight, Purolator Courier Corp. (courier services acquired by Emery in 1987), Air Express International, and Airborne Freight from respective annual reports and 10-K forms of various years.

## **BUSINESS INFORMATION SERVICES**

**Advertising** Estimated receipts of taxable firms from 1985 to 1988, including both advertising agencies (SIC 7311) and other advertising services and representatives,



from *Service Annual Survey*. Data of 1983 and 1984 are from Bureau of the Census (unpublished data).

**Miscellaneous Commercial Services** Estimated receipts of taxable firms from 1985 to 1988 from *Service Annual Survey*. Data of 1983 and 1984 are from Bureau of the Census (unpublished data). This category includes direct mailing services, commercial art and photography, and stenographic services.

**Data Processing and Other Computer Services** Estimated receipts of taxable firms from 1985 to 1988 from *Service Annual Survey*. Data of 1983 and 1984 are from Bureau of the Census (unpublished data). Data from 1975 to 1982 are from *Computer Industry Review*. This category includes data processing services (SIC 7374) and computer related services, not elsewhere classified (SIC 7379). Leasing and renting (not manufacturers) and computer consultants on a fee basis are included here.

**Management, Consulting, and Public Relations Services** Revenues from *Industrial Outlook*. According to SIC definition, this category includes five groups:

1. Management and information system consulting.
2. Management and administration services.
3. Public relation services.
4. Economic, marketing, and sociological research.
5. Other consulting services, not elsewhere classified.

**Accounting** Estimated receipts of taxable firms from 1985 to 1988 from *Service Annual Survey*. Data of 1983 and 1984 are from Bureau of the Census (unpublished data).

**Credit Reporting and Collection Agencies** Estimated receipts of taxable firms from 1985 to 1988 from *Service Annual Survey*. Data of 1983 and 1984 are from

Bureau of the Census (unpublished data). This category includes mercantile and consumer credit reporting or the collection or adjustment of claims.

**Electronic Information Services** Revenues from *Information Industry Factbook* (Stamford, Conn.: Digital Information Group, 1989). This category includes database and on-line services, defined in the generic sense. The services cover all functional areas, from financial to scientific.

**Airline Computer Reservation Systems** Cash revenues, including participant fees and subscriber fees, from *Study of Airline Computer Reservation Systems* (Washington, D.C.: Department of Transportation, May 1988). Data of 1987 and 1988 are projected using the average growth rate from 1983 to 1986.

## **MISCELLANEOUS MANUFACTURING**

**Paper and Board** Values of shipments from *Industrial Outlook*.

**Photographic Equipment and Supplies** Values of shipments from *Industrial Outlook*.

## **FINANCIAL AND LEGAL SERVICES**

**Commercial Banks and Savings Institutions** Sums of operating incomes, including interest and non-interest, of FDIC-insured commercial banks, FDIC-insured savings banks, and FSLIC-insured savings institutions, from *FDIC Statistics on Banking* (Washington D.C.: Federal Deposit Insurance Corporation, annual) and *Moody's Bank and Finance Manual* (New York: Moody's Investors Services, annual).

**Insurance Companies** Sums of total incomes, including premiums received and investment/other incomes, from *Statistical Abstract*.

**Legal Services** Revenues from *Industrial Outlook*.

**Securities Brokers** Unconsolidated incomes of brokers/dealers registered with U.S. Securities and Exchange Commission (SEC) from SEC annual reports, various years. Figure of 1987 is projected from a 1986 datum using the average growth rate from 1984 to 1986.

## **Appendix B: Advertising Expenditures**

In Table 1B, the size of TV and radio industries is evaluated by using advertising expenditures in these industries, rather than their actual operating incomes. Therefore, a complete set of data on this topic has been included, below, for completeness purpose.

Table B shows the estimated annual U.S. advertising expenditures from 1975 to 1987. The data were prepared by Robert J. Coen of McCann-Erickson, Inc., for *Advertising Age*. The category "Others" includes business publications, outdoor advertising, Yellow Pages, weekly newspapers (both shoppers and subscription type), point-of-sales (POS) advertising, and so on.

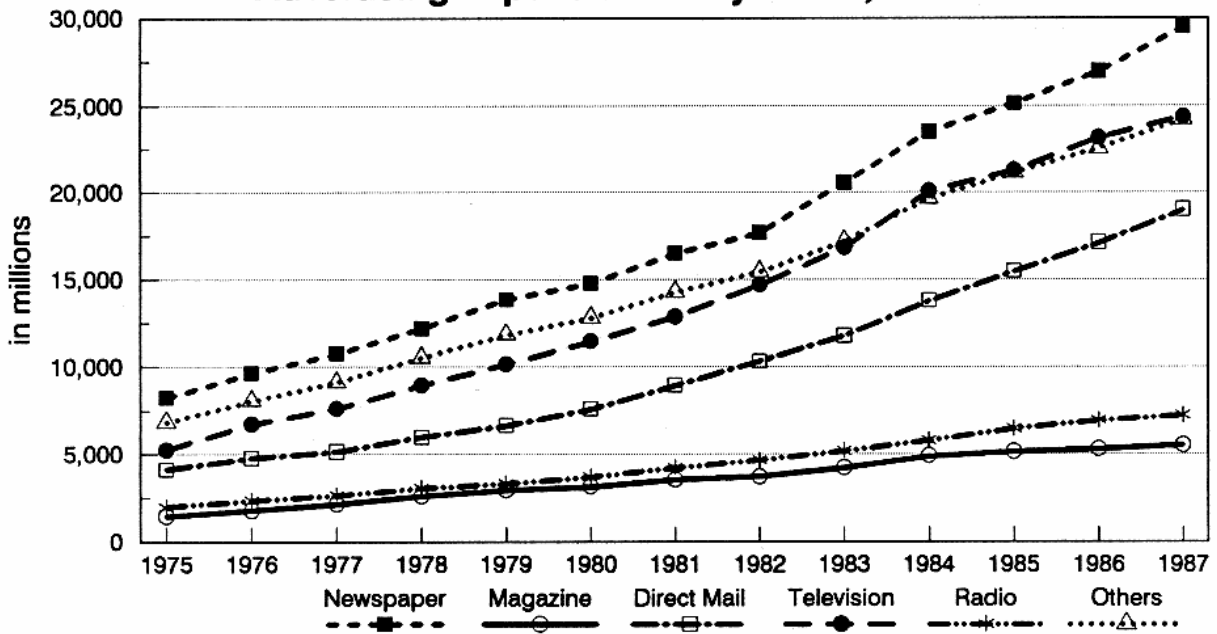
Figures B-1 and B-2 show advertising expenditures by media. Figure B-3 shows the percentage breakdowns of the spending into six categories. One general trend illustrated by these figures is that the advertising expenditures grow steadily over the years, and that the growth rate is in line with the information industry. Figure B-3 also shows that spending on television and direct mail grew faster than the rest of the media.

Table B. ADVERTISING EXPENDITURES (in millions of dollars)

Year	Newspaper	Magazine	Radio	Television	Direct Mail	Others	TOTAL
1975	\$8,234	\$1,465	\$1,980	\$5,263	\$4,124	\$6,834	\$27,900
1976	\$9,618	\$1,789	\$2,330	\$6,721	\$4,786	\$8,056	\$33,300
1977	\$10,751	\$2,162	\$2,634	\$7,612	\$5,164	\$9,117	\$37,440
1978	\$12,214	\$2,597	\$3,052	\$8,955	\$5,987	\$10,525	\$43,330
1979	\$13,863	\$2,932	\$3,310	\$10,154	\$6,653	\$11,868	\$48,780
1980	\$14,794	\$3,149	\$3,702	\$11,474	\$7,596	\$12,835	\$53,550
1981	\$16,528	\$3,533	\$4,230	\$12,886	\$8,944	\$14,309	\$60,430
1982	\$17,694	\$3,710	\$4,670	\$14,716	\$10,319	\$15,471	\$66,580
1983	\$20,582	\$4,233	\$5,210	\$16,842	\$11,795	\$17,188	\$75,850
1984	\$23,522	\$4,932	\$5,817	\$20,090	\$13,800	\$19,659	\$87,820
1985	\$25,170	\$5,155	\$6,490	\$21,290	\$15,500	\$21,145	\$94,750
1986	\$26,990	\$5,317	\$6,949	\$23,185	\$17,145	\$22,554	\$102,140
1987	\$29,485	\$5,530	\$7,240	\$24,370	\$19,030	\$24,205	\$109,860
<b>Average Annual Growth</b>							
1975 - 87	11.3%	11.9%	11.5%	13.8%	13.6%	11.2%	12.2%
1975 - 83	12.2%	14.3%	12.9%	15.7%	14.1%	12.3%	13.4%
1983 - 87	9.4%	7.0%	8.6%	9.8%	12.7%	9.0%	9.8%

Source: Robert J. Coen of McCann-Erickson, for Advertising Age.

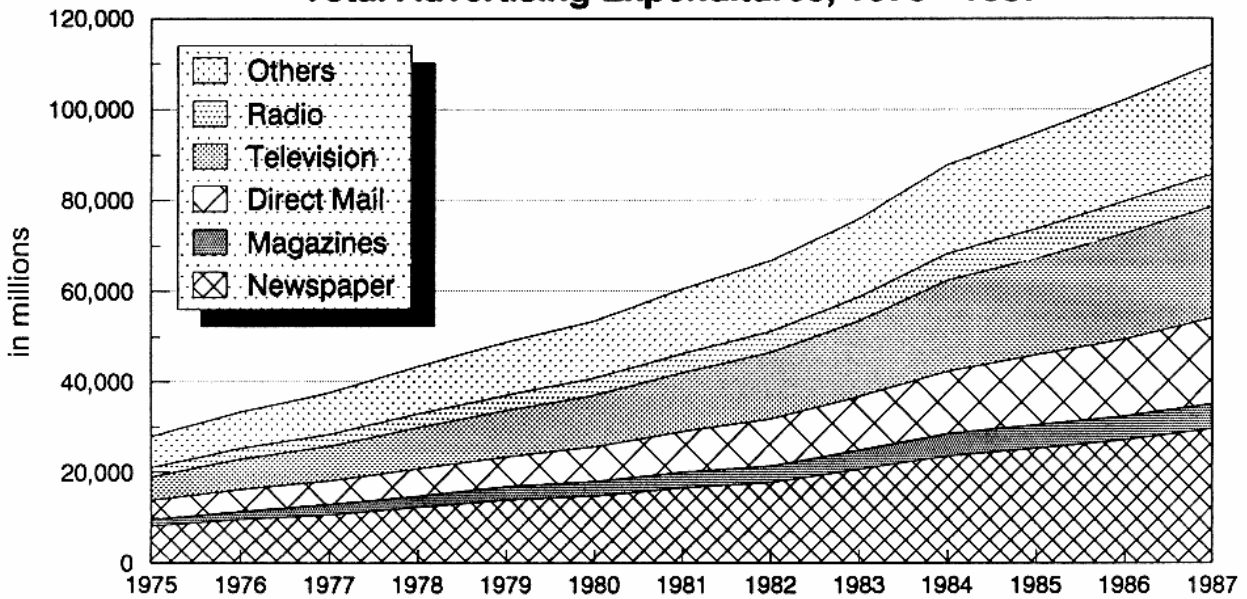
**Figure B-1**  
**Advertising Expenditures: by Media, 1975 - 1987**



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Source: Robert J. Coen, McCann-Erickson, Inc.

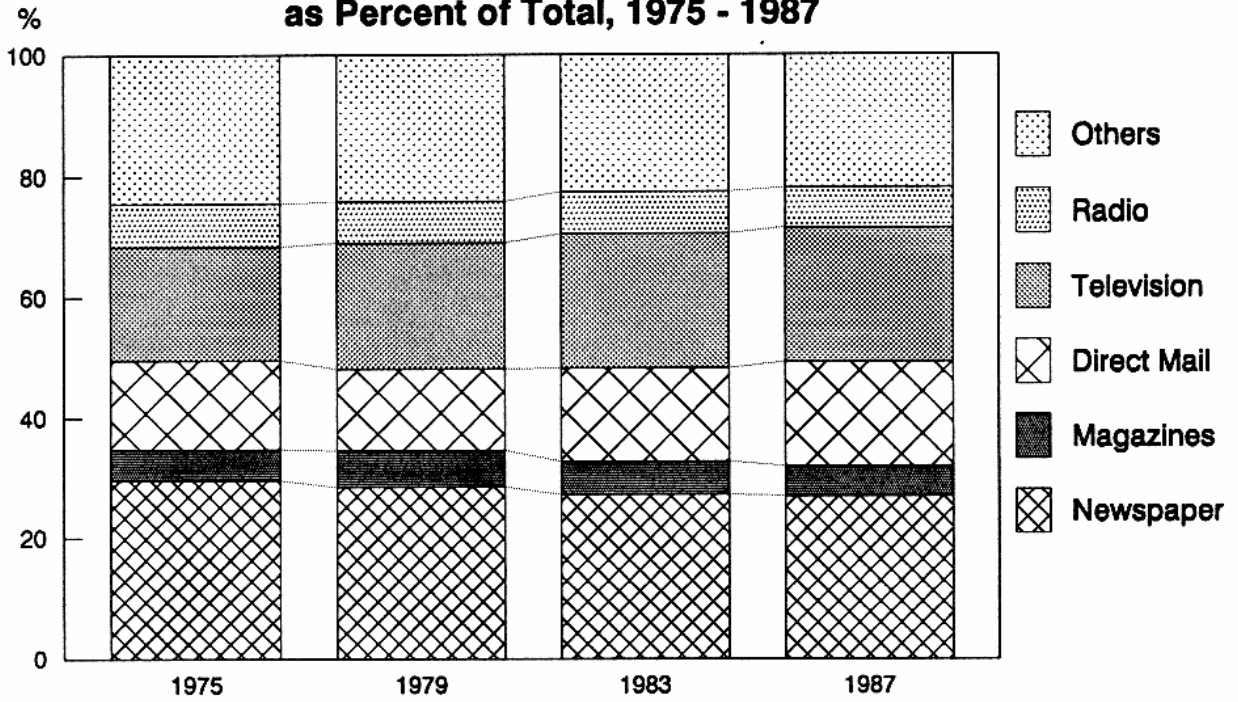
**Figure B-2**  
**Total Advertising Expenditures, 1975 - 1987**



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Source: Robert J. Coen, McCann-Erickson, Inc.

**Figure B-3**  
**Advertising Spending by Media**  
**as Percent of Total, 1975 - 1987**



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Source: Robert J. Coen, McCann-Erickson, Inc.