

Incidental Paper

**Size, Growth, and Trends
of the Information Industries:
1978–1990**

Derrick C. Huang

Program on Information Resources Policy

Harvard University

Cambridge, Massachusetts

Center for Information
Policy Research

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Size, Growth, and Trends of the Information Industries: 1978–1990

Derrick C. Huang
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Project Director
Anthony G. Oettinger

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Managing Director
John C. LeGates

Executive Director
Oswald H. Ganley

Derrick C. Huang is a candidate for the Ph.D at Harvard University in Information Technology Management and Policy. As a research affiliate with the Program, he is currently examining the dynamics of wireless communications and other alternative telecommunications in the U.S. and the world.

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The Information Industries

This paper is the third of a series, the first two papers having been published in 1986 and 1990,¹ in an effort to describe the size and growth of the information industries on the basis of revenue data.² The businesses included in this paper range from telephony to media to postal service and are loosely grouped into four sectors: (1) telecommunications and computer, (2) broadcasting and entertainment, (3) publishing and printing, and (4) information services.

Size and Growth

Total revenues, in current dollars, from 1978 to 1990 of the four business sectors and of the information industries as a whole are summarized in **Table 1**.³ Total revenues of the information industries as a whole reached more than \$860 billion in 1990 (in current dollars). For the same year, the (nominal) gross domestic product (GDP) was \$5,514 billion.⁴

Figure 1 illustrates, on a logarithmic scale, the growth of the information industries and the GDP from 1978 to 1990. The information industries have been expanding steadily: from 1982 to 1986, their average growth rate was 14.48 percent and from 1986 to 1990, 7.56 percent. The growth rates of the GDP for the same two periods were 7.91 percent and 6.52 percent, respectively. As a result, the total output of the information industries increased from 10.1 percent

¹Benjamin M. Compaine, *Size and Growth Trends of the Information Industry, 1970-1983* (Cambridge, Mass.: Program on Information Resources Policy, Harvard University, I-86-2, 1986); Derrick C. Huang, *Size and Growth Trends of the Information Industry, 1975-1987* (Cambridge, Mass.: Program on Information Resources Policy, Harvard University, I-90-1, 1990).

²Because revenue data are used, nonprofit activities related to information industries are not taken into account in this paper, though they can be quite important. Library services, for instance, is a crucial information delivery mechanism that cannot be measured by revenues. For a discussion of the statistical importance of library services, see Mary Jo Lynch, *Libraries In An Information Society: A Statistical Summary* (Chicago, Ill.: American Library Association, 1987).

³In this paper, all revenue data and the GDP are in current dollars: they are not adjusted for inflation. Data in constant dollars are not used, because there is no single, consistent indicator of inflation that can be used for all businesses. See Appendix for details.

⁴Another indicator of national aggregate output is the gross national product, or GNP. See Appendix for the difference between the GDP and GNP.

Table 1
Size and Growth of Information Industries and the GDP

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Average Growth		
														1982-86	1986-90	
Telecommunications and Computer	77.27	89.79	112.98	130.45	148.50	172.15	191.59	205.17	215.72	226.78	247.85	260.43	272.01		9.86%	5.92%
Broadcasting and Entertainment	25.76	27.37	31.19	34.85	38.54	43.53	50.63	57.46	62.26	68.33	76.08	81.85	87.50		12.78%	8.68%
Publishing and Printing	47.44	52.80	58.43	65.03	72.87	80.19	89.38	97.27	103.20	120.35	130.49	137.68	145.33		9.11%	8.43%
Information Services	52.41	59.56	70.97	83.06	115.34	167.47	185.56	229.18	260.49	281.64	310.43	344.25	358.96		23.29%	8.23%
Total Revenues of Information Industries	202.9	229.5	273.6	313.4	375.2	463.3	517.2	589.1	641.7	697.1	764.8	824.2	863.8		14.48%	7.56%
Gross Domestic Product (GDP)	2,250	2,489	2,708	3,031	3,150	3,405	3,777	4,039	4,269	4,540	4,900	5,244	5,514		7.91%	6.52%
Total Information Industries as Percentage of GDP	9.0%	9.2%	10.1%	10.3%	11.9%	13.6%	13.7%	14.6%	15.0%	15.4%	15.6%	15.7%	15.7%			

Numbers are in billions of U.S. (current) dollars.

of the GDP in 1980 to 15.7 percent in 1990.⁵

Revenues of the businesses in the information industries are listed in **Tables 2 to 5**. From 1986 to 1990, three businesses posted more than 20 percent growth: cellular telephony (51.99 percent), opto-electronic database-media and delivery (47.28 percent), and personal computer networking (35.72 percent). Other high-growth businesses include paging, programming services and software, private delivery services, cable television, airline computer reservation systems, and media for entertainment. From 1986 to 1990, while most businesses in the information industries were growing, the telegraph business posted a 18.61 percent decrease.⁶

Trends

One noticeable trend is that the growth of the information industries as a whole has slowed down. Since 1986, the total information industries as a percentage of the GDP have shown little or no increase (**Table 1**). For most information businesses, the average growth rate from 1986 to 1990 was lower than that from 1982 to 1986. The information industries are becoming a mature part of the U.S. economy.

This trend toward maturity also shows up when the growth rates of individual businesses are examined. The relatively small, newly established

⁵Note that in the calculation of the GDP, values added, rather than revenues, of different business activities are used. Thus, in order to know what part of the GDP is contributed by the information industries, values added (that is, roughly, revenues less total input) need to be used. The "total output of information industries as percentage of GDP," shown in the text and **Figure 1**, only demonstrates the relative growth of the industries in question and the aggregate national production.

⁶The only other businesses that showed negative growth in that period are telephone and telegraph equipment and long-distance telephony. However, the decrease in revenues of long-distance telephone companies may not signify a decrease in their economic activity, because a large part of their receivables is discounted from their revenues as the access charge, which is paid to their local counterparts. The access charge has always been determined politically. For a detailed description of access charges, see Anthony G. Oettinger, *The Formula Is Everything: Costing and Pricing in the Telecommunications Industry* (Cambridge, Mass.: Program on Information Resources Policy, Harvard University, P-88-2, 1988).

4 Information Industries

Figure 1
Information Industries and the GDP
(on logarithmic scale)

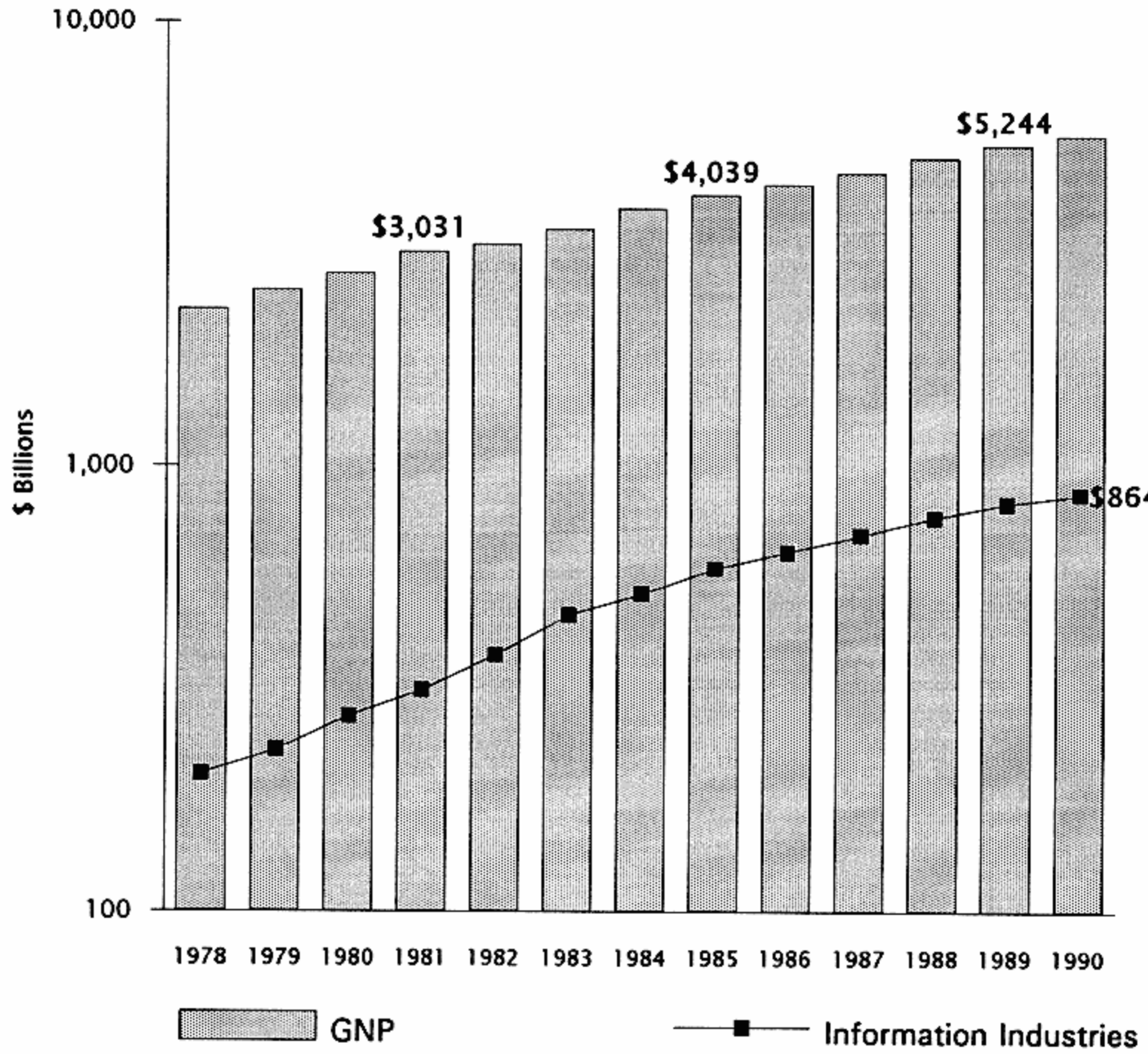


Table 2
Industry Revenues: Telecommunications and Computer

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Average Growth		
														1982-86*	1986-90*	
Telecommunications Services	Local Telephony and Access	21.72	23.48	25.99	29.64	33.57	35.27	30.30	33.89	39.74	41.99	43.15	45.99	47.97	5.02%	4.75%
	Long-Distance Telephony	24.43	27.60	31.00	36.09	39.87	41.77	46.58	48.33	48.76	48.13	49.34	48.68	47.92	5.23%	-0.42%
	Cellular Telephony	N/A	N/A	N/A	N/A	N/A	N/A	0.18	0.48	0.82	1.15	1.96	3.34	4.64	N/A	51.99%
	Paging	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.33	1.48	1.90	N/A	19.57%
Communications Products	Telegraph	1.03	1.13	1.23	1.36	1.42	1.34	1.38	1.37	1.21	1.08	0.88	1.02	0.41	-3.76%	-18.61%
	Telephone and Telegraph Equipment	8.00	9.68	11.16	12.18	11.89	12.12	14.48	16.27	14.75	16.53	16.67	14.68	14.70	6.11%	-0.05%
	Radio Communications Equipment	N/A	N/A	5.11	5.72	6.85	7.69	9.26	10.67	11.18	11.50	12.68	13.75	15.40	13.16%	8.36%
	Personal Computer Networking	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.60	2.16	2.94	4.00	N/A	35.72%
	Systems, Components, and Peripherals	15.77	20.40	25.66	30.16	34.75	39.53	49.28	49.00	48.68	48.80	53.23	54.83	54.80	9.30%	3.07%
	Programming Services and Software	1.35	1.67	3.87	4.90	7.25	15.78	19.06	21.03	24.03	28.11	34.78	40.53	43.69	15.13%	15.64%
	Data Processing Services	4.97	5.83	6.93	7.87	8.87	12.57	14.12	15.16	16.41	17.02	18.87	19.60	21.31	9.33%	6.76%
	Other Computer Services	N/A	N/A	2.03	2.53	4.03	6.09	6.96	8.98	10.14	10.87	12.80	13.59	15.28	18.75%	10.77%
	TOTAL	77.27	89.79	112.98	130.45	148.50	172.15	191.59	205.17	215.72	226.78	247.85	260.43	272.01	10.66%	5.92%

Numbers are in billions of U.S. (current) dollars.

*Average growth for 1983-86 is shown for categories whose 1982 data are not available or not comparable with later data.

*Average growth rates of paging and computer networking are for 1988-90 and 1987-90, respectively.

Table 3
Industry Revenues: Broadcasting and Entertainment

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Average Growth	
														1982-86	1986-90
Broadcasting Television	8.96	10.15	11.47	12.89	14.72	16.84	20.09	21.02	22.88	23.90	25.69	26.89	28.41	11.80%	5.51%
Cable Television	1.50	1.91	2.60	3.72	5.10	6.51	7.89	9.31	10.52	12.37	13.98	15.93	17.78	19.98%	13.39%
Broadcasting Radio	3.05	3.31	3.70	4.23	4.67	5.21	5.82	6.49	6.95	7.21	7.80	8.32	8.73	10.46%	5.84%
Media for Entertainment	6.77	6.51	6.61	6.94	7.10	7.58	8.40	12.77	14.03	17.32	20.72	21.71	23.36	19.89%	12.75%
Broadcasting Equipment	N/A	N/A	1.19	1.45	1.54	1.46	1.48	1.56	1.55	1.61	1.80	1.85	1.90	0.24%	5.20%
Household Audio and Video Equipment	5.48	5.49	5.61	5.64	5.42	5.92	6.95	6.32	6.33	5.93	6.10	7.14	7.32	4.44%	3.93%
TOTAL	25.76	27.37	31.19	34.85	38.54	43.53	50.63	57.46	62.26	68.33	76.08	81.85	87.50	12.78%	8.68%

Numbers are in billions of U.S. (current) dollars.

Table 4
Industry Revenues: Publishing and Printing

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Average Growth		
														1982-86*	1986-90	
Newspapers	14.56	16.20	17.96	20.05	21.28	23.26	25.30	27.02	29.21	31.85	32.93	34.15	35.27		8.25%	4.67%
Periodicals	7.16	8.31	8.97	9.84	11.48	12.44	14.05	15.25	15.72	17.33	18.61	19.79	20.72		8.24%	6.93%
Book Publishing	5.40	5.57	6.11	6.76	7.74	8.43	9.46	10.20	10.73	12.62	13.57	14.07	14.85		8.54%	7.93%
Book Printing	1.92	2.02	2.25	2.56	2.39	2.57	2.83	2.92	3.10	3.26	3.57	3.84	4.03		6.74%	6.72%
Commercial and Advertising Printing	16.51	18.56	20.64	23.15	27.12	28.98	33.11	35.56	37.36	44.79	47.46	50.31	53.08		8.40%	8.52%
Opto-Electronic Database — Media and Delivery	N/A	N/A	N/A	N/A	N/A	1.50	1.40	1.90	2.20	2.70	6.20	7.50	9.00		14.95%	47.28%
Other Commercial or Professional Publishing	1.90	2.14	2.51	2.68	2.87	3.01	3.22	4.44	4.89	7.81	8.15	8.02	8.38		14.93%	11.17%
TOTAL	47.44	52.80	58.43	65.03	72.87	80.19	89.38	97.27	103.20	120.35	130.49	137.68	145.33		9.11%	8.43%

Numbers are in billions of U.S. (current) dollars.

*Average growth for 1983-86 is shown for those categories whose 1982 data are not available or not comparable with later data.

Table 5
Industry Revenues: Information Services

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Average Growth	
														1982-86 ^a	1986-90
Investment Consulting	11.27	13.96	19.98	24.37	28.80	36.90	39.61	49.84	64.42	66.10	66.10	76.86	71.42	22.64%	2.94%
Legal Services	21.29	22.67	25.69	30.64	34.33	39.84	45.86	52.84	58.90	67.00	75.95	83.07	91.12	14.47%	11.13%
Management Consulting and Public Relations	N/A	N/A	N/A	N/A	20.63	24.78	27.83	38.54	42.30	44.25	52.53	57.32	61.20	20.16%	9.75%
Public Accounting and Bookkeeping	N/A	N/A	N/A	N/A	N/A	17.11	18.08	21.24	22.91	26.61	29.70	33.30	34.24	10.33%	10.11%
Advertising	N/A	N/A	N/A	N/A	N/A	11.98	12.45	14.94	15.80	16.80	18.34	19.02	19.94	9.90%	5.91%
Direct Mailing Advertising Services	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.73	5.91	6.69	7.31	8.15	9.12	N/A	11.05%
Credit Collection and Reporting	N/A	N/A	N/A	N/A	N/A	2.88	4.26	4.17	4.50	5.26	5.51	6.11	6.66	17.95%	9.77%
Airline Computer Reservation Systems	0.01	0.02	0.06	0.11	0.16	0.26	0.38	0.67	0.82	1.07	1.18	1.30	1.43	51.84%	13.38%
Postal Services	15.84	18.00	19.11	20.78	23.63	24.70	26.47	28.96	31.02	32.30	35.94	38.92	40.07	7.05%	6.62%
Private Delivery Services	4.00	4.91	6.12	7.15	7.79	9.01	10.61	12.25	13.90	15.55	17.87	20.19	23.76	15.58%	14.05%
TOTAL	52.41	59.56	70.97	83.06	115.34	167.47	185.56	229.18	260.49	281.64	310.43	344.25	358.96	23.29%	8.23%

Numbers are in billions of U.S. (current) dollars.

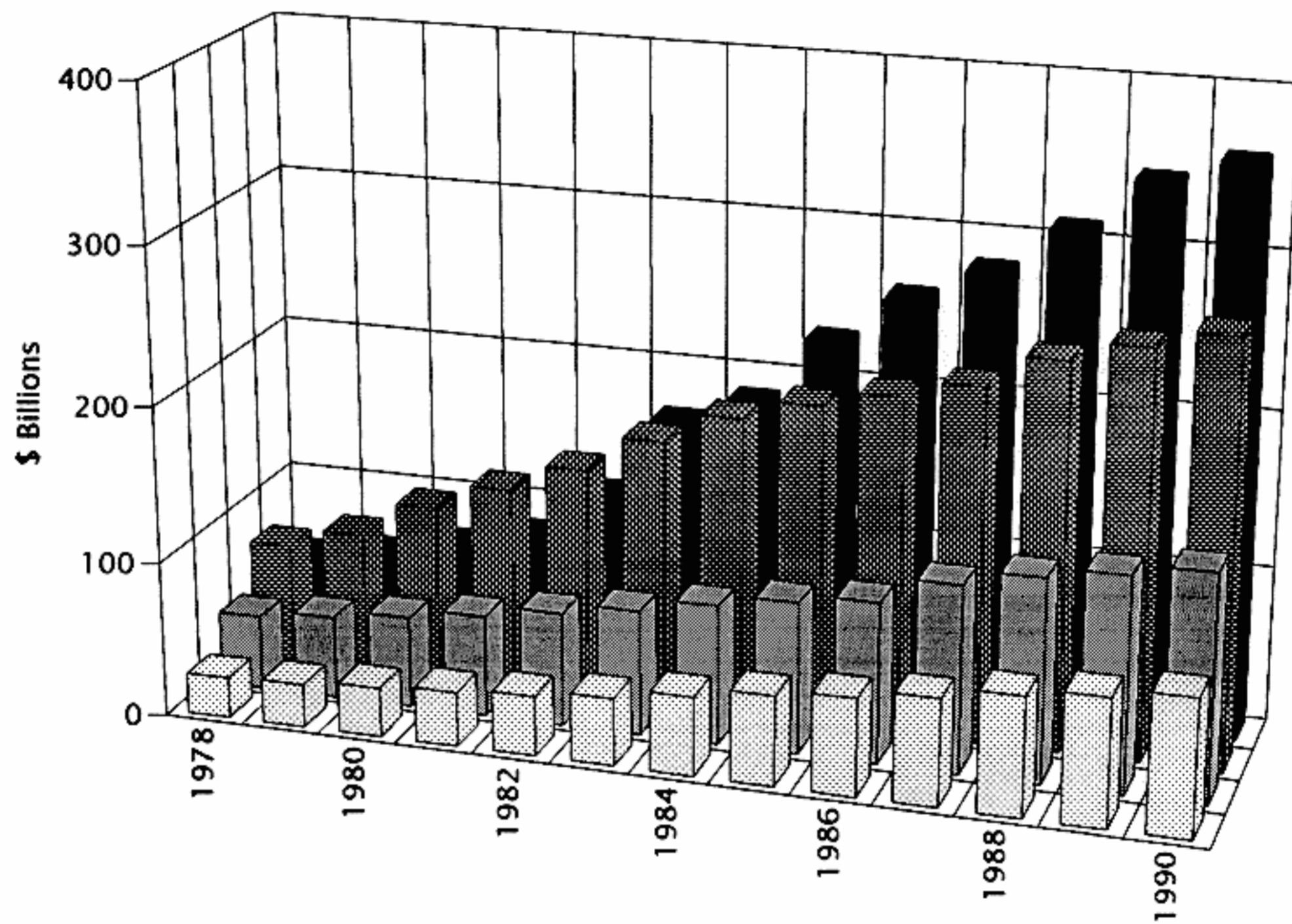
^aAverage growth for 1983-86 is shown for those categories whose 1982 data are not available or not comparable with later data.

businesses, such as cellular telephony and personal computer networking, were the fastest growing ones in the information industries. Large, well-established businesses, such as local and long-distance telephony, broadcasting TV, and broadcasting radio, became steady rather than expansionary ones. As a consequence, the growth of the information industries as a whole slowed down, because revenues of larger businesses showed little increase and those that expanded were relatively small ones.

Finally, of the four sectors, information services became more important in terms of output. Among other things, innovations in information technology and their implementation enhanced or created information services.⁷ **Figures 2 and 3** illustrate revenues of the four sectors in terms of absolute dollar amount and percentage of the total output of the information industries. The trend toward growing information services seems to be in conformance with a popular claim that the service sector is increasingly important in U.S. economy.

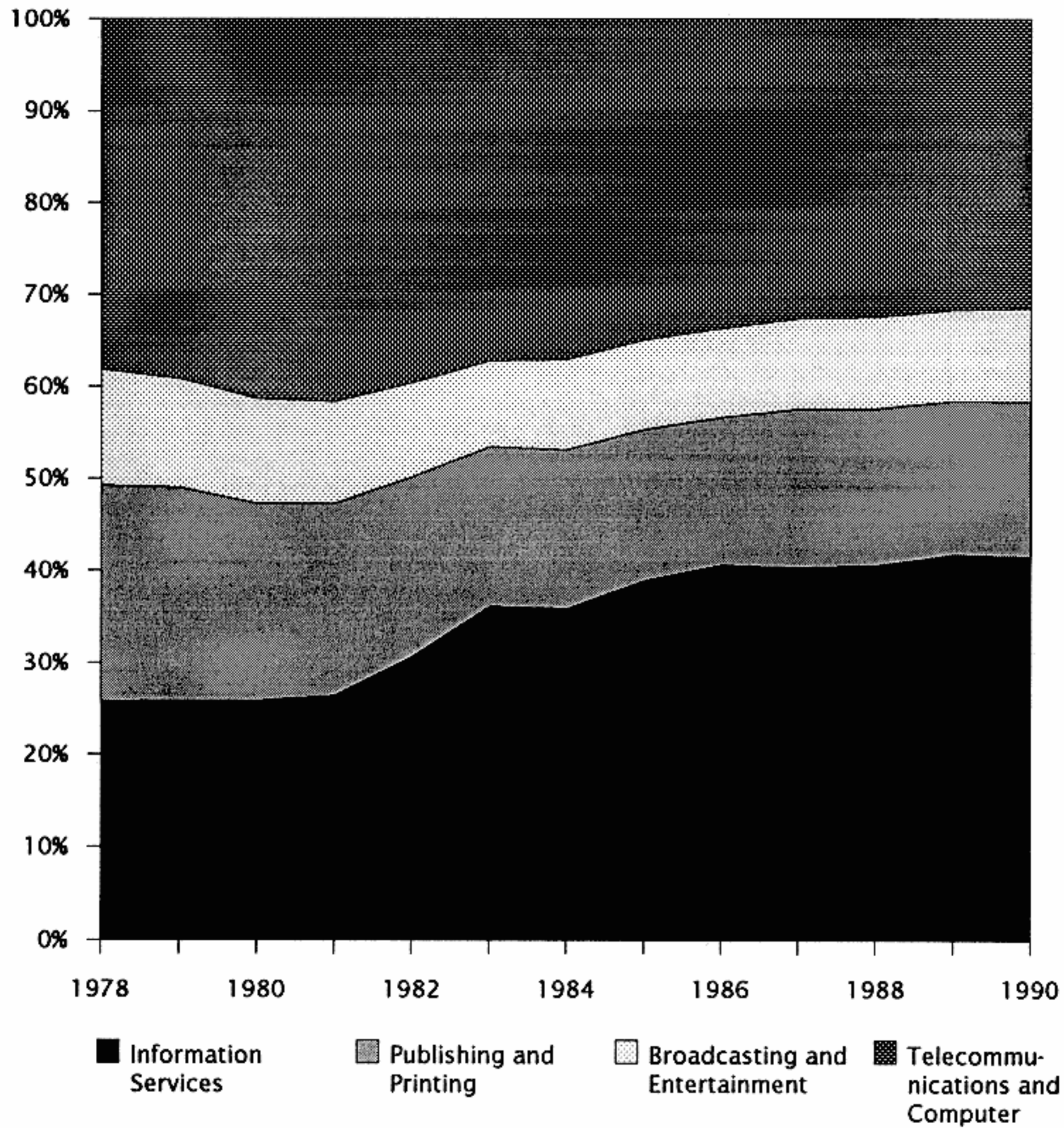
⁷Use of computers and communications technologies, for example, has dramatically altered the nature of such businesses as credit reporting and airline reservation systems.

Figure 2
Revenues of Information Industries:
Growth of Sectors



■ Broadcasting and Entertainment ■ Publishing and Printing ■ Telecommunications and Computer ■ Information Services

Figure 3
Sectors of Information Industries:
Yearly Breakdown



Appendix

Definition and Sources of Data

How the four sectors and businesses are defined and how the data for them are compiled are integral to this paper, because, as is always the case, the validity of the statistics depends on their definition and on the methods of collection. This appendix explains the definitions adopted and the sources of statistics used in the paper.

All data in this paper are in current dollars, rather than constant dollars, because a consistent indicator of inflation that can be used for all businesses does not exist. The consumer price index (CPI), which measures the price fluctuation of a "basket of goods," is the generally accepted indicator of inflation for the GDP or GNP. But the inflation rates of different goods can be very different. The CPI increased, rather steadily, at an average of 4.7 percent per year from 1986 to 1990. Some items, such as medical care, showed higher than average price increases, and others, such as energy and fuel oil, exhibit erratic changes. The price index for telephone services increased, on average, only 0.1 percent annually, well below other items.⁸

Because this study was intended, in part, to update the author's 1990 paper,⁹ an effort was made to keep the data consistent with those in the earlier study. However, the dynamic structure of the information industries and their products and services made adoption of new definitions and data sources necessary in many cases. For this reason, a comparison of the statistics here and those in the earlier study should only be attempted cautiously.

I. Telecommunications and Computer

This group includes three classes of businesses: telecommunications services, communications products, and computers.

⁸U.S. Department of Commerce, *Statistical Abstract of the United States 1992* (Washington, D.C.: Government Printing Office, 1992), Table 739.

⁹See footnote 1.

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- **Local Telephone and Access** Revenues are derived from local public switched telephone services, local private line services, payphone services, and interstate access services. From the Federal Communications Commission, *Statistics of Communications Common Carriers*, 1990-91 ed. (Washington, D.C.: the FCC, 1991), pp. 231-32 (hereafter, *SOCC 1990-91*). Before divestiture in 1984, access charges paid by the long-distance company of American Telephone and Telegraph Company (AT&T) to the Bell Operating Companies (BOCs) were an internal transaction; to prevent double counting and to retain consistency, revenues for 1984 and beyond are derived using the formula: $(Total\ local\ telephone\ revenues) + (Access\ charge\ revenues) - (Access\ charge\ paid\ by\ AT\&T)$.
- **Long-Distance Telephony** Revenues of long-distance telephone operations after access charges made to the local exchange carriers (LECs). From *SOCC 1990-91*, pp. 233-34.
- **Cellular Telephony** Data from Cellular Telecommunications Industry Association (CTIA), quoted in Shearson Lehman Brothers, Inc., *Cellular Trends CTIA Data — Industry Report* (September 18, 1992) [NEXIS].
- **Paging** From Robert Wysor, "Survey Shows Paging Growth and Predicts Stable Revenue," *Telocator* (August/September 1992), pp. 20-24.
- **Telegraph** From *SOCC 1990-91*, p. 169.
- **Telephone and Telegraph Equipment** From U.S. Department of Commerce, International Trade Administration, *U.S. Industrial Outlook* (Washington, D.C.: Government Printing Office, annual) (hereafter, *Industrial Outlook*). Data are product shipment values.
- **Radio Communications Equipment** Total revenues of "Commercial, industrial, and military communications equipment," from Electronic Industry Association (EIA), quoted in U.S. Department of Commerce, *Statistical Abstract of the United States* (Washington, D.C.: Government

Printing Office, annual) (hereafter, *Statistical Abstract*). The 1990 revenue is an EIA estimate.

- **Personal Computer Networking** Revenues of networking interface cards, bridge and router hardware, network servers, and networking software. From the Gartner Group, quoted in Jack Shandle, "It Looks Like Another Year of Double-Digit Growth," *Electronics* (January 1991), p. 60.
- **Computer Systems, Components, and Peripherals** From *Industrial Outlook*. Data are product shipment values.
- **Programming Services and Software** Revenues of packaged software, custom software, and systems integration. Data for 1984-1990 are from U.S. Bureau of the Census, *Service Annual Survey: 1990* (Washington, D.C.: Government Printing Office, Current Business Report BS/90-1, 1991) (hereafter, *Service Annual Survey 1990*). The 1983 revenue is a U.S. Department of Commerce published datum. Data for 1978-1982 are from International Data Corporation, *Computer Industry Report and Forecast*, semiannual (hereafter, *Computer Industry Report*).
- **Data Processing Services** Data for 1984-1990 are from *Service Annual Survey 1990*. Revenue for 1983 is a U.S. Department of Commerce published datum. Data for 1978-1982 are from *Computer Industry Report*.
- **Other Computer Services** Revenues derived from computer professional services, leasing/rental, and so on. Data for 1984-1990 are from *Service Annual Survey 1990*. The 1983 revenue is a U.S. Department of Commerce published datum. Data for 1980-1982 are from *Computer Industry Report* (for professional services only).

II. Broadcasting and Entertainment

- **Broadcasting Television** Advertising expenditures in broadcasting television, from McCann-Erickson, *Advertising Age*, quoted in *Statistical Abstract*.
- **Cable Television** From Paul Kagan Associates, *Cable TV Financial Databook*, annual, quoted in *Statistical Abstract*.
- **Broadcasting Radio** Advertising expenditures in broadcasting radio, from McCann-Erickson, *Advertising Age*, quoted in *Statistical Abstract*.
- **Media for Entertainment** Revenues of movie box office receipts, music tapes, CDs, and records, and sales and rentals of home videos. The big jump in 1985 is partially due to a lack of data for home video industry in 1984 and earlier. From *Industrial Outlook*.
- **Broadcasting Equipment** Data from EIA, quoted in *Statistical Abstract*. Data for 1988-1990 are EIA estimates.
- **Household Audio and Video Equipment** From *Industrial Outlook*. Data are product shipment values. Revision of the Standard Industrial Classification (SIC) code in 1987 may explain the discontinuity of data from 1986 to 1987.

III. Publishing and Printing

- **Newspapers** From *Industrial Outlook*. Data are industry shipment values.
- **Periodicals** From *Industrial Outlook*. Data are industry shipment values.
- **Book Publishing** From *Industrial Outlook*. Data are industry shipment values.

- **Book Printing** From *Industrial Outlook*. Data are industry shipment values.
- **Commercial and Advertising Printing** From *Industrial Outlook*. Data are industry shipment values. The large jump in revenues from 1986 to 1987 may be due to the revision of the SIC code.
- **Opto-Electronic Database — Media and Delivery** Revenues derived from electronic database production, CD-ROM database, and on-line delivery of database. From *Industrial Outlook*.
- **Other Commercial or Professional Publishing** Includes telephone directories, newsletters, business information publishing, and so on. From *Industrial Outlook*. Data are industry shipment values. The large jump in revenues from 1986 to 1987 may be due to the revision of the SIC code.

IV. Information Services

- **Investment Consulting** From annual reports of the Securities and Exchange Commission, quoted in *Statistical Abstract*.
- **Legal Services** Data for 1984-1990 are from *Service Annual Survey 1990*. Data for 1978-1983 are unpublished data from the Bureau of the Census.
- **Management Consulting and Public Relations** Data for 1985-1990 are from *Service Annual Survey 1990*. Data for 1982-1984 are from the 1986 edition of *Industrial Outlook*.
- **Accounting and Bookkeeping** Data for 1984-1990 are from *Service Annual Survey 1990*. The 1983 revenue is an unpublished datum from the Bureau of the Census.

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- **Advertising** Revenues of advertising agencies. Data for 1984-1990 are from *Service Annual Survey 1990*. The 1983 revenue is an unpublished datum from the Bureau of the Census.
- **Direct Mail Advertising Services** Revenues derived from the creation, production, and distribution of direct mail and the compilation and sales of databases for mailing. From *Service Annual Survey 1990*.
- **Credit Collection and Reporting** Data for 1984-1990 are from *Service Annual Survey 1990*. The 1983 revenue is an unpublished datum from the Bureau of the Census.
- **Airline Computer Reservation Systems** Revenues generated by the use (leasing and transaction fees) of computer reservation systems, mostly owned by airlines. Data for 1978-1986 are from U.S. Department of Transportation, *Study of Airline Computer Reservation Systems* (Washington, D.C.: the DoT, DOT-P-37-88-2, 1988). Statistics for 1987 and 1988 are from the DoT, *Airline Marketing Practices: Travel Agencies, Frequent-Flyer Programs, and Computer Reservation Systems* (Washington, D.C.: the DoT, 1990). Data for 1989 and 1990 are extrapolated on the assumption of a steady growth rate of 10 percent (consistent with the growth rate from 1987 to 1988).
- **Postal Services** From *Statistical Abstract*. Source: *Annual Report of the Postmaster General*.
- **Private Delivery Services** Sum of revenues (including international operations) reported in annual reports of the following companies: United Parcel Services, Federal Express, Emery Air Freight, Purolator Courier (courier services only), Consolidated Freightways (air freight service only), Air Express International, and Airborne Freight. In 1987, Emery acquired Purolator and merged with Consolidated Freightways.

V. Gross Domestic Product

The GDP data are from *Statistical Abstract*. Another indicator of national aggregate output is the Gross National Product (GNP). The difference between the GNP and GDP is that the latter is the value of final goods and services produced *within a country*, while the former counts the total output, *domestic or abroad*, by a country's citizens and companies. When the GNP exceeds GDP, the citizens and companies of a country are producing more output than are foreigners in that country. The choice to use the GDP in this paper is arbitrary. Because the data collected here may, depending on the source, reflect domestic output, output by citizens and companies, or some combination of both, for the purpose of comparison, the difference between the GNP and GDP is insignificant.

Acronyms

AT&T	American Telephone and Telegraph (Company)
BOC	Bell Operating Company
CD	Compact Disk
CD-ROM	Compact Disk-Read-only Memory
CPI	Consumer Price Index
CTIA	Cellular Telecommunications Industry Association
DoT	Department of Transportation
EIA	Electronic Industry Association
FCC	Federal Communications Commission
GDP	Gross Domestic Product
GNP	Gross National Product
LEC	Local Exchange Carrier
SIC	Standard Industrial Classification