

The business services industry sets pace in employment growth

Industries which provide services to businesses for a fee or on a contractual basis have had rapid gains in employment growth over the last decade, especially firms supplying computer and data processing services and temporary help; expansion is expected to continue

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Just as businesses purchase raw materials, machinery, or office equipment from suppliers, they also purchase services. These services may be highly technical, such as the development and sale of specialized computer software programs, or they can be more mundane, such as building cleaning and maintenance. Also, the need may be year round, such as for payroll processing, or temporary, such as for a fill-in receptionist. In any case, the use of contractors to supply certain types of services gives an employer considerable flexibility, and often is less expensive than hiring permanent employees to provide the same services. Business services is the fastest growing industry in the economy, and, while still small in the aggregate, may be representative of changes in the way many American companies are doing business.

The business services industry is made up of seven major industries:¹ advertising; consumer credit reporting and collection; mailing, reproduction, and stenographic services; services to buildings, including cleaning, maintenance, and

exterminating services; personnel supply services, which includes both temporary help supply companies and employment agencies; computer and data processing services; and miscellaneous business services, which offer research and development, management and consulting, and protective services. These industries supply a variety of services to business establishments on a fee or contract basis. The heterogeneous mix of individual industries is also reflected in the diverse occupational distribution of employment in business services, which includes highly skilled managerial and administrative occupations, as well as lower skilled service occupations.

With employment doubling, the rate of job growth in business services over the past decade was more than four times that for all private nonagricultural industries. The growth of individual industries varied widely: employment in computer and data processing services and personnel supply services more than tripled, while moderate growth occurred in advertising; mailing, reproduction, and stenographic services; and services to buildings (although each of these industries grew much faster than the economy as a whole). Credit reporting and collection was the only business services industry that failed to increase its work force.

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This article examines the rapid growth in the business services industry, particularly the computer and data processing and personnel supply services industries. It discusses the type of services offered by business services industries, the extent and nature of the employment expansion, and the occupations and earnings of the work force.

The data are from the Current Employment Statistics (CES) survey, the Current Population Survey (CPS) and the Occupational Employment Statistics (OES) survey.² The CES survey is generally recognized as the major source of current information on employment by industry. CES statistics are derived from a sample survey of business establishments, designed to provide industry information on nonagricultural wage and salary employment, average weekly hours, average hourly earnings, and average weekly earnings. Data derived from this survey are used whenever possible. However, the CES survey provides no demographic information except gender, and no occupational information at all. The CPS is used to provide information on job tenure and self-employment. Occupational distributions of employment are available from both the OES survey and the CPS. For this article, detailed OES employment data were aggregated into the major occupational groupings used in the CPS, which were used for economy-wide comparisons.³

Computer and data processing services

The greatest employment growth in business services between 1974 and 1984 took place in computer and data processing services, which grew by more than 250 percent. While the rate of employment gain in computer and data processing services throughout the economic downturns was much less than during expansionary periods, job gains continued even during the downturns. (See table 1.) This illustrates the relative insensitivity of this industry to changes in the business cycle. Computer and data processing services comprises two main components—data processing and programming services. Growth in data processing services depends on businesses using outside firms for data processing, whereas computer programming and other software services depends on businesses using their own systems.

Enterprises in data processing services provide such services as data entry, processing and preparation of reports from data supplied by clients, leasing or renting of computer time, and management and operation of the computer and data processing facilities of firms. Some data processing services organizations operate computer centers at which they process data on a periodic basis for firms that supply their own computer programs, and simply purchase computer power. Data are submitted by some of these customers via remote-batch terminals, and output is received on the same terminals. Other customers are time-sharing users who use their own computer terminals to solve relatively small business problems, utilizing the power supplied by the service organizations' mainframe computer.⁴

Many customers submit standard jobs for routine process-

Table 1. Average annual rates of employment change in private nonagricultural and selected business services industries during business cycles

Business cycles ¹	All private nonagricultural industries	Personnel supply services	Computer and data processing services
Recessionary periods:			
November 1973–March 1975	-5.7	-13.3	11.0
January 1980–July 19805	-1.8	4.4
July 1981–November 1982	-3.4	-8.7	28.5
Recovery periods:			
March 1975–January 1980	20.8	133.7	108.7
July 1980–July 1981	2.8	16.5	10.8
November 1982–June 1985	11.9	71.5	44.2

¹Recessionary and recovery periods as designated by the National Bureau of Economic Research.

ing using computer programs supplied by the data processing service organization. In most cases, these firms are too big to perform their data processing manually, but it would not be cost effective for them to purchase or lease computer systems and hire operating staff. The requested services generally include payroll, accounts payable, and accounts receivable—the oldest types of services provided by data processing service organizations—and usually involve updating customers' private files in the course of processing input data and preparing output reports. The inception of on-line computer services has permitted access to public files (for example, airline, sporting, and theatrical reservation files, stock market transaction files, and U.S. census data) via software provided by the service organizations.⁵

During the late 1970's, design and production advances resulted in faster, cheaper, and more reliable computers. Less costly hardware has made it possible for many companies to purchase their own computers. As software became more user-friendly and hardware easier to use, the need for firms to contract for computer services diminished. Moreover, because traditional data processing activities such as accounting and financial analysis are now easily available using small computers and standard software packages, even companies that continue to contract for data processing services no longer seek such services to the same degree.⁶ Evidence of this trend is the 16-percent employment growth in data processing services between 1982 and 1984, a relatively small growth compared with that in computer programming services (46 percent) during that period.

While many of the data processing service organizations that sell traditional time-sharing services have suffered a slowdown in growth, some have begun to offer specialized business services based on their own proprietary software. Companies that offer services to particular market niches such as hospitals and brokerage firms are experiencing rapid growth.⁷ Moderate employment growth should continue in data processing services, along with greater overall acceptance of computer technology in the marketplace and continued innovations in data communications. As was the case in the past few years, growth should be tempered as

computer hardware and software become more affordable, resulting in a larger proportion of firms which maintain their own computer systems.

The other major component of computer and data processing services is the computer programming and other software services industry. Included in this industry are firms which provide analysis and design for computer systems, development of computer programs or systems, computer programming services, and computer-related systems engineering. While only a third of the 475,000 workers in the computer and data processing services industry were employed in computer programming services in 1984, much of the long-run potential for substantial employment growth lies in this industry.

Unlike data processing service organizations, computer programming services firms have benefited from the introduction of mini- and micro-computers. Employment in computer programming services grew 46 percent between 1982 and 1984. As computer hardware dropped in price and performance improved, new applications for computers became feasible. The potential for more powerful, user-friendly computer software that can provide services such as financial statement preparation, profit analysis, and analytical management reports should increase the already strong demand for software services. Software is currently being written that appeals to both a broad group of users as well as a highly specialized market. The more computers and their applications proliferate, the greater will be the need for computer programming services.⁸

Within computer and data processing services, a disproportionate number of workers hold professional and technical jobs. There are almost twice as many professional specialty workers (such as computer systems analysts and electrical and electronic engineers) in this industry, compared with other business services industries. (See table 2.) The number of technicians (such as computer programmers) is almost three times the proportion found within all business services and seven times the average proportion for all industries. Because of the fast-moving technologies in this

high tech industry, there is a great demand for technicians and programmers who are familiar with the latest computer technology.

Personnel supply services

The second fastest employment growth within business services between 1974 and 1984, at 211 percent, was achieved by personnel supply services. During the first half of this period, the average annual rate of growth was about 20 percent. This rate dropped off between 1979 and 1981, and employment actually declined during the 1981-82 recession. Between 1982 and 1984, however, employment grew 50 percent. Personnel supply services has a much larger ratio of administrative support workers, compared with other business services industries, and, at 42 percent in 1984, had more than twice the share of clerical employment than the average for all industries. Personnel supply services comprise two components, temporary help supply services, which accounts for three-fourths of the industry employment, and employment agencies.

Temporary help supply services consists of businesses primarily engaged in supplying temporary help to other establishments on a contractual basis. (See accompanying article.) The employees remain on the payroll of the temporary help supply agencies, but are placed under the direct or general supervision of the firm to which they are supplied. Unfortunately, the CES survey cannot determine the industries in which temporary employees actually work because they appear on the payrolls of the individual temporary help supply agencies. Therefore, employment growth in the user industries is understated.

Overall, there was a 57-percent employment increase in temporary help supply services between 1982 and 1984, the largest growth of any industry in the economy over the 2-year period. To some degree, the employment boom since 1982 in temporary help supply services can be attributed to the post-recession economic recovery. Table 1 shows employment growth in personnel supply services, both during

Table 2. Occupational distribution of nonagricultural employees in the business services industry, 1984

[In percent]

Occupation	All nonagricultural employees ¹	Business services							
		Total ²	Advertising	Credit reporting and collection	Mailing, reproduction, and stenographic	Services to buildings	Personnel supply	Computer and data processing	Miscellaneous business services
Managerial and administrative	11.3	10.2	21.5	10.0	7.3	2.6	7.3	12.8	12.6
Professional speciality	13.0	8.5	20.7	.8	14.7	(³)	5.7	16.4	9.1
Technicians and related support	3.1	7.3	3.5	1.6	2.3	.1	8.7	21.4	6.4
Salesworkers	12.4	5.3	15.4	7.8	6.2	1.8	1.8	7.3	6.5
Administrative support—including clerical	16.4	28.2	31.0	78.2	43.4	4.3	41.5	36.8	24.0
Services, except private households	13.9	26.3	.4	.9	.7	88.3	9.9	.5	25.6
Precision production, craft, and repair; operators, fabricators, and laborers	30.0	14.2	7.5	.7	25.4	2.9	25.2	4.9	15.8

¹ Data are from the Current Population Survey, annual averages.

² Data are from the Occupational Employment Statistics survey, June 1984.

³ Less than 0.1 percent.

and after the last three recessionary periods. During post-recessionary periods, employment growth in personnel supply services was much stronger than in all private non-agricultural industries. Such strong employment growth indicates that although some of the increase is due to a change in how firms handle business office functions, much is due to real growth.

Many businesses exercise caution as they emerge out of a recession, choosing to hire temporary employees rather than risking a long-term investment in permanent hires. The temporary help industry provides customers with trained personnel, and the customers pay the temporary help supply agencies an hourly rate above that paid to the temporary workers. Companies which use these agencies to meet their short-term needs can test the market to see if job expansion is prudent.⁹ If unfavorable market conditions call for a reduction in labor costs, it is easier and less costly to cancel the contract for temporary help. Also, if managers are unsatisfied with the performance of a temporary worker, they can simply request a replacement. If favorable market conditions warrant the hiring of permanent employees, the firms may offer temporary workers a permanent position, with the added advantage that those employees are already familiar with their business techniques. However, contracts between temporary help supply agencies and their customers may limit this practice.

The use of nonpayroll employees allows the latter to avoid many of the costs associated with employment, such as payroll processing, as well as those of health and unemployment insurance, workers' compensation, sick and vacation leave, and pensions.

Temporary help workers perform a variety of jobs. They can be service workers earning the minimum wage or highly paid technicians or administrators. The largest number of temporary workers are employed as general office clerks, secretaries, and typists. There is a particularly large number of typists experienced with word processing equipment in this industry. To get the most from already purchased office equipment, companies are now competing for typists trained in word processing skills. Given the rate at which word processing systems are being installed, the demand for these workers is likely to continue into the near future.

Other prominent temporary supply services occupations are related to the rapidly expanding health care industry. There are sizable numbers of registered and licensed practical nurses, as well as other health care professionals and technicians, employed as temporary help workers. Employment opportunities for these health care specialists is due, in large part, to the considerable expansion in medicare and medicaid insurance coverage for home health care in the last decade.¹⁰ To cut health care costs, health insurance coverage now often includes the cost of skilled home health care nurses, therapists, and technicians. Most home care agencies are small, independently owned businesses, but, because of fierce competition and economies of scale, large

national companies have increased their share in the market over the decade.¹¹ Both large and small home health care organizations supply health service workers to customers on a contractual basis.

Most employees stay with a temporary supply service for only a short time, although some stay for years. Just as businesses use temporary help to test the market, temporary workers can shop for a permanent position in a recovering economy, sampling a range of work environments until they find the right employment situation, while gaining self-confidence and job experience. Workers not actively seeking permanent positions may be attracted to the competitive wages and the flexible hours provided by temporary employment, especially workers with family or other personal responsibilities.¹²

The increasing number of business establishments that are computerizing their operations has created a demand for workers with computer-related skills over the decade. Temporary help supply agencies recruit and train workers for staff positions that this new office technology creates.¹³ As noted earlier, the largest number of workers on the payroll of such agencies are secretaries with word processing skills. In addition, the agencies lease systems analysts and other professional and technical specialists to companies on a per-project basis. The number of these professionals is still very small, however, as most of such work is handled by the computer and data processing industry. Strong demand for temporary workers who are familiar with computer technology should continue along with the growth in computer applications.

Employment agencies, the other component of personnel supply services, consists of firms that assist employers looking for staff or individuals seeking employment. This industry includes placement services, labor contractors, and maid, model, nursing, and teacher registries. Unlike temporary help supply services firms, they do not employ workers for contracting out to establishments, but match job applicants and job openings for a fee, which is paid by either the employer or by the job applicant. Employment agencies are cost-effective sources for locating experienced and skilled personnel. Many agencies promote specialized occupations, such as data processing, clerical, technical, managerial, executive, or engineering. Nevertheless, the staffs of these agencies are concerned with placement-related activities or support, so their occupational range is limited. The most prominent managerial occupation in this industry is employment interviewers who interview, select, and recommend applicants for job openings. Much of the growth potential in this occupation, where women make up the majority of employees, should occur as employers try to provide effective employee relations for an expanding and aging work force.¹⁴ Overall, employment in this component of the industry increased 30 percent between 1982 and 1984, as economic recovery led to increased hiring.

Other business services

Mailing, reproduction, and stenographic services also had strong employment growth (89 percent) between 1974 and 1984. Firms engaged in direct mail advertising, compiling and selling mailing lists, and providing typing services are included in this industry. Word-processing services are also offered by these establishments to both individuals and firms that do not own or operate their own computer system. Future employment growth will probably not be as strong as in the past 10 years, as microcomputer cost declines and packaged computer programs make it easier for firms and individuals to own and operate their own computer systems, displacing some of the services provided by this industry.

Services to buildings industry includes establishments which offer cleaning, disinfecting, and exterminating services to business establishments and homeowners. Employment in this industry grew 55 percent over the 1974–84 period. Employment among janitors and cleaners—the industry’s major occupational group—has increased over the decade.

Because pay is relatively low and advancement limited, job turnover is high, creating many of the openings for these workers. Job gains over the next decade are projected to grow more rapidly than other services industries, partly due to planned growth in the number of office buildings, apartment houses, and private dwellings.¹⁵

Advertising industry’s employment increased 48 percent between 1974 and 1984. Employment opportunities were particularly strong for sales agents, advertising and public relations managers, and artists. Overall, job growth in advertising during the last decade was below that of other business services industries, but was still more than twice as large as the average growth in all industries throughout the economy.

Miscellaneous business services is the largest segment of the business services industry, accounting for more than 40 percent of all employment. Included in this industry are such diverse components as management, consulting, and public relations services; protective services; and research

Table 3. Ten most prominent occupations in the seven business services industries, June 1984

Industry and occupations	Percent of industry employment	Industry and occupations	Percent of industry employment
Advertising:		Continued—Services to buildings:	
Sales agents, advertising	10.4	Nonspecified service supervisors	1.5
Marketing, advertising, and public relations managers	9.8	Secretaries	1.3
Secretaries	9.5	Sales agents, business services	1.3
Artists	8.0	General office clerks	1.2
Writers and editors	4.4	Maintenance repairers	1.0
Designers	4.4	Personnel supply:	
Bookkeeping, accounting, and auditing clerks	3.6	Nonspecified helpers, laborers, and material movers	8.2
General office clerks	3.3	General office clerks	8.1
Nonspecified professional and technical occupations	3.1	Secretaries	6.7
Purchasing agents—except wholesale, retail, and farm products	3.0	Typists	5.2
Credit reporting and collection:		Registered nurses	4.3
Bill and account collectors	25.1	Employment interviewers	4.3
General office clerks	8.7	Nonspecified service workers	4.2
Credit checkers	8.1	Freight, stock, and material movers	4.2
Clerical supervisors	5.9	Nonspecified health professionals	3.8
Sales agents, business services	4.6	Typists, word processing equipment	3.5
Secretaries	4.1	Computer and data processing:	
Data entry keyers	3.9	Computer programmers	16.5
Typists	3.8	Systems analysts—electronic data processing	10.0
Bookkeeping, accounting, and auditing clerks	2.8	Data entry keyers	9.2
Financial managers	2.6	Computer operators	5.2
Mailing, reproduction, and stenographic:		Secretaries	4.2
Mail machine operators	7.5	General managers and top executives	3.3
Artists	6.1	Electrical and electronic engineers	2.9
Photographers	4.1	General office clerks	2.9
Mail clerks	3.6	Sales agents, business services	2.8
Designers	3.1	Clerical supervisors	2.5
Printing press machine operators	3.1	Miscellaneous business services:	
Duplicating machine operators	3.1	Guards and watch guards	21.6
Clerical supervisors	3.0	General managers and top executives	4.3
Nonspecified helpers, laborers, and material movers	3.0	Secretaries	3.6
Secretaries	2.9	Switchboard operators	2.4
Services to buildings:		General office clerks	2.3
Janitors and cleaners	67.8	Interviewing clerks	2.2
Maids and housekeeping cleaners	6.4	Nonspecified helpers, laborers, and material movers	1.8
Pest control and assistants	6.2	Bookkeeping, accounting, and auditing clerks	1.8
Housekeepers	2.3	Clerical supervisors	1.7
Nonspecified cleaning and building service workers	2.0	Nonspecified managers and administrators	1.6

NOTE: Data are from the Occupational Employment Statistics survey, June 1984.

and development laboratories, that provide employment for a wide range of occupations. Between 1980 and 1984, employment grew by 25 percent in miscellaneous business services,¹⁶ and the growth rate is expected to continue to lag behind the rest of business services.

Credit reporting and collection was the only business services industry that failed to register job gains between 1974 and 1984. About 8 of 10 employees in this component of the business services industry are clerical workers. (See table 3.) The increase in office automation systems over the decade made it easier for the firms themselves to acquire information formerly provided by this segment, and may have resulted in the elimination of many administrative support jobs related to accounts reporting and collection.¹⁷

Characteristics of employment growth

Overall, women accounted for 46 percent of the business services work force in 1984, up from 39 percent in 1974, as their job growth outpaced gains for men. (See table 4.) Only two business services industries did not increase their share of women during that period—credit reporting and collection and computer and data processing services. The decrease in the share of employment for women in computer and data processing services was primarily due to that industry's increased emphasis on high tech occupations, which are dominated by men.

Women make up the majority of workers in credit reporting and collection, advertising, and personnel supply services. More than 60 percent of the personnel supply services work force are women, reflecting this industry's greater employment of administrative support personnel and nurses, occupations dominated by women. Within personnel supply services, there are more women than men in both employ-

ment agencies and temporary help supply agencies; however, since 1982, job gains for men have been stronger in both industries. In fact, growth for men in employment agencies was almost four times that for women. The future structure of business services may be determined by the relative employment gains of the two large growth industries—computer and data processing, where employment is dominated by men, and personnel supply services, where employment is dominated by women.

Self-employed workers constitute a rapidly growing segment of the business services industry. Over the 1974–84 period, self-employment more than tripled—from 190,000 to 575,000; women accounted for most of the growth. To the extent that female employment is growing more rapidly than male employment in the business services industry, the increase in self-employed women could be expected. Nevertheless, the growth in self-employed women over the decade may also indicate an expansion in the employment opportunities that women are creating for themselves.¹⁸

Weekly earnings

Historically, the weekly earnings of workers in the business services industry have been somewhat lower than the average for all industries.¹⁹ Between 1974 and 1984, however, the 105-percent increase in average weekly earnings in business services outpaced the 90-percent average gain for all industries. In 1984, business services employees averaged \$266.45 a week, compared with \$294.05 for all private nonagricultural industries and \$250.59 for the services division of the service-producing sector of the economy.

The earnings in business services reflect, among other factors, the occupational mix, which, despite a large representation of managers and administrators, also has a large concentration of low wage service and clerical workers.²⁰

Table 4. Percent distribution of production or nonsupervisory employees in the business services industry, 1974 and 1984 annual averages

Year and sex	Total ¹	Advertising	Credit reporting and collection	Mailing, reproduction, and stenographic	Services to buildings	Personnel supply	Computer and data processing
1974							
Total (in thousands)	2,027.4	123.8	79.6	87.6	393.8	266.2	134.6
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Men	61.1	58.2	24.6	54.7	67.3	46.2	51.6
Women	38.9	41.8	75.4	45.3	32.7	53.8	48.4
1984							
Total (in thousands)	4,075.6	183.3	80.0	165.5	608.9	828.0	473.7
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Men	54.3	48.5	28.9	50.8	61.8	38.0	55.2
Women	45.7	51.5	71.1	49.2	38.2	62.0	44.8
1974–84							
Percent change:							
Total	101.0	48.1	.5	88.9	54.6	211.0	251.9
Men	78.6	23.2	17.9	75.4	42.0	155.8	276.5
Women	136.3	82.8	-5.2	105.3	80.5	258.5	225.8

¹ Includes miscellaneous business services, not shown separately.

NOTE: Data are from the Current Employment Statistics survey.

The industry also has a very low incidence of unionization. With respect to the occupational structure, there is a relatively large proportion of clerical and service workers in business services. Fifty-four percent of the business services work force are employed in these two occupational groupings, where weekly earnings are relatively low compared with all workers. Owing to a vast difference in the occupational structure of the industry, there is a wide range of average weekly earnings within business services. For example, average weekly earnings in computer and data processing services increased by 120 percent to \$411.18 over the 10-year period studied, and were 40 percent greater than the average for all industries in 1984. This is not surprising, given that more than half of the workers in this industry are relatively highly paid administrators, managers, professionals, and technicians. In contrast, average weekly earnings in the services to buildings industry, at \$177.41, were 40 percent below the average for all workers. Eighty-eight percent of the workers in the services to buildings industry were in occupations with relatively low wages, such as janitors and cleaners.

As for unionization, workers who are members of unions tend to earn higher wages than nonunion members. In 1984, union members earned, on average, \$103 more per week than their nonunion counterparts.²¹ Part of the earnings gap between business services and other industries may be related to the fact that only about 6 percent of business services employees were union members in 1984, about 10 percentage points below the average for all U.S. industries.²²

Tenure and hours

Job tenure is a measure of the length of time an employee has worked continuously for the same employer, although not necessarily in the same occupation.²³ Tenure is generally terminated when a person transfers to a job in a different firm, is laid off for 30 days or more, or enters the Armed Forces. Firms in growing industries usually hire new workers as they expand and, therefore, show relatively low levels of job tenure. Establishments in industries where employment is stagnant or declining do not hire as often, letting positions expire as they become vacant. If a reduction in personnel is required, it will generally be concentrated among persons with the least seniority, which increases the average level of job tenure among those still in the industry.

Median job tenure in the rapidly expanding business services industry, as of January 1983, was a relatively low 2.7 years, compared with 4.3 years in all industries.

The comparatively short job tenure for business services employees also reflects the large number of temporary workers in this industry, a result of employment gains in personnel supply services. Another factor affecting job tenure is the relatively large proportion of women. Median job tenure for men was 3.0 years, compared with 2.5 years for women. Only retail trade and private household services, where larger numbers of women are employed, had lower median job tenure.

Not only do workers in business services tend to work for shorter periods for any specific employer, but they also tend to work fewer hours. However, whereas average weekly hours of employment for workers in all industries dropped by 3 percent between 1974 and 1984, average weekly hours of employment in the business services industry increased by 1 percentage point.²⁴ At 33.6 hours, there is still a gap of 1.7 hours between business services and the average for all industries. A major reason for the narrowing gap was a weekly hours increase of nearly 5 percent to 38.5 hours in computer and data processing services, 3.2 hours more than the average for all industries. In contrast, average weekly hours of employment in services to buildings, where part-time work is typical, was a very low 28.8 hours; even so, weekly hours increased by 4 percent over the decade.

Continued expansion expected

The relative growth of business services employment was particularly rapid in the last 10 years, as firms acquired a greater appreciation of the variety of services that could be provided. Many establishments began contracting out for new specialized business services or for services that formerly were either taken care of inhouse or were neglected, when they realized that these services could be supplied at less expense and more efficiently by business services organizations. Agencies that supply temporary employees also provide customers with the flexibility to meet their short-term employment needs. The strong trend toward the use of outside companies to supply business services is expected to continue. Therefore, job expansion in business services should surpass that of other industries in the future, although prospects for growth in the heterogeneous mix of individual business services industries vary widely. □

FOOTNOTES

¹ BLS and other Federal and State agencies follow as closely as possible the Office of Management and Budget's 1972 *Standard Industrial Classification (SIC) Manual* to define and classify industries in the U.S. economy. Business Services (SIC 73) has seven component industries: advertising (SIC 731); consumer credit reporting and collection (SIC 732); mailing, reproduction, and stenographic services (SIC 733); services to buildings (SIC 734); personnel supply services (SIC 736); computer and data processing services (SIC 737); and miscellaneous business services (SIC 739).

² The Current Employment Statistics survey is a monthly survey that

samples approximately 270,000 establishments employing more than 35 million people. It counts only wage and salary employees whose names appear on the payroll records of nonagricultural firms. The Current Population Survey reflects a larger segment of the population, although based on a smaller sample of approximately 60,000 households. Information is obtained each month for approximately 120,000 individuals 16 years and over and includes, in addition to nonagricultural wage and salary employment, agricultural employment, the self-employed, unpaid family workers, private household workers, as well as the unemployed, and persons not in the

labor force. For a detailed comparison of the two sample series, see Gloria P. Green, "Comparing employment estimates from household and payroll surveys," *Monthly Labor Review*, December 1969, pp. 9-20. The Occupational Employment Statistics survey is a periodic mail survey conducted by State employment security agencies of a sample of nonfarm establishments to obtain wage and employment information by occupation. These data are used to estimate total employment by occupation for the Nation, for each State, and for selected areas within States. The reference period of the current OES survey was the week that included June 12, 1984.

³ Complete occupational detail will be published in a forthcoming Bureau of Labor Statistics bulletin, *Occupational Employment in Selected Nonmanufacturing Industries*.

⁴ Montgomery Phister, Jr., *Data Processing Technology and Economics* (Bedford, MA., Santa Monica Publishing Co. and Digital Press, 1979), pp. 28-29.

⁵ See Montgomery Phister, Jr., *Data Processing*.

⁶ For a discussion of these issues, see Stephen T. McCellen, *The Coming Computer Industry Shakeout* (New York, John Wiley and Sons, 1984); and Franklin M. Fisher, *IBM and the U.S. Data Processing Industry: An Economic History* (New York, Praeger Publishers, 1983).

⁷ See Stephen T. McCellan, *The Coming Computer*, pp. 135-38.

⁸ *Ibid.*, pp. 237-42.

⁹ Samuel R. Sacco, "The Growing Importance of Temporary Employees," *The Office*, September 1984, pp. 42 and 47.

¹⁰ Brad Edmondson, "The Home Health Care Market," *American Demographics*, April 1985, pp. 29-30.

¹¹ See Brad Edmondson, "Home Health Care," pp. 48-49.

¹² Martin J. Gannon, "Preferences of temporary workers: time, variety, and flexibility," *Monthly Labor Review*, August 1984, pp. 26-28.

¹³ Karen E. Debats, "The Temporary Services Industry," *Personnel Journal*, February 1983, pp. 120-25.

¹⁴ *Occupational Outlook Handbook*, 1984-85 edition, BLS Bulletin 2205, pp. 36-38.

¹⁵ See *Occupational Outlook Handbook*, pp. 16, 241-42.

¹⁶ Data available only for 1980-84.

¹⁷ For a discussion of the banking industry's movement into the computer services industry and the effect of their entry on free trade and competition in unregulated markets such as computer and data processing or credit reporting and collection, see "Hearings before the Subcommittee on Antitrust and Restraint of Trade Activities Affecting Small Businesses" (U.S. House of Representatives, 97th Cong., May 7, 1981).

¹⁸ For more information on self-employment, see Eugene E. Becker, "Self-employed workers: an update to 1983," *Monthly Labor Review*, July 1984, pp. 14-18.

¹⁹ Data are based on CES estimates of average weekly earnings of production or nonsupervisory workers in private nonagricultural industries.

²⁰ For more information on the relationship between earnings and occupations, work hours, and other factors, see Earl F. Mellor, "Investigating the differences in weekly earnings of women and men," *Monthly Labor Review*, June 1984, pp. 17-27.

²¹ Data refer to members of a labor union or employee association similar to a union.

²² Based on unpublished union data for detailed industries from the CPS.

²³ Job tenure data are based on the January 1983 supplement to the CPS.

²⁴ Data are based on CES estimates of average weekly hours of production or nonsupervisory workers in private nonagricultural industries.