

The services industry: is it recession-proof?

Steady growth has led the services division to account for nearly 20 percent of total employment in 1980, linked mainly to business and health services; since 1948, it has been nearly immune to recessions and has displayed relative cyclical insensitivity

MICHAEL URQUHART

Throughout this century the bulk of employment growth has been in the services-producing sector of the economy, whose share of total nonagricultural employment has increased from 53 percent in 1920 and 58 percent in 1948 to more than 70 percent in 1980.

The impact of this shift in employment on the functioning of the economy has been the subject of considerable analysis.¹ In particular, studies have shown that the growth of employment in the services sector has continued even during economic downturns, and some have concluded that a services-dominated economy promotes stability over the business cycle.²

This article focuses on the degree of cyclical sensitivity of the fastest growing component of the services-producing sector, the services division. (Other major components of the sector are: transportation, communication, and public utilities; wholesale and retail trade; finance, insurance, and real estate; and government.)³ This industry group, while quite varied in composition, includes those activities usually thought of as services, such as repair, health, social and personal services, business services, education, and entertainment.⁴ The 1980 distribution of services employment follows; this diversity hinders slightly, but does not preclude, the drawing

of general conclusions about the division's cyclical behavior:

	<i>Percent distribution 1980</i>
Services division	100.0
Health	29.5
Business services	16.9
Membership organizations	8.9
Social services	6.5
Educational	6.3
Hotels and other lodging	6.0
Personal services	5.2
Amusement and recreation	4.1
Auto repairs	3.3
Legal	2.7
Miscellaneous repairs	1.7
Motion pictures	1.2
Miscellaneous services	5.7

Using data from the Current Employment Statistics program (payroll survey), this article also examines the employment growth record of the services division, including its cyclical sensitivity and impact on overall economic stability in the postwar period. Data from the Current Population Survey (household survey) are used to examine the demographic composition of employment in services and the nature of unemployment associated with the industry.⁵

The services employment series from the two surveys

Michael Urquhart is an economist in the Division of Employment and Unemployment Analysis, Bureau of Labor Statistics.

are not precisely comparable, as they do not cover the same universe. Employment estimates for services from the household series are consistently about 50 percent greater than the payroll series. This is primarily because the former includes employees in public education, the self-employed, and private household workers. Correcting for these conceptual dissimilarities reduces the difference to only about 300,000 in 1980, or less than 2 percent.⁶

Health, business lead job growth

The postwar employment growth record of the services division is presented in table 1. According to the payroll survey, services employment increased from 5.2 to 17.7 million between 1948 and 1980, and its share of total employment rose from 11.5 to 19.6 percent. This gain surpassed that of any other major industry group, including government.

Not all components of the services division exhibited such extraordinary progress.⁷ From 1972 to 1980, the only period for which data exists for all components, the slowest employment growth occurred in personal services (2 percent), motion pictures (4 percent), membership organizations (12 percent), and education (17 percent). The greatest increases in employment were reached in these types of services: social (108 percent), legal (78 percent), and business (68 percent).

However, in terms of sheer size, advances in this division have been dominated by two industries, health and business services. They accounted for almost half of services employment in 1980 and have contributed about 55 percent of its total increase since 1972.

The most dynamic components of the health services industry since 1972 have been dentists' offices (81 percent growth), nursing and personal care facilities (69

percent), and physicians' offices (68 percent). Hospitals, which make up nearly half of total employment in this industry, have risen by a modest 22 percent. Overall, health services posted an increase of 53 percent in the 8-year period.

Within business services, personnel supply (which includes employment and temporary help agencies) and computer and data processing services more than doubled. These two components accounted for 40 percent of all growth within business services; other elements showing more moderate increases were advertising (21 percent), mailing, reproduction, and stenographic (49 percent), and services to buildings (51 percent), while credit reporting and collection decreased 7 percent.

There has also been a substantial gain (55 percent) in the number of female employees in the services division since 1972, making up 67 percent of its total increase. Almost every industry has augmented their proportion of women, and nowhere did female employment decline. However, 72 percent of the boost was accounted for by only three industries: health, business, and social services. Health services alone, in which women make up 80 percent of employment, contributed 41 percent of the expansion. Within business services, about half of the rise was caused by the rapidly growing personnel supply and computer and data processing services. However, the majority of business services employees in 1980 (57 percent) were men.

Overall, male employment in services rose only 32 percent. Men accounted for a majority of the increased employment in auto repair, miscellaneous repair, and amusements and recreation services.

Most of the increase in services employment is real growth, but much is because of a shift in employment to services, and with particular regard to business ser-

Table 1. Employees on nonagricultural payrolls by selected industry divisions and years, 1948-80

(Numbers in thousands)

Industry	1948		1958		1965		1972		1980	
	Number	Percent distribution	Number	Percent distribution	Number	Percent distribution	Number	Percent distribution	Number	Percent distribution
Total nonfarm payroll employment	44,866	100.0	51,324	100.0	60,765	100.0	73,675	100.0	90,657	100.0
Goods-producing sector	18,774	41.8	19,513	38.0	21,926	36.1	23,668	32.1	25,855	28.5
Services-producing sector	26,092	58.2	31,811	62.0	38,839	63.9	50,007	67.9	64,801	71.5
Services ¹	5,181	11.5	6,765	13.2	9,036	14.9	12,276	16.7	17,741	19.6
Hotels and lodging places	(²)	.....	(²)	.....	(²)	.....	813	1.1	1,071	1.0
Personal	(²)	.....	877	1.7	985	1.7	912	1.2	931	1.2
Business	(²)	.....	656	1.3	1,139	2.1	1,790	2.4	3,002	3.3
Auto repair, services, and garages	(²)	.....	(²)	.....	(²)	.....	397	.5	583	.6
Miscellaneous repair	(²)	.....	(²)	.....	155	.3	199	.3	305	.3
Motion pictures	249	.6	199	.4	185	.3	205	.3	214	.2
Amusement and recreation	(²)	.....	(²)	.....	(²)	.....	504	.7	735	.8
Health	(²)	.....	1,365	2.7	2,080	3.6	3,412	4.6	5,229	5.8
Legal	(²)	.....	139	.3	182	.3	271	.4	481	.5
Educational	(²)	.....	572	1.1	772	1.3	958	1.3	1,117	1.2
Social	(²)	.....	(²)	.....	(²)	.....	553	.8	1,149	1.3
Membership organizations	(²)	.....	(²)	.....	(²)	.....	1,403	1.9	1,571	1.7
Miscellaneous	(²)	.....	(²)	.....	(²)	.....	637	.9	1,008	1.1

¹ Includes veterinary, animal, landscape, and horticultural services (SIC-074-5,078); and museums, botanical, and zoological gardens (SIC-841-2), not shown separately.

² Not available.

VICES, is the direct result of a substitution effect. The recent growth of business services is largely caused by a change in how firms handle business office functions. Employees are classified by industry based upon the major activity of the establishment employing them. Thus, for example, clerical workers who prepare financial records in a manufacturing firm are counted as employed in manufacturing. In contrast, if the establishment contracts with an outside accounting firm to prepare their records, those employees are classified as part of the services division. To the extent that firms replace their clerical workers with agency services, a "shift" in employment from manufacturing to services occurs. In this case, there is no basic change in the type of work being done, but rather a major change in how and where it is performed, resulting in a different industrial classification. While the true measure of the "contracting out" of work traditionally done by the establishments cannot be calculated, it does indicate the need for caution in drawing conclusions about industry employment trends.⁸

Professional, technical workers dominant

In general, workers in the services division are more apt to be employed part time or be self-employed, especially in comparison to manufacturing. With the exception of trade, part-time employment in services, at 19.2 percent of the employed total, was substantially higher than in any other division, and more than a third of all part-time workers had jobs in services. Self-employment, at 10 percent of the total in services, compares with a low of 1.6 percent in manufacturing and 7.3 percent for the total economy. (See table 2.)

Women are more likely to be employed in services than in any other division. At 60 percent, their proportion is almost twice that in manufacturing (31 percent) and substantially greater than the average for the total economy (42 percent). While the proportion of blacks, at 13 percent, is higher than other divisions shown, it is only slightly above the overall ratio.

Workers in the services division also tend to be a bit older than most. The proportion of employees 55 years

and over is greater than in any other division, while that of youths ages 16 to 24 is smaller than average.

Since 1968, there have been only minor changes in the preceding characteristics, with the exception of the rise in female employment (from 57 to 60 percent). The labor force has grown younger, blacks and women have increased their shares, part-time employment has been relatively unchanged, and self-employment has declined slightly.

The occupational distribution of employment in the service and manufacturing divisions for 1980 is provided in the tabulation below:

Occupation	Total		Services	Manufacturing
	100.0	100.0	100.0	100.0
White-collar workers	54.3	66.1	34.2	34.2
Professional and technical	16.7	38.5	11.4	11.4
Managerial and administrative, except farm	11.7	7.7	7.8	7.8
Sales	6.6	0.7	2.5	2.5
Clerical	19.4	19.2	12.5	12.5
Blue-collar workers	32.9	10.4	63.9	63.9
Craft	13.4	5.5	19.5	19.5
Operatives, except transport	11.1	2.7	36.5	36.5
Transport operatives	3.7	0.8	3.5	3.5
Nonfarm laborers	4.8	1.3	4.5	4.5
Service, except private household	12.7	23.5	1.7	1.7

As mentioned earlier, service workers account for about 25 percent of the industry's employees. Professional and technical workers continue to dominate, accounting for 39 percent of all employees in 1980, with the industry employing about two-thirds of all professionals. Clericals, at 19 percent, and managers and administrators, at 8 percent, made up most of the remainder. This distribution is in sharp contrast to goods-oriented industries, such as manufacturing, where most employees are either craftworkers or operatives. While the white-collar occupations (professional, managerial, clerical, and sales) account for 66 percent of all employment in services, they represent only 34 percent in manufacturing. The broad occupational distribution

Table 2. Employment by selected industry divisions and characteristics, 1980

[In percent]

Division	Total employed (in thousands)	Age (in years)			Women	Black	Part time ¹	Self-employed
		16-24	25-54	55 and over				
Total nonagricultural industries	93,960	21.8	63.9	14.3	42.4	11.2	13.6	7.3
Manufacturing	21,593	18.2	67.7	14.2	31.4	11.3	3.2	1.6
Transportation, communication, and public utilities	6,393	14.5	72.6	12.9	25.2	12.6	6.0	4.3
Trade	19,727	34.3	52.4	13.3	46.4	8.4	24.9	9.4
Finance, insurance, and real estate	5,860	21.4	64.1	14.5	58.2	9.2	10.4	7.8
Services (less private household)	26,914	18.8	66.1	15.1	59.8	12.9	19.2	10.0

¹ Part time includes only wage-and-salary workers who are on voluntary part-time schedules. Percent is of total wage-and-salary workers, not total given in first column.

in services has been fairly stable since 1972, although there has been a slight increase in the proportion of white-collar employees.

Cyclical behavior

Payroll jobs. Table 3, which compares the average annual percentage change in employment during periods of expansion and contraction, helps to illustrate why services might be considered "recession-proof."⁹ With one exception, the recession of 1957–58, employment in this division has increased even during cyclical downturns. In contrast, the goods-producing sector has paired substantial declines in employment with every recession. The rest of the services-producing sector also declined when each of the first four recessions occurred, but has since grown moderately during downturns.

Comparison of average rates of growth over the business cycle provides further evidence of this contrasting behavior. Services employment has advanced by an average of 2.1 percent during contractions and 4.8 percent in times of expansion, while employment in the goods-producing sector declined by 8.3 percent in recessions and increased by an average of 3.8 percent during recovery periods.

However, individual components of the services division show considerable variation. For example, during the 1973–75 recession, three components—personal services, auto repair, and motion pictures—posted declines, while health, legal, and social services expanded at higher than average rates for the division.

An industry that exhibits employment growth during recessionary periods is not necessarily insensitive to business cycles. A better estimate of such sensitivity is the average cyclical change net of the trend in employment growth. This can be measured by subtracting the average change during periods of contraction from that of expansionary periods. For the services division, the average cyclical change is only 2.7 percent, far below the 12.4-percent registered for the goods-producing sector. This indicates that there is some cyclical dimension in its growth rate, but clearly minimal when contrasted with the more sensitive goods-producing sector. The rest of the services-producing sector has a slightly higher average cyclical change—3.5 percent.

The behavior of the two largest components of this division, business and health services, is illustrative of the differences within the division. Health services display almost no cyclical sensitivity (1.0 percent), while business services show a relatively high degree (7.6 percent). While the sensitivity of business services appears to be more comparable to the goods-producing sector than to most other services industries, business services employment did not decrease during any recession. However, to conclude from the lack of employment declines alone that business services are recession-proof

Table 3. Average annual rates of change in nonfarm payroll employment during postwar business cycle expansions and contractions, by selected industry divisions

Business cycle expansions(E) and contractions(C)	Goods-producing sector	Services-producing sector, except the services division	Services industries		
			Total	Business	Health
November 1948 to October 1949(C)	-9.6	-1.3	1.0	(¹)	(¹)
October 1949 to July 1953(E)	6.0	3.1	3.0	(¹)	(¹)
July 1953 to May 1954(C)	-8.4	-4	1.8	(¹)	(¹)
May 1954 to August 1957(E)	2.4	2.7	4.1	(¹)	(¹)
August 1957 to April 1958(C)	-12.0	-2.3	-3	(¹)	(¹)
April 1958 to April 1960(E)	3.6	3.2	4.6	10.0	6.6
April 1960 to February 1961(C)	-6.0	-5	2.9	4.2	5.4
February 1961 to December 1969(E)	2.4	3.9	5.9	12.4	9.6
December 1969 to November 1970(C)	-6.0	1.7	2.4	2.4	6.7
November 1970 to November 1973(E)	3.6	3.3	4.1	5.8	6.4
November 1973 to March 1975(C)	-8.4	1.5	3.6	7	6.8
March 1975 to January 1980(E)	4.8	4.3	7.1	12.2	6.6
January 1980 to July 1980(C)	-10.1	6	3.2	2.6	6.4
Average for:					
All expansions	3.8	3.4	4.8	10.1	7.3
All contractions	-8.6	-1	2.1	2.5	6.3
Cyclical change net of trend	12.4	3.5	2.7	7.6	1.0

¹ Data not available.

NOTE: Business cycle peaks and troughs are those designated by the National Bureau of Economic Research. Employment changes in the business and health services industries are based on unadjusted data, all others are seasonally adjusted. For method of calculation, see footnote 10 of this article.

would be misleading. Their rate of employment gain throughout economic downturns was much less than during expansionary periods. Should the present trend of rapid employment growth in this industry substantially change, its sensitivity to recessions could result in employment declines.

Unemployed service workers. An examination of cyclical trends in unemployment provides a different picture of the services division. In sharp contrast to the employment record, the cyclical pattern of unemployment in services almost matches the highly sensitive overall unemployment rate. The apparent paradox of both employment and unemployment increasing in services during economic contractions can be partly explained by examining the reasons for the latter.

Workers become unemployed for one of the following reasons: (1) from a layoff (caused by slack economic conditions) or a permanent separation; (2) from recently joining the labor force or reentering it; or by (3) quitting or leaving a job.

Typical of cyclically sensitive industries is a jump in unemployment caused by the loss of a job (especially from layoff) during a downturn. As business declines,

Table 4. Experienced unemployed private wage-and-salary workers in the total nonagricultural and services industries by reason for unemployment, sex, and age, selected quarters, 1974-75

Reason, sex, and age	Total, all industries				Services industries			
	I 1974	I 1975	Actual change	Percent of actual change	I 1974	I 1975	Actual change	Percent of actual change
Total, 16 years and over	3,885	6,790	2,905	100.0	686	997	311	100.0
Job losers	2,268	4,685	2,417	83.2	306	464	158	50.8
On layoff	888	2,207	1,319	45.4	80	131	51	16.4
Other job losers	1,380	2,478	1,098	37.8	226	333	107	34.4
Job leavers	644	648	4	.1	143	151	8	2.6
Reentrants	972	1,457	485	16.7	237	381	144	46.3
Men, 20 years and over	1,779	3,385	1,606	100.0	189	288	99	100.0
Job losers	1,329	2,815	1,486	92.5	123	198	75	75.8
On layoff	517	1,324	807	50.2	25	56	31	31.3
Other job losers	812	1,491	679	42.3	98	142	44	44.4
Job leavers	213	227	14	.9	29	38	9	9.1
Reentrants	237	342	105	6.5	37	52	15	15.2
Women, 20 years and over	1,374	2,385	1,011	100.0	378	542	164	100.0
Job losers	630	1,365	735	72.7	147	209	62	37.8
On layoff	271	683	412	40.8	46	58	12	7.3
Other job losers	359	682	323	32.0	101	151	50	30.5
Job leavers	273	279	6	.6	85	92	7	4.3
Reentrants	470	741	271	26.8	147	241	94	57.3

NOTE: Data are derived from the Current Population Survey.

companies cut back employment.

For example, this is reflected in the figures for the 1973-75 recession shown in table 4.¹⁰ Overall, persons on layoff made up nearly half of the increase in unemployment between the first quarters of 1974 and 1975, reentrants for only about a sixth, and job leavers a negligible amount. The situation was reversed for the services division, with reentrants accounting for almost half the increase, and layoffs for only a sixth. However, there was contrasting behavior among men and women 20 years old and over. Among unemployed men in services, reentrants made up only 15.2 percent of the increase in unemployment; female reentrants accounted for 57.3 percent. Women traditionally have had less attachment to their jobs and are more likely to move in and out of the labor force than are men. As a result, the increase in unemployment in services during recessions is not because of any slack in the services industry, but is connected to employees (mostly women) who worked in it in the past and then reentered the labor force. Therefore, it would be a mistake to conclude from the overall unemployment figures alone that the services division is highly sensitive to cyclical fluctuations.

Contributing to economic stability?

The suggestion by some economists that the growth of the services-producing sector might lead to a reduction in the severity of business downturns was referred to earlier. The argument was that cyclical declines in total employment would be reduced by the continued growth in the services-producing sector. An examination of the data during the postwar period shows that the stability of employment has improved. The net cyclical change in overall employment has declined from 7.3 percent in the 1940's and 1950's to 5.3 percent dur-

ing the 1960's and 1970's. This decrease in the cyclical nature of the economy is supported by the downward trend in relative recessionary employment cutbacks from peak to trough. (See table 5.) From a high of 5 percent during the 1948-49 recession, the drop in em-

Table 5. Changes in nonfarm payroll employment from postwar business cycle peaks to troughs, by selected industry divisions, seasonally adjusted

[Numbers in thousands]

Business cycles	Nonfarm payroll employment		Goods-producing sector	Services industries	Services industries as a percent of total less services
	Total	Less services industries			
November 1948 to October 1949:					
Actual change . . .	-2,260	-2,314	-2,018	54	...
Percent change . . .	-5.0	-5.8	-10.7	1.0	2.3
July 1953 to May 1954:					
Actual change . . .	-1,528	-1,613	-1,539	85	...
Percent change . . .	-3.0	-3.6	-7.2	1.5	5.3
August 1957 to April 1958:					
Actual change . . .	-2,131	-2,117	-1,676	-14	...
Percent change . . .	-4.0	-4.6	-8.0	-2	-7
April 1960 to February 1961:					
Actual change . . .	-1,188	-1,349	-1,162	161	...
Percent change . . .	-2.2	-2.9	-5.6	2.2	11.9
December 1969 to November 1970:					
Actual change . . .	-855	-1,105	-1,651	250	...
Percent change . . .	-1.2	-1.9	-6.8	2.2	22.6
November 1973 to March 1975:					
Actual change . . .	-1,438	-2,052	-2,736	614	...
Percent change . . .	-1.9	-3.2	-10.9	4.7	29.9
January 1980 to July 1980:					
Actual change . . .	-1,164	-1,462	-1,552	298	...
Percent change . . .	-1.3	-2.0	-5.8	1.7	20.4

ployment has been reduced to 1 to 2 percent for the last three recessions.¹¹

One possible measure of the specific contribution of the services division to this improved overall economic performance is provided in table 5. The degree to which employment growth in services offsets the employment decline in the rest of the economy soared from 2.3 percent in 1948–49 to almost 30 percent during 1973–75.

An alternative approach is to compare the change in the percentage decline in employment caused by the services division vis-a-vis the total economy. As illustrated in columns 1 and 2 of the table, the addition of services reduces the decline by a fairly constant 0.7-percentage point. It was somewhat higher in the 1973–75 recession.

Although both measures indicate the stabilizing impact of the services division on the severity of economic downturns, this reduced sensitivity of employment to business cycles must be partially attributed to other changes in the economy. Even without services, the drop in employment would have been reduced by about 4 percentage points, and even the goods-producing sector showed improvement until the 1973–75 recession.

Recession-proof, but with qualifications

Since 1948, the services division has experienced extraordinary growth and today accounts for almost one-fifth of total employment. This increase has been concentrated in two industries—business and health services. Employment in this division continues to be dominated by white-collar occupations, with higher-

than-average proportions of women, blacks, and part-timers.

The growth of services has been relatively immune to business downturns, with its employment declining in only 1 of 7 postwar recessions. Furthermore, the cyclical fluctuations in the division's employment growth rates are considerably smaller than those of the goods-producing sector. The combination of steady growth and relative cyclical insensitivity warrants the conclusion that this division is relatively recession-proof; however, certain qualifying factors are necessary. The rate of growth is reduced during downturns, and some components of this division are more cyclically sensitive than others. And unemployment associated with the industry is higher in times of recession, even though much of this increase stems from reentrance to the labor force.

However, it is more difficult to assess the impact of growth of the services division upon the rest of the economy. While services have contributed to economic stability by reducing the employment decline during recessions, the overall economy has exhibited this trend even on its own. Services employment has reduced the percentage drop in total employment during contractions by a fairly constant amount over time.

Any projection about the future behavior of this division must be made cautiously. Among other things, the component industries show considerable variability, both in rates of growth and cyclical sensitivity. Hence, it is quite possible that the overall behavior of the division will change with its composition. □

FOOTNOTES

¹ See Victor Fuchs, *The Service Economy* (New York, National Bureau of Economic Research, 1968); George Stigler, *Trends in Employment in the Service Industries* (Princeton, Princeton University Press, 1956); Edward F. Denison, "Shift to Services and the Rate of Productivity Change," *Survey of Current Business*, October 1973, pp. 20–35; and Thomas M. Stanback, *Understanding the Service Economy* (Johns Hopkins University Press, 1979).

² Arthur Burns, "Progress Towards Economic Stability," *American Economic Review*, March 1960, pp. 6–7; Fuchs, *The Service Economy*, ch. 7. Fuchs has argued that the shift in employment between 1929 and 1965 has reduced the cyclical volatility of the economy by 15 percent (p. 181). For the potential negative impact of services on the growth rate of productivity see John W. Kendrick, "Productivity Trends and Prospects," *U.S. Economic Growth from 1976–1986: Prospects, Problems and Patterns* (Joint Economic Committee of Congress, October 1, 1976); Denison, *Survey of Current Business*. However, Denison has questioned the analytic utility of the division of the total economy into two sectors, goods- and services-producing. He failed to find "any characteristic, except possibly the holding of inventories, to which a commodity-service classification corresponds at all closely." (See p. 22.) Thus, a classification of major industry components by cyclical sensitivity would not agree with the goods-services breakdown. For example, transportation, communication, and public utilities all show considerable volatility. Denison also argues that if you exclude government there has been no dramatic shift to services.

³ The goods-producing sector includes mining, construction, and manufacturing. When agriculture is included, it is part of the goods-producing sector.

⁴ The services division is not to be confused with the service occupation, which refers to employees whose major work activity is providing services. About two-thirds of all service workers are employed in the services division, but only about one-fourth of all employees in this division are service workers. Most of the others are professional and clerical workers.

⁵ The two independent employment series published by BLS—the household data from the Current Population Survey and the payroll data from the Current Employment Statistics program (establishment survey)—are somewhat different in concept and definition. Because it provides more precise information on the industrial composition of employment, and because its estimates are more reliable for examining month-to-month changes, the payroll survey is used to examine secular and cyclical trends. However, the payroll survey includes practically no information on the demographic characteristics of the labor force, and excludes the self-employed and the unemployed. In this area, the household survey is used. The establishment survey provides an estimate of the total number of nonagricultural wage-and-salary jobs. The household survey is more comprehensive and covers all job-holders. Besides wage-and-salary workers, it includes the self-employed, unpaid family workers, private household workers, and agricultural workers. For a detailed comparison of the two series, see Gloria P. Green, "Comparing employment estimates from household and payroll surveys," *Monthly Labor Review*, December 1969, pp. 9–20.

⁶ According to the payroll survey, there were 17,736,000 persons employed in the services division in 1980. In contrast, the household series shows an employment level of 27,983,000 in services industries.

This larger estimate from the household survey results from the inclusion of several categories (private household workers, public education, and the self-employed) not included in the payroll series. Subtracting these categories reduces the estimate of services industry employment in the household survey to 18,037,000.

⁷ Data on most two-digit industries do not exist prior to 1972. At that time, the Standard Industrial Classification system (SIC) was revised. For services, the major impact of the reclassification is the exclusion of approximately 60,000 employees in the forestry, fisheries, and agricultural services industries. Other changes affected the distribution of employment among the two-digit industries included in the services division. For example, data processing was shifted from SIC 89 (miscellaneous services) to SIC 73 (business services). Social services, SIC 83, was added as a new industry. A major revision was also introduced in 1961, with minor revisions in 1958, 1963, and 1967. All historical series have been changed to reflect these changes. However, some series could not be reconstructed before the revisions, and this explains the unavailability of specific industry data in table 2. For more information on SIC revisions, see the October 1978 issue of *Employment and Earnings*, pp. 8-32.

⁸ A similar point can be made about other service industries. Denison, for one, argues it is a general problem in evaluating any shift to service employment.

⁹ The table is based on the procedure used by Fuchs. Briefly, the rate of change for an expansion is measured from a 3-month average centered on a trough to a 3-month average centered on a peak. The percentage change is divided by the number of months from peak to trough and multiplied by 12 to provide an annual average. A similar procedure is used for contractions. According to Fuchs, the difference in rate of change between an expansion and contraction provides a measure of the cyclical change net of the trend in employment. See Fuchs, *The Service Economy*, p. 162.

¹⁰ The 1973-75 recession, the most serious in the postwar period, was chosen to illustrate the differential impact of an economic downturn on services as compared with the overall economy. Using quarterly averages from the same quarters in each year avoids some of the problems caused by seasonality. The business cycle peak occurred during fourth-quarter 1973. This should not affect the comparisons being made.

¹¹ At least part of this improvement reflects roughly similar magnitudes of employment declines in the cyclically sensitive goods-producing sector (except for 1973-75), while the size of the employment base has increased over time.

Work from society's perspective

Complicating an evaluation of the youth unemployment issue is that, from society's perspective, working year-round, full time is not necessarily the most desirable activity for a young person. For prime age males, the social ordering of activities is clear; working year-round, full time is the desired role. For young people, particularly for teenagers, being in school may be preferable, from society's perspective, to working. To some, military service also ranks above civilian employment. For young females, child rearing may be more favorable than working.

—MICHAEL L. WACHTER, "The Dimensions and Complexities of the Youth Unemployment Problem," in Bernard E. Anderson and Isabel V. Sawhill, eds., *Youth Employment and Public Policy* (New York, The American Assembly, Columbia University, 1980), p. 48.
