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Volume Author/Editor: George J. Stigler

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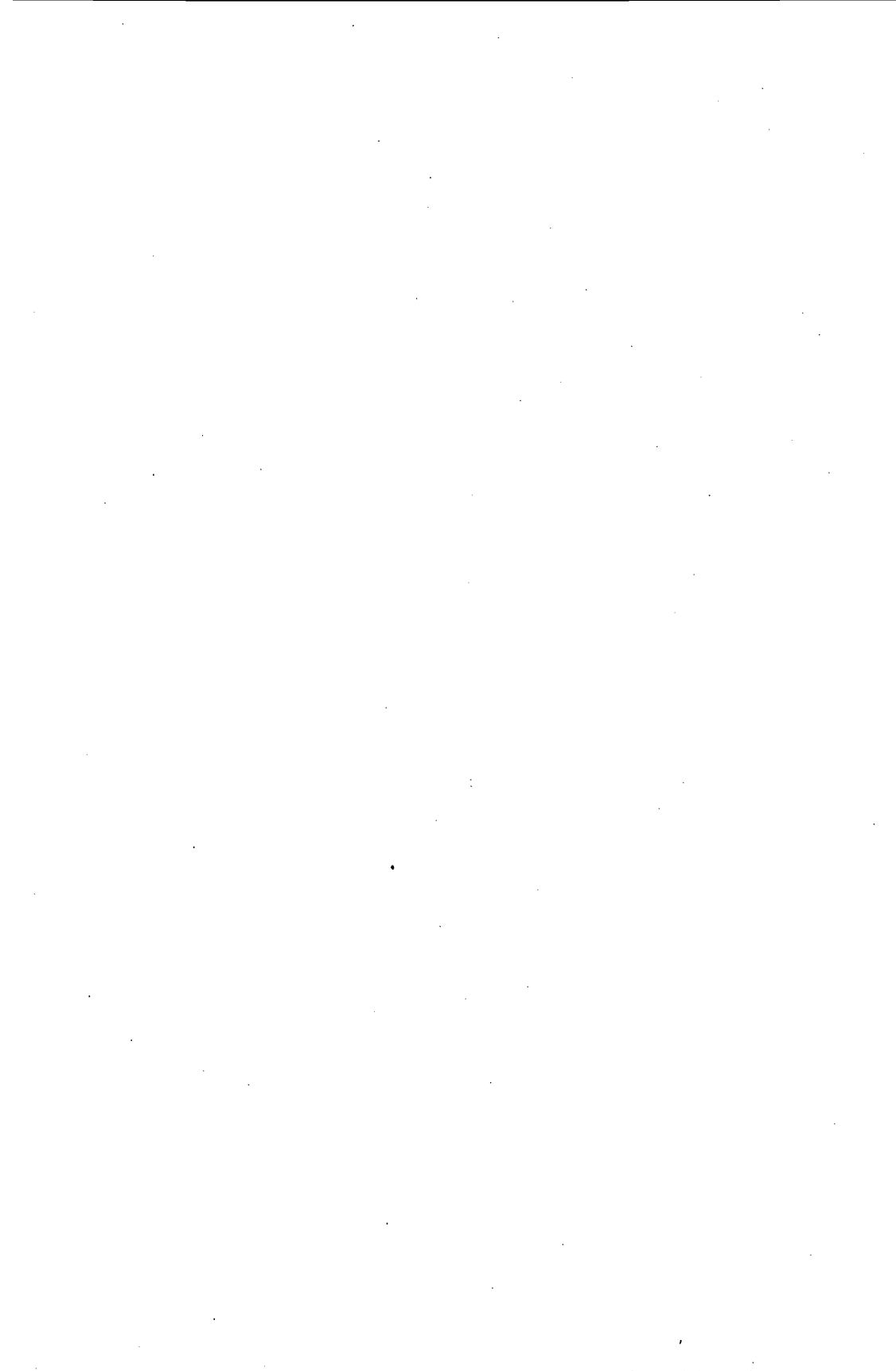
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TRENDS IN EMPLOYMENT

IN THE SERVICE INDUSTRIES

THE GROWTH OF THE SERVICE INDUSTRIES

ONE of the earliest studies of workingmen's family budgets was published in 1797 by Sir Frederic Morton Eden, when he issued the celebrated book *The State of the Poor*. The study was the product of his own sympathy and diligence, supplemented by the assistance of a few clergymen and the services for a year of a hired assistant. The budgets were not a "sample" in any desirable sense, and they are restricted chiefly to the poorest families, but still they shed much light on the contemporary standard of living.

In 1937 and 1938 another study was made of the budgets of English workingmen's families. The contrast with Eden's study is itself enough to reveal the vast changes wrought during the intervening century and a half. The Ministry of Labour was the sponsor; between 10,000 and 12,000 budgets (in each of four quarters) were collected; scientific sampling was employed in selecting the families; the families generally had incomes under £250 (the corresponding figure for Eden's study was about £50), and each family was paid 2s.; 6d. for each weekly record of its expenditures.

We boldly compare the findings of these two studies (Table 1).

TABLE 1

Percentage Composition of Expenditures of
English Working Families, 1794 and 1937-1938

	AGRICULTURAL WORKERS		NONAGRICULTURAL WORKERS	
CATEGORY	*1794*	*1937-1938*	*1794*	*1937-1938*
Housing	4.6	8.3	6.0	12.7
Food	74.5	48.4	73.9	40.1
(Grain)a	(46.2)	(9.7)	(36.2)	(6.3)
Clothing	9.0	9.1	5.0	9.5
Fuel and light	4.4	8.6	5.4	7.6
Miscellaneous	7.6	25.6	9.6	30.1
Total	100.1	100.0	99.9	100.0
Detail				
Number of families	60	1,491	26	8,905
Persons per family	5.9	3.79	6.2	3.77
Average annual	£39	£150	£40	£224
expenditure	11s.; 11d.	11s.; 1½d.	7s.; 4d.	5s.; 8½d.

a Included in food.

Source: Sir Frederick Morton Eden, *The State of the Poor*, London, J. Davis, 1797, Vols. II-III, and *Ministry of Labour Gazette*, London, Ministry of Labour, December 1940, pp. 304-305, and January 1941, pp. 9-11.

To measure the full extent of the change in family expenditures over time we should probably compare the agricultural workers of 1794 with the nonagricultural workers of 1937-1938. We find food costs to have fallen enormously relative to total expenditures —from 74.5 to 40.1 per cent. All other categories of expenditure rose, although only slightly in the case of clothing. The really vast expansion, however, was in the category of "miscellaneous": in 1937-1938 it consisted of a variety of categories (household furnishings, 11.6 per cent of "miscellaneous"; tobacco, 9.9 per cent; insurance premiums, 9.3 per cent; travel, 8.8 per cent; health and unemployment insurance, 8.1 per cent; medical care, 6.5 per cent; entertainment, 5.4 per cent; union dues, 5.3 per cent) that were generally unimportant or wholly absent in 1794.

A similar comparison, more precise in its earlier data but covering less than half as long a period, can be made for this country (see Table 2). Again the outstanding changes are the great drop in the

TABLE 2

Average Income and Expenditures of Massachusetts Working
Families, 1874-1875, 1903, and 1935-1936

CATEGORY	1874-1875 (1)	1903 (2)	1935-1936 (3)
Income	$762	$685	$1,378
Expenditures	740	632	1,415
Surplus	22	53	−37
Rent	124	132	244
Food	423	258	485
Clothing, shoes, dry goods	104	83	127
Fuel	44	32	128
Other	45	126	431
	Percentage of Total Expenditure		
Rent	16.7	20.9	17.2
Food	57.2	40.8	34.3
Clothing, shoes, dry goods	14.2	13.1	9.0
Fuel	5.9	5.1	9.0
Other	6.1	19.9	30.5
Total	100.0	99.8	100.0
Families in sample	389	1,189	1,872
Persons per family	5.14	3.92	3.05

Column	Source
1	*Sixth Annual Report of Bureau of Statistics of Labor*, Wright and Potter, State Printers, 1875. Families 27, 56, 78, 184, 195, 257,

fraction of income spent upon food and the great rise in "other" expenditures.

Such comparisons offer strong support for Dr. Ernst Engel's law, which in one form states that the richer a society, the smaller the fraction of expenditures made on food. The widely separated budgets suggest also that this rise in income leads to a large expansion of amusements, medical service, personal care, and similar services.

An immense transformation of the workingman's way of life has taken place in the last 150 years. The near halving of the share of income devoted to food tells as fully as any single ratio can that economic progress in this period outstripped that of all the centuries which had preceded.

But the budgets do not reveal the full extent of man's shift from the basic material requisites—food, clothing, and shelter—to the endless variety of public and private services. The budgets do not show the great expansion of government services, and in fact catch only the small part that workingmen pay for in direct taxes. The budgets do not separate the share of commodity costs going for marketing services or for business services which are not purchased separately. Let us therefore turn to the industrial composition of the labor force, which provides for the modern period a comprehensive account of the rise of the service industries.

1. The Trend of the Service Industries

Our study of the trend of the service industries begins, as a matter of statistical necessity, with 1870: the earlier period probably merged smoothly into that we study, but we cannot measure it numerically. The growth of the service industries, as measured by their labor force, has been consistent but not steady (see Table 3). If we consider the whole labor force, the share in service indus-

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Notes to Table 2 (continued)

258, and 385 are omitted because rent is included in board, or home is owned and no imputed rental is given.
2   *Eighteenth Annual Report of the Commissioner of Labor Statistics*, Dept. of Commerce and Labor, 1904.
3   *Family Expenditures in Seven New England Cities, 1935-36*, Bureau of Labor Statistics, Vol. II, 1941. Three city classes (less than 25,000; 25,000-100,000; over 100,000) are combined with the number of "operative and kindred workers" in Massachusetts cities of these sizes in 1940 as weights.

tries increased from one-fifth in 1870 to one-half in 1950, but shows decades of near stability (1870-1880, 1910-1920) followed by spurts. If we consider only the nonagricultural labor force,

TABLE 3

The Labor Force in the Service. Industries, 1870-1950

| | | ABSOLUTE NUMBER (THOUSANDS) | | PER CENT IN SERVICE INDUSTRIES OF: | |
	Total[a]	*Nonagricultural Industries*	*Service Industries*[b]	*Labor Force*	*Nonagricultural Labor Force*
1870	12,780	6,350	2,450	19.2	38.6
1880	17,195	8,585	3,320	19.3	38.7
1890	23,570	13,580	5,200	22.1	38.3
1900	28,700	17,990	6,920	24.1	38.5
1910	36,130	24,790	9,770	27.0	39.4
1920	41,230	30,110	11,360	27.6	37.7
1930	47,255	37,075	17,190	36.4	46.4
1940	49,970[c]	40,970	20,130[c]	40.3	49.1
1950	58,460[c]	51,445	25,560[c]	43.7	49.7

[a] Excluding workers with unknown industrial classification.

[b] To facilitate comparison of 1950 figures on the service industries with earlier years, the 1950 census data on these industries have been revised to conform with Solomon Fabricant's classification of the labor force in the service industries for 1870-1940. Solomon Fabricant, "The Changing Industrial Distribution of Gainful Workers," *Studies in Income and Wealth, Volume Eleven*, National Bureau of Economic Research, 1949, pp. 41-43.

[c] Including the estimated number of members of the armed forces in continental United States only. The census estimates that about 150,000 members of the armed forces were serving abroad in 1940 (see *Population—Special Reports*, Bureau of the Census, Series P-44, No. 12, June 12, 1944, p. 2n). In 1950 according to census estimates there were 301,595 members of the armed forces stationed outside the continental United States (see *Census of Population, 1950*, Bureau of the Census, Vol. II, Part 1, Table 35, p. 87).

Note: The figures for 1870-1940 are derived from Fabricant's estimates of the industrial distribution of gainful workers. See Fabricant, *op. cit.*, Table 2, p. 42. The 1950 data are derived from *Census of Population, 1950*, Vol. II, Part 1, Tables 50 and 130.

there was no upward trend in the share of workers in service industries between 1870 and 1920, but after that a large increase.[1]

When we turn to the general categories of service industries, we find an almost unbroken expansion of every sector except the one

[1] The use of the nonagricultural labor force as a base to measure the industrial composition of the labor force calls for more defense than it usually gets. Unless one is prepared to make some assumption such as that the movement of people away from farms is subject to a set of explanations separate from explanations for other occupational movements, or that the source of migrating laborers has a decisive effect upon their destination, the nonagricultural basis seems rather artificial.

that was largest in 1870, domestic service, which has steadily decreased from a fourteenth to less than a thirtieth of the labor force (Table 4). Even the decline of domestic service has been

TABLE 4

Labor Force in Service Industries as Per Cent of Total
and Nonagricultural Labor Force, 1870-1950

	Trade	Finance and Real Estate	Educa- tion	Other Professional Services and Amusements	Domestic Service	Personal Service	Govern- ment, n.e.c.
			1. Per Cent of Total Labor Force				
1870	6.14	.34	1.49	1.10	7.36	1.96	.78
1880	6.72	.37	1.92	1.10	6.28	2.09	.81
1890	7.74	.69	2.16	1.48	6.45	2.72	.81
1900	8.57	1.05	2.26	1.74	6.06	3.38	1.05
1910	9.33	1.44	2.49	2.13	5.95	4.21	1.49
1920	9.85	1.94	2.84	2.62	4.12	3.95	2.23
1930	13.10	3.11	3.45	3.64	5.40	5.29	2.39
1940	14.37	3.10	3.36	4.64	5.22	6.20	3.38
1950	16.43	3.33	3.57	5.42	2.96	6.38	5.62
			2. Per Cent of Nonagricultural Labor Force				
1870	12.38	.68	2.99	2.20	14.80	3.94	1.57
1880	13.45	.73	3.84	2.21	12.58	4.19	1.63
1890	13.44	1.20	3.76	2.58	11.19	4.71	1.40
1900	13.66	1.68	3.61	2.78	9.67	5.39	1.67
1910	13.59	2.10	3.63	3.11	8.67	6.13	2.18
1920	13.48	2.66	3.89	3.59	5.65	5.41	3.06
1930	16.70	3.96	4.40	4.64	6.88	6.74	3.05
1940	17.53	3.78	4.10	5.66	6.37	7.57	4.12
1950	18.68	3.79	4.06	6.16	3.36	7.25	6.38

n.e.c. = not elsewhere classified.
Source: Daniel Creamer, "Changes in the Industrial Composition of Manpower since the Civil War," *Studies in Income and Wealth, Volume Eleven*, National Bureau of Economic Research, 1949, Table 1, p. 47. Figures exclude "industry not specified."

chiefly relative to the labor force (which tripled over the period) and only after 1940 did the absolute number of servants decline.

The last two decades in education display the only other instance of even a moderate pause in the relative growth of the service industries. The share of the labor force employed in education paused in its upward trend as the birth rate fell from 1920 to 1935. The high level of births in recent years has transformed the age structure of the population: in 1940 the eighteen-year-olds were the most numerous age group (2.6 million); in 1950 it is the three-

year-olds (3.6 million). We may expect a large further growth of employment in education.

With this temporary exception of education and the persistent exception of domestic service, the record has been one of substantially unbroken growth relative to the labor force. In general the service industries which were largest in 1870 have grown least rapidly, but even wholesale and retail trade, which had one-sixteenth of the labor force in 1870, has grown to one-sixth of the labor force. The number employed in trade now exceeds that in agriculture and mining combined, and is two-thirds of the number in manufacturing.

Government employment includes persons performing not only services that only governments supply, such as law enforcement, regulation, and national defense, but also services provided by nongovernment bodies as well (such as education and construction). Only the former employees ("not elsewhere classified," or n.e.c.) are reported separately in Table 4. This smaller group grew more rapidly than the total of all government employees, which we discuss later, because it excludes education, the largest peacetime function of government in the census years before 1950.

Of course the industry categories distinguished in Table 4 are broad: finance includes pawnbrokers and governors of the Federal Reserve System; professional services and amusement include judges and flagpole sitters; government, n.e.c., includes an astonishing variety of activities. If we could look beneath the aggregates— as we shall for certain industries in later chapters—we would find that the variety of patterns of growth was much greater than Table 4 suggests: there have been industries, such as drinking places, which have vanished from sight (or at least became less noticeable) and then reappeared; industries, such as nonprofit organizations and public insurance, which have grown from almost nothing to substantial size, and others, such as livery stables, which have followed the opposite and more painful course. This diversity of pattern is worth keeping in mind simply to discourage any belief that growth of employment in the service industries has been universal or is inevitable, or, for that matter, the belief that we are likely to find a single set of explanations for so diverse a group of industries.

Comparisons like those above which state that the number of persons in trade exceeds the number in agriculture and mining combined, or that the number in domestic service considerably exceeds that in railroading, are often criticized as exaggerating the

importance of the service industries. In at least one sense such comparisons should be criticized, for a simple count of heads of workers is a poor measure of the importance of an industry to an economy. It is poor because it ignores the quality of the labor force: are the service industries staffed chiefly with relatively skilled or unskilled workers? It is a poor measure, also, because it ignores the quantities of the other productive resources cooperating with labor in production.

Both of these points may be illustrated, although only approximately and for only a few broad industry categories, from the national income data (Table 5). We may measure the quality of workers by their wage incomes, although we must recognize that our first method of estimating the wage incomes of professional workers (e.g. that of a physician by the average of his employees' wages) is seriously biased downward, and our second method (which includes entrepreneurial property incomes) is biased upward. It is apparent, however, that if we use an average of these earnings as a measure of labor quality, the service industries do not systematically have a smaller share of the labor force than when we count heads: only in personal and domestic service is the per cent of the total labor force much greater than the per cent of earnings, and in the professions the share in earnings is much higher. And when we shift to an "income originating" measure, which takes account of all forms of productive contributions including those of property, we find that the service industries again fall on both sides of the national average. In finance, insurance, and real estate the share of all income greatly exceeds the share of labor income; in personal services the opposite relationship is found in lesser degree.

The service industries are thus of roughly equal economic significance, whether measured by employment, labor earnings, or national income originating. There are other bases for ranking industries, some metaphysical and some capable of comprehensible interpretation.[2] But none, I suspect, justifies snobbishness toward the service industries.

2. *The Public Economy*

Although we shall discuss later certain service industries (the

[2] The most significant, I think, is that which measures the "importance" of an industry by its short-run indispensability (inelasticity of demand), for this measure is related to the political and monopolistic power the industry may achieve.

TABLE 5

Percentage Use of National Resources by Selected Service Industries, 1950

| | | LABOR INCOME | | |
INDUSTRY	LABOR FORCE[a]	Wages and Salaries[b]	Wages and Salaries plus Income of Un-incorporated Enterprise[c]	INCOME ORIGINATING
Trade	19.47	20.18	20.87	18.10
Wholesale	4.62	6.06	5.96	5.71
Retail	14.86	13.84	14.65	12.40
Finance, Insurance, and Real Estate	3.41	3.87	3.73	8.61
Insurance	1.41	1.63	1.58	1.38
Real Estate	.94	.82	.83	5.48
Service	13.30	9.87	10.58	9.48
Hotels	1.07	.78	.63	.55
Personal	2.05	1.55	1.51	1.19
Domestic	3.01	1.51	1.39	1.11
Motion Pictures	.40	.40	.39	.35
Other amusements	.49	.43	.39	.33
Medical	2.11	1.51	2.35	1.87
Legal	.38	.29	.70	.55
Engineering	.27	.37	.37	.30
Education (private)	.83	.65	.57	.47
Government	12.56	13.27	12.24	9.77

[a] Proprietors plus full-time equivalent employees.

[b] Includes entrepreneurial wage income estimated as number of proprietors times average annual earnings of full-time employees.

[c] Wages and salaries here are exclusive of estimated wage income of entrepreneurs. For industry subgroups the income of unincorporated enterprises was calculated by applying the ratios of 1949 income of unincorporated enterprises as reported respectively in the *National Income Supplement, 1954, Survey of Current Business* (Dept. of Commerce), and *Survey of Current Business*, July 1952, to the corresponding 1950 series in the *Survey of Current Business*, July 1952.

Source: *Survey of Current Business*, July 1952, Table 16, p. 19, and *National Income Supplement, 1954, Survey of Current Business*, Exhibit 2, p. 77, and Tables 13, 14, 25, 27, and 28.

military and college teaching professions) which are wholly or partly administered by governments, we shall not attempt to discuss in any detail the vast range of economic activities performed by modern governments. The reader is referred to Solomon Fabricant's recent work for such a discussion.[3] But it is desirable now to

[3] Solomon Fabricant, *The Trend of Government Activity in the United States since 1900*, National Bureau of Economic Research, 1952.

take at least a glance at this group of activities, for they are chiefly in the category of services.

It is not quite accurate to say that all the important forms of government employment are service industries, and indeed our pervasive governments are represented in every broad industry category (see Table 6). But there is only one commodity-producing industry

TABLE 6

Government Employment by Industry, 1950

INDUSTRY	EMPLOYMENT Number (thousands)	Per cent	GOVERNMENT EMPLOYMENT AS PER CENT OF INDUSTRY EMPLOYMENT
Agriculture	21	.3	.3
Forestry and fisheries	25	.4	20.8
Mining	2	.0	.2
Construction	329	5.1	9.6
Manufacturing	130	2.0	.9
Transportation and public utilities	352	5.4	8.1
Street railways and buses	110	1.7	34.0
Utilities and sanitary services	194	3.0	24.8
Trade	29	.5	.3
Finance and real estate	57	.8	3.0
Business and personal services and entertainment	36	.6	.7
Professional services	2,021	31.1	45.3
Medical and health	446	6.9	27.4
Education	1,539	23.7	74.3
Public administration	3,485	53.6	100.0
Postal service	454	7.0	100.0
Federal public administration	1,009	15.5	100.0
State and Local public administration	1,025	15.8	100.0
Armed forces	997[a]	15.3	100.0
Industry not reported	17	.2	2.0
Total	6,504	100.0	11.4

[a] In the United States.

Source: *Census of Population, 1950*, Bureau of the Census, Vol. II, Part 1, Table 133.

(construction) in which government employment is appreciable relative to both total industry employment and total government employment. Government employment in the transportation and public utility industries is larger, and if we transferred the postal service to this area, as in consistency we should, this group of indus-

tries would contain a considerable part of government employment. But all the rest of government employment falls in service industries such as education and health, or in the public services *sui generis*. It should be remarked that if we were studying other countries this identification of government activity with service industries would clearly be illicit: in the United Kingdom, for example, 2.4 million workers (in a total labor force of 23 million) were in nationalized industries in 1950.[4]

Government employment has had scarcely any upward trend relative to the service industries, if it is not too naïvely optimistic to treat the spring of 1950 as possibly atypical of the future (Table 7). But the service industries themselves have in the aggregate

TABLE 7

The Labor Force in Service Industries and
in Government Employment, 1900-1950

| | LABOR FORCE (THOUSANDS) | | GOVERNMENT LABOR FORCE AS PER CENT OF SERVICE INDUSTRIES (3) |
	All Service Industries (1)	Government (2)	
1900	6,920	1,110	16.0
1910	9,770	1,736	17.8
1920	11,360	2,529	22.3
1930	17,190	3,206	18.7
1940	20,130	3,644[a]	18.1
1950	25,560	6,559[a]	25.8

a These figures were adjusted to 1930 base.

Column   Source

  1   Table 3.

  2   *1900-1940*: Solomon Fabricant, *The Trend of Government Activity in the United States since 1900*, National Bureau of Economic Research, 1952. *1950: Census of Population, 1950*, Bureau of the Census, Vol. II, Part 1, Tables 45, 118, and 133.

grown rapidly and without interruption, and our mode of presentation should not conceal the fact that the employees of governments grew sixfold in the half century, while the labor force only doubled.

Fabricant's study indicates that growth took place in all major and virtually all minor functions of government, and that one must look to trifling functions such as regulation of midwives in order to

[4] See Moses Abramovitz and Vera Eliasberg, *The Growth of Public Employment in Great Britain*, Princeton University Press for National Bureau of Economic Research, in press.

discover absolute declines in activity.[5] The generality of growth of government functions, however, is partly an organizational illusion: A given agency has a tendency to adapt itself to changing institutions. The same navy that once fought with wooden sailing vessels now fights with atomic submarines; the same Federal Communications Commission that once regulated only radio takes on the regulation of television in stride. If private industries were defined merely by function—say, transportation—rather than by both function and method of performing it—like railroads—we should also find declining private industries to be most uncommon in a growing economy.

Many individual functions of government have grown for exactly the same reasons that various private industries we discuss later have grown. As our population has become more urban, it has been almost inevitable that we should have more public employees to enforce traffic rules, watch the sanitary practices of consumer and businesses, teach children, and the like. As our population has become wealthier, it is natural that it should demand a better grade of bank or schoolhouse just as it demands better food and housing.

It is not possible to state precisely how much of the expansion of government economic activity we can explain by such traditional determinants of industry growth. One may conjecture, however, that much of the growth must be based upon different factors. Developments such as the rise of per capita income and the growth of cities characterized the whole nineteenth century, and yet the data seem to suggest that the growth of public employment was small relative to the labor force during this century.[6] A basic shift in attitudes toward individual and social action, or in the distribution of political power which has changed the effective importance of different attitudes, has probably been basic to much of the growth of government economic activity. We shall not undertake to investigate this large subject.

[5] Fabricant, *op. cit.*, p. 82.
[6] See Abramovitz and Eliasberg, *op. cit.*, and Fabricant, *op. cit.*, p. 14.