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# 1

## INTRODUCTION

A TENDENCY for employment to grow more rapidly in the service industries than in the rest of the economy is one of the best-documented aspects of economic growth. In the United States, where we have reasonably good information on the industrial distribution of the employed population for at least the last hundred years, this shift to services has occurred almost without interruption and has been more rapid in recent decades than in the period before 1929. Currently, well over half of total employment is accounted for by wholesale and retail trade, finance, insurance, and real estate; professional, personal, business, and repair services; and general government.

Until 1920, the shift of U.S. employment could, in very large measure, be described simply as a movement from agricultural to nonagricultural pursuits. Employment in commodity-producing industries outside of agriculture tended to grow as rapidly as in the services. In the 1920's, however, service industry employment accelerated relative to the rest of the nonagricultural economy. In the 1930's this shift was very pronounced because the impact of the Depression reinforced the secular trend. In the post-World War II period, services have accounted for virtually all of the net absolute growth of employment, as gains in manufacturing and construction have barely been large enough to offset declines in agriculture and mining. Table I-1 shows the levels and shares of employment by major industry group in 1929, 1939, 1948, and 1963.

The growing importance of the service sector, combined with the prominence now given to problems of economic growth, has resulted in a sharp increase in interest in the productivity of the service industries. It is generally believed that productivity in services has not (and

TABLE I-1

*Employment in the United States by Major Industry Group,  
Selected Years, 1929-63*

Industry	1929		1939	
	Employment (thousands)	Percentage of U.S. Total	Employment (thousands)	Percentage of U.S. Total
Agriculture, forestry, and fishing	9,205	19.9	8,273	17.8
Mining	1,017	2.2	870	1.9
Construction	2,306	5.0	1,864	4.0
Manufacturing	10,556	22.8	10,086	21.6
Transportation	3,034	6.6	2,169	4.7
Communications and public utilities	1,034	2.2	871	1.9
Government enterprise	409	.9	503	1.0
Wholesale trade	1,744	3.8	1,942	4.2
Retail trade	6,077	13.1	6,440	13.8
Finance and insurance	1,207	2.6	1,066	2.3
Real estate	368	.8	494	1.1
Households and institutions	3,249	7.0	3,033	6.5
Professional, personal, business, and repair services	3,235	7.0	3,363	7.2
General government (including armed forces)	2,775	6.0	5,630	12.1

(continued)

TABLE I-1 (concluded)

Industry	1948		1963	
	Employment (thousands)	Percentage of U. S. Total	Employment (thousands)	Percentage of U. S. Total
Agriculture, forestry, and fishing	7,012	12.0	4,725	6.8
Mining	1,021	1.7	654	.9
Construction	3,262	5.6	4,305	6.2
Manufacturing	15,468	26.4	16,767	24.2
Transportation	3,000	5.1	2,546	3.7
Communications and public utilities	1,281	2.2	1,461	2.1
Government enterprise	720	1.2	987	1.4
Wholesale trade	2,712	4.6	3,391	4.9
Retail trade	8,597	14.7	10,537	15.2
Finance and insurance	1,349	2.3	2,437	3.5
Real estate	574	1.0	763	1.1
Households and institutions	3,051	5.2	4,316	6.2
Professional, personal, business, and repair services	4,449	7.6	6,182	8.9
General government (including armed forces)	6,080	10.4	10,336	14.9

Source: Office of Business Economics, *Survey of Current Business*, July 1962, July 1964; *U. S. Income and Output*, 1958; *National Income*, 1954 Edition.

perhaps cannot) improve as rapidly as in goods-producing industries. Doubts concerning the accuracy of the underlying data are widespread, however, and the analysis of the lag in service productivity, if it exists, has not been pushed very far.

Comparison of the goods and service sectors in the aggregate does reveal substantial difference in sector rates of growth of output per man; indeed, it is this differential rather than a drastic change in the composition of final output that appears to account for most of the shift of employment since 1929. However, when sector differences in rates of change of hours per man, quality of labor, and physical capital per worker are also taken into account, the productivity differential is much smaller than that based on output per man.

In this paper an attempt is made to obtain a better understanding of the factors affecting productivity by an examination of differences among detailed service industries. Such an approach, if applied with the caution that the imperfections in data and analytical techniques require, should permit some test of conclusions about productivity that have been reached on the basis of intersector comparisons and studies of productivity trends within manufacturing industries.