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CHAPTER 1

Distribution's Growing Share of the Labor Force

BETWEEN the end of the Civil War and the outbreak of the Korean War the labor force in the United States grew roughly four and a half times. The census counted 13 million gainfully occupied persons in 1870, 60 million in 1950. "Gainfully occupied" of course includes the jobless, as well as the employed. For this reason the figures may be a poor guide to short-run employment trends. But over longer periods the unemployment percentage has little if any trend, and we can use the labor force—the number gainfully occupied—as a way of measuring employment movements over several decades.

The census figures can be arranged by industry (Table 1). If we regard retail and wholesale trade as a form of service and government as a service industry, we can divide the labor force into two parts—those engaged in the physical production of commodities and structures and those engaged in distributing, transporting, and financing commodities or performing personal services of one kind or another. The distinction is by no means a fundamental one, yet it points up certain differences. The most notable of these differences is perhaps the contrast in employment trends.

Between 1870 and 1950, persons occupied in producing commodities and in construction multiplied almost three times, but those engaged in the service group of industries grew tenfold. In 1870 there were more than three occupied persons in the former group for every one in the latter. By 1940, numbers in the two groups were roughly equal; by 1950 the latter was the larger group. Table 2 shows a percentage distribution of the same data. The fraction of the labor force in the service industries rose with remarkable steadiness from a quarter in 1870, to a third between 1900 and 1910, almost a half in 1940, and more than half in 1950.

It would not be accurate to speak of a mass migration out of the commodity and into the service industries. Both groups were growing, but the latter grew much faster than the former. Even where an industry actually declined, the reduction in numbers could be ac-

Table 1

THE LABOR FORCE, BY INDUSTRY, 1870-1950^a
(thousands of persons)

| | 1870 | 1880 | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Commodity production and construction | 9,686 | 13,015 | 16,840 | 19,679 | 23,172 | 25,679 | 25,588 | 25,703 | 27,339 |
| Commodity-producing industries | 8,934 | 12,185 | 15,394 | 18,016 | 20,874 | 23,513 | 22,559 | 22,195 | 23,596 |
| Agriculture, forestry, and fishing | 6,489 | 8,701 | 10,171 | 10,914 | 11,588 | 11,401 | 10,525 | 9,141 | 7,141 |
| Mining | 198 | 314 | 475 | 760 | 1,054 | 1,230 | 1,158 | 1,110 | 969 |
| Manufacturing and hand trades | 2,247 | 3,170 | 4,748 | 6,342 | 8,232 | 10,882 | 10,876 | 11,944 | 15,486 |
| Construction | 752 | 830 | 1,445 | 1,663 | 2,297 | 2,167 | 3,029 | 3,508 | 3,743 |
| Service | 3,085 | 4,179 | 6,729 | 9,033 | 12,958 | 15,548 | 21,787 | 24,264 | 31,117 |
| Commodity distribution: retail and wholesale trade | 785 | 1,155 | 1,825 | 2,460 | 3,366 | 4,064 | 6,112 | 7,179 | 9,608 |
| Other service industries | 2,300 | 3,024 | 4,904 | 6,573 | 9,592 | 11,484 | 15,675 | 17,085 | 21,509 |
| Transportation and public utilities | 617 | 816 | 1,476 | 2,034 | 3,022 | 3,981 | 4,548 | 3,837 | 5,095 |
| Finance | 43 | 63 | 163 | 302 | 517 | 795 | 1,445 | 1,549 | 1,949 |
| Professional service | 199 | 304 | 518 | 721 | 1,079 | 1,503 | 2,295 | 2,936 | 3,709 |
| Personal service | 1,189 | 1,445 | 2,152 | 2,712 | 3,670 | 3,334 | 4,931 | 5,703 | 5,458 |
| Government | 251 | 396 | 597 | 803 | 1,304 | 1,871 | 2,456 | 3,061 | 5,298 |
| Not specified | 154 | 198 | 169 | 362 | 750 | 387 | 1,337 | 3,331 | 1,595 |
| Total | 12,925 | 17,392 | 23,739 | 29,073 | 36,881 | 41,614 | 48,712 | 53,299 | 60,052 |

^a Daniel Carson, "Changes in the Industrial Composition of Manpower since the Civil War," *Studies in Income and Wealth, Volume Eleven*, National Bureau of Economic Research, 1949, p. 47. In the original, figures for 1870 to 1920 are described as "ages 10 and over"; for 1940 as "ages 14 and over." The overlap in 1930 shows only minor differences between the classifications, and the 1930 data in this table are averages of those in the original.

The derivation by Carson of the data for 1870 to 1930 is described in the source mentioned. The effect of a possible misclassification of commercial travelers and other salesmen during 1870 to 1920 is discussed below in Appendix A and shown to be unimportant.

Carson took the 1940 data from Alba M. Edwards, *Comparative Occupation Statistics for the United States, 1870 to 1940, Census of Population, 1940*, Table 7, in preference to

the original census figures because Edwards had distributed public emergency workers according to their usual occupation.

The 1950 figures are reproduced directly from the *Census of Population, 1950*, Vol. II, Part I, Table 130. The classification is as there shown, except that, in our table, manufacturing includes "miscellaneous repair services"; retail and wholesale trade excludes "eating and drinking places," and includes "advertising," "accounting, auditing and bookkeeping services," and "miscellaneous business services"; transportation and public utilities include "transportation," "telecommunications," "electric light and power, and electric-gas utilities," "gas and steam supply systems," "other and not specified utilities," "radio broadcasting and television," and "automotive repair services and garages";

professional service excludes "educational services, government," and includes "theaters and motion pictures," "bowling alleys, and billiard and pool parlors," and "miscellaneous entertainment and recreation services"; personal service includes "eating and drinking places"; and government includes "public administration," "educational services, government," "water supply," "sanitary services," and "armed forces" (census Table 118). Not specified includes new (i.e. other than experienced) workers seeking work (census Table 50). The foregoing rearrangement of the 1950 figures makes them comparable with those for earlier years.

For 1930, 1940, and 1950 see also Appendix Table A-1 below.

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complished by the cessation of recruitment together with normal attrition. And the industries which grew fastest could, and probably did, grow mainly through recruitment of those entering the labor force rather than by transfer of employees from other industries. Yet if no mass migration of workers is recorded, or occurred, the industrial distribution of the labor force—the source of people's incomes and the manner in which they earned a living—changed radically during the eighty-year period.

Table 2

PERCENTAGE DISTRIBUTION OF THE LABOR FORCE, BY INDUSTRY, 1870-1950^a

| | 1870 | 1880 | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Commodity production and construction | 75.8 | 75.7 | 71.4 | 68.5 | 64.1 | 62.3 | 54.0 | 51.4 | 46.8 |
| Commodity production | 70.0 | 70.9 | 65.3 | 62.7 | 57.8 | 57.0 | 47.6 | 44.4 | 40.4 |
| Construction | 5.9 | 4.8 | 6.1 | 5.8 | 6.4 | 5.3 | 6.4 | 7.0 | 6.4 |
| Service | 24.2 | 24.3 | 28.6 | 31.5 | 35.9 | 37.7 | 46.0 | 48.6 | 53.2 |
| Commodity distribution | 6.1 | 6.7 | 7.7 | 8.6 | 9.3 | 9.9 | 12.9 | 14.4 | 16.4 |
| Other service | 18.0 | 17.6 | 20.8 | 22.9 | 26.5 | 27.9 | 33.1 | 34.2 | 36.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

^a Based on Table 1. It has been assumed that the "not specified" in that table has the same industrial composition as the identified portion of the labor force.

Commodity Production and Commodity Distribution

The causes of this remarkable shift in peoples' ways of getting a living in the United States would form a worthwhile topic for inquiry. The present study will contribute something to this end, but its purpose is a narrower one. In studying one particular service industry—distribution—we shall contrast especially trends in the production of commodities, on the one hand, and their distribution, on the other. To the first group we assign agriculture, forestry, and fishing; mining; and manufacturing; to the second group, retail and wholesale trade.

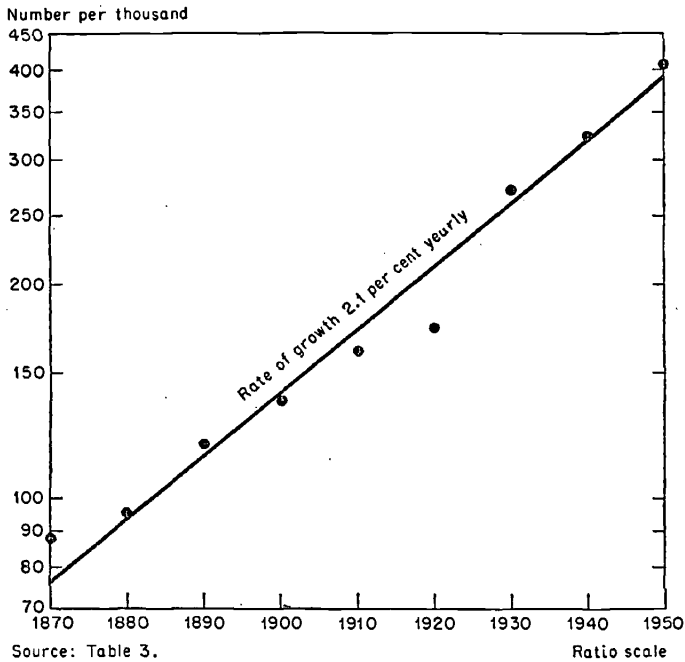
The divergence of employment trends between these two groups is a part of, and is just as marked as, that noted above. Persons engaged in the commodity-producing industries more than doubled between 1870 and 1950; those distributing commodities grew twelve-fold (Table 1). Some further measures are shown in Table 3. Thus distribution's share in the entire labor force grew rapidly—from 6 per cent in 1870 to 16 per cent in 1950. But distribution's share of those persons engaged in the production and distribution of commodities rose still more rapidly—from 8 per cent at the earlier date

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to 29 per cent at the later. Put otherwise, for every thousand persons engaged in production in 1870, there were fewer than one hundred persons in distribution; in 1950 there were about four hundred. These figures are exhibited, together with a trend line fitted to the data, in Chart 1. The slope of the trend indicates that the number of persons engaged in distribution per thousand engaged in production grew at an average annual rate of 2.1 per cent, or 23 per cent per decade.

Chart 1

NUMBERS ENGAGED IN COMMODITY DISTRIBUTION PER THOUSAND ENGAGED IN COMMODITY PRODUCTION, 1870-1950



The data in Tables 1, 2, and 3 are the only long-time series available to us. As mentioned, they refer to numbers engaged rather than to employment; and distribution is regrettably but necessarily defined to exclude restaurants and bars and include advertising and miscellaneous business services. For recent years other figures are available which are not subject to these defects. Such figures are shown in Table 4 for the last three decennial census years and serve to confirm the trends discussed above.

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Table 3
RELATIVE NUMBER IN DISTRIBUTION, 1870-1950 ^a

| | 1870 | 1880 | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 |
|---|------|------|------|------|------|------|------|------|------|
| Number of persons engaged in distribution: | | | | | | | | | |
| As per cent of labor force | 6.1 | 6.7 | 7.7 | 8.6 | 9.3 | 9.9 | 12.9 | 14.4 | 16.4 |
| As per cent of number in production and distribution combined | 8.1 | 8.7 | 10.6 | 12.0 | 13.9 | 14.7 | 21.3 | 24.4 | 28.9 |
| Per thousand in production ^b | | | | | | | | | |
| Observed | 88 | 95 | 119 | 137 | 161 | 173 | 271 | 323 | 407 |
| Trend value ^c | 76 | 93 | 114 | 140 | 172 | 211 | 260 | 319 | 392 |

^a Based on Table 1.

^b Agriculture, forestry, and fishing; mining; manufacturing and hand trades.

^c Values obtained by fitting an exponential curve by least squares (Glover's method). The rate of growth is 2.1 per cent yearly.

Table 4
EMPLOYMENT IN DISTRIBUTION AND OTHER INDUSTRIES, 1930, 1940, AND 1950
(full-time equivalent employees and active proprietors, Department of Commerce) ^a

| | 1930 | 1940 | 1950 |
|--|------------------------|--------|--------|
| | (thousands of persons) | | |
| All industries | 43,725 | 48,088 | 58,795 |
| Commodity-producing industries | 19,183 | 19,895 | 22,958 |
| Agriculture, forestry, fisheries | 8,804 | 7,918 | 6,884 |
| Mining | 956 | 965 | 966 |
| Manufacturing | 9,423 | 11,012 | 15,108 |
| Distribution | 7,437 | 8,646 | 11,225 |
| | (per cent) | | |
| Employment in distribution: | | | |
| As per cent of all employees | 17.0 | 18.0 | 19.1 |
| As per cent of employees in production and distribution combined | 27.9 | 30.3 | 32.8 |
| | (persons) | | |
| Per thousand in production | 388 | 435 | 489 |

^a Survey of Current Business, National Income Supplements, Dept. of Commerce. Differences between this table and Table 1 are discussed in Appendix A. As with the "labor force" of preceding tables, full-time employment includes the self-employed. Unlike the labor-force figures, these exclude the jobless, and part-time workers are reduced to a full-time basis. Moreover, distribution here includes restaurants and bars, and excludes advertising and miscellaneous business services.

Aspects of Distribution's Growth since 1869

The long-time trend described by these figures prompts many questions. Why did employment in retail and wholesale trade rise so much more rapidly than in manufacturing, mining, and agriculture? Why did we use ten persons in commodity production to each one in distribution in the 1870's, fewer than three of the former for every one of the latter in 1950?

At this point we shall merely summarize some of the influences at work. They will be taken in turn, considered in detail, and if possible assessed quantitatively at a later stage. In the first place, hours of work declined more in retail and wholesale establishments than in factories, mines, and farms. Thus distribution's labor input, when measured in man-hours, did not rise as rapidly as the number of persons employed. Of course the same is true of commodity production, but man-hours showed a larger lag in distribution than in production. This matter is considered further in the present chapter.

Second, the scope of distribution expanded as an ever-larger fraction of what the nation's factories, mines, and farms produced entered the distribution system. For the function of distributing goods needs to be distinguished from the industrial segment that has come more and more to perform that function. These have not always coincided, nor even now do they completely coincide. The function is older than the industry that performs most of it. Originally, no doubt, all producers themselves distributed their products, and distribution as a separate enterprise did not yet exist. Then the industry had neither output nor employment, though the function was already being performed.

From the statistical standpoint we are necessarily concerned with the industry rather than the function. Specialization, partly a consequence of the growing complexity of the distributive function, gave birth to the merchant. Such specialization was still in progress during our period. Fewer and fewer producers were self-sufficient or were able to reach the ultimate consumers of their products without the help of some distributor. This shift can be measured quantitatively; it is discussed in Chapter 2.¹

Third, the scope of distribution changed in other ways also. Some of its functions, such as packaging, were partly shifted back to the factory; other functions, such as delivery, were partly abandoned (for

¹ Thus we measure persons employed by firms engaged in wholesale and retail trade rather than persons exercising the distributive function. A different difficulty, arising from the possibility that salesmen in other industries were classified in trade in early years and in other industries in later years, is discussed in Appendix A and shown to be unimportant.

instance, by grocery stores that became self-service markets)—or, if you prefer, were shifted forward onto the consumer. Still other functions were assumed for the first time or greatly expanded in scope during our period of study, such as after-sales service, the granting of free trial and return privileges, and the testing of products. Whether these changes on balance increased or diminished the amount of service performed by distribution, per unit of goods distributed, is debatable. Quantitative assessment must elude us. Yet it is argued in Chapter 2 that the distributor on the whole performs somewhat more functions than he used to do. If so, the labor needed to move a given quantity of goods increased on this account.

Fourth, the amount of goods distributed—or the volume of services performed—per man-hour of employment in distribution rose far less rapidly than output per man-hour in commodity production. Labor productivity, as ordinarily measured, rose much faster in the production of goods than in their distribution. This difference was of course a reflection of the fact that technology changed far less rapidly in retail and wholesale trade than it did in manufacturing, mining, or agriculture. Moreover, capital per worker, at least in manufacturing, seems to have increased more rapidly than in distribution. In Chapter 3 an attempt is made to measure the differential change in productivity. That chapter contributes to an explanation of the growth in distribution's share of the labor force.

Labor Input Measured in Man-Hours

In Table 5 we have assembled the best estimates we could for weekly hours actually worked in the commodity-producing industries and in distribution at ten-year intervals, 1869 to 1949.² Actual hours reflect overtime and part-time working as distinct from the nominal or full-time workweek. The only data available for the early years relate to nominal hours; but the latter have been adjusted to a basis of actual hours, as explained in notes to the table.

It will be seen that between the beginning and end of the period weekly hours of work fell very sharply, both in manufacturing and in trade; although today, as eighty years ago, hours in trade are longer. Yet the trend in manufacturing is not representative of commodity production as a whole. In agriculture, nominal or full-time hours worked by wage workers, and actual hours worked by farm

² The occupation census relates to decennial years 1870–1950 (Tables 1 to 3). Production censuses relate to years 1869–1939, and censuses of distribution were taken in 1929 and 1939. We have adopted the latter chronology as standard and where necessary have assumed that 1940 labor force data would differ but slightly from 1939, etc. We justify the assumption by our preoccupation with long-term trends.

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Table 5

HOURS WORKED PER WEEK IN PRODUCTION AND DISTRIBUTION,
1869-1949 ^a

| | 1869 | 1879 | 1889 | 1899 | 1909 | 1919 | 1929 | 1939 | 1949 |
|--|------|------|------|------|------|------|------|------|------|
| Agriculture ^b | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 |
| Mining ^c | 44 | 43 | 42 | 39 | 38 | 36 | 38 | 27 | 41 |
| Manufacturing ^d | 56 | 55 | 53 | 52 | 51 | 46 | 44 | 38 | 39 |
| Commodity production (weighted mean) ^e | 52 | 52 | 51 | 51 | 50 | 48 | 47 | 43 | 43 |
| Wholesale and retail trade ^f | 66 | 66 | 66 | 65 | 59 | 56 | 54 | 48 | 44 |

^a Figures are intended to represent actual (rather than normal or full-time) hours worked. In most industries in most years part-time more than counterbalances overtime; hence actual hours are commonly fewer than nominal hours worked per week. Yet figures shown doubtless overstate actual weekly hours per person in the labor force, since persons wholly unemployed are not accounted for.

^b Data given in Harold Barger and Hans H. Landsberg, *American Agriculture, 1899-1939: A Study of Output, Employment and Productivity*, National Bureau of Economic Research, 1942, p. 271, yield a figure of 2,550 hours per year. If a year is taken as 50 weeks, this is equivalent to 51 hours per week. A decline has occurred in nominal hours in agriculture; but so far as mean actual hours are concerned, it is likely that the decline has been offset by fewer child workers, fewer casual laborers at harvest time, and more dairying (*ibid.*, pp. 268-272).

Since we use constant hours per week and weeks per year, our estimate of *actual* labor input in agriculture, measured in man-hours, varies with numbers engaged (Table 1) and declines 38 per cent between 1910 and 1950. Another estimate, of labor *required* for farm work (Reuben W. Hecht and Glen T. Barton, *Gains in Productivity of Farm Labor*, Dept. of Agriculture, Tech. Bull. 1020, 1950, Table 45), declines only 14 per cent between 1910 to 1914 and 1945 to 1948. This implies that average hours per year for the agricultural labor force as a whole *increased* substantially between the earlier date and the later, a conclusion I cannot accept.

^c 1909-1949: Bureau of Labor Statistics data for bituminous coal mining (*Historical Statistics of the United States, 1789-1945*, Bureau of the Census, 1949, series D 146). *Extrapolated back to 1890* by nominal hours in coal mining (Paul H. Douglas, *Real Wages in the United States, 1890-1926*, Houghton Mifflin, 1930, p. 163). *Thence to 1869* by hours in manufacturing (see note d).

^d 1909-1949: BLS data (*Historical Statistics*, Series D 118). *Extrapolated back to 1890* by nominal hours (*ibid.*, series D 123; Douglas, *op.cit.*). *Thence to 1869* using data from the Aldrich report. The latter will be found in *Wholesale Prices, Wages, and Transportation*, 52d Cong., 2d sess., S. Report 1394 (1893), Part I, pp. 176-179. A weighted mean was taken of nominal hours in the twelve manufacturing industries there shown; daily hours were converted to weekly hours on the assumption that the workweek contained six days.

^e 1869-1949: Figures for agriculture, mining, and manufacturing were combined by using numbers engaged in the following year (Table 1) as weights.

^f 1869-1909: An extensive survey of state reports led to estimates of nominal hours for food stores, dry goods, hardware, drug stores, and bars and restaurants, for dates around 1880, 1900, and 1910 (see Roselyn Silverman, "Hours Worked in Retail Trade, 1880-1920," M.A. thesis, Columbia University, 1950). These figures were weighted by number of dealers in each branch from the occupation census. The averages resulting were 69, 68, and 62 hours per week for the three dates
(footnotes continued on page 12)

operators in each kind of farming, have probably fallen somewhat—in competition with urban occupations. Yet, owing to the growth of dairy farming (which gives employment in all twelve months) and the mechanization of harvesting (which has cut seasonal needs for labor), it is doubtful whether the actual workweek, averaged over all persons reported by the occupation census as engaged in farming, has fallen at all. That is to say, hours worked per year, averaged in this way, have remained remarkably stable. In consequence, weekly hours in commodity production as a whole declined by only half as much as in manufacturing.

Between 1869 and 1949, hours in distribution fell from 66 to 44, or by 22 hours a week. In commodity production the decline was from 52 to 43, or 9 hours a week. If we multiply weekly hours worked by numbers engaged, we obtain a figure for weekly labor input in man-hours (Table 6). Measured in man-hours, labor input in distribution rose three times as fast over the period as a whole as labor input in the commodity industries. In both cases the change after 1910 was less than prior to that year. Indeed labor input in commodity production actually exhibits a declining trend during the last four decades.

The contribution of the differential trend in weekly hours to the relative growth of numbers in distribution is evidently small. Using slightly more than one-tenth of the man-hours in commodity production at the opening of our period, distribution used nearly one-half

respectively. Willford I. King (*Employment, Hours and Earnings in Prosperity and Depression*, NBER, 1923, pp. 82, 87) shows actual hours in retail trade as about 98 per cent of nominal hours. However, King thinks his figures somewhat understate fulltime hours (p. 81), and we therefore multiplied nominal hours by 95 per cent.

1919: For 1920, King gives 52 hours for employees' actual workweek. As hours of employees are shortened, it is obvious much family labor in small stores continues to work as long hours as ever. Roughly half the labor force were proprietors or family employees in 1919, and we assume these workers still had a 60-hour week. Hence estimate of 56 hours.

1929: Weekly hours in manufacturing were about 2 below the 1919 level (Historical Statistics, series D 118). Hours of employees in trade may have fallen more slowly, but against this the importance of family labor diminished. Hence 54 hours for 1929.

1939: The BLS figure for actual hours of employees is 43.0 (*Handbook of Labor Statistics*, Bull. 916, 1947 ed., pp. 82-83). There were 2,080 thousand proprietors and full-time family employees against 4,600 thousand paid employees (*Census of Business, 1939*, Vol. 1, *Retail Trade*, Part 1, p. 85). We assume the former worked 60 and the latter 43 hours per week, the weighted mean being 48. The same plan was followed in 1949, using the proportion between proprietors and full-time employees from the 1948 census of distribution.

Both King and BLS (*loc.cit.*) show hours in wholesaling close to those in retailing, so we have not given the former separate consideration.

Table 6
 NUMBERS ENGAGED AND INPUT OF MAN-HOURS IN PRODUCTION AND DISTRIBUTION, 1870-1950
 (millions, except where percentages are shown)

| | Mean Annual Percentage Rate of Change ^a | | | | | | | | | | | | | | | | | |
|---|--|------|-----------|------|-----------|-------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
| | 1870-1879 | | 1880-1889 | | 1890-1899 | | 1900-1909 | | 1910-1919 | | 1920-1929 | | 1930-1939 | | 1940-1949 | | 1950-1959 | |
| | 1870 | 1880 | 1880 | 1890 | 1890 | 1900 | 1900 | 1910 | 1910 | 1920 | 1920 | 1930 | 1930 | 1940 | 1950 | 1950 | 1950 | 1950 |
| Commodity production: | | | | | | | | | | | | | | | | | | |
| Numbers engaged ^b | 8.9 | 12.2 | 15.4 | 18.0 | 20.9 | 23.5 | 22.6 | 22.2 | 23.6 | 22.0 | +0.2 | +1.0 | | | | | | |
| Weekly labor input (man-hours) ^c | 467 | 632 | 792 | 919 | 1,051 | 1,129 | 1,062 | 947 | 1,011 | +1.9 | -0.3 | +0.7 | | | | | | |
| Commodity distribution: | | | | | | | | | | | | | | | | | | |
| Numbers engaged ^b | .8 | 1.2 | 1.8 | 2.5 | 3.4 | 4.1 | 6.1 | 7.2 | 9.6 | +3.6 | +2.7 | +2.9 | | | | | | |
| Weekly labor input (man-hours) ^c | 52 | 76 | 120 | 160 | 199 | 228 | 330 | 345 | 421 | +3.3 | +1.9 | +2.3 | | | | | | |

^a Exponential curve fitted by least squares (Glover's method).

^b Table 1. The effect of a possible misclassification of commercial travelers and other salesmen during 1870 to 1920 is discussed in Appendix A where this is shown to be unimportant.

^c Table 5.

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as many man-hours as did commodity production at the close. To explain the growth of employment in distribution, we need to invoke one or more of the other factors listed in the preceding section—the larger share of output entering distributive channels, the expansion of distributive functions, and the slower rise of productivity in distribution than elsewhere. These matters are discussed in succeeding chapters. Meanwhile certain other aspects of employment in wholesale and retail trade will be given brief notice.

The Share of Wholesale Trade

The vast increase in distribution's draft upon the labor force conceals many crosscurrents. Throughout our period most persons engaged in distribution worked in a retail store. In recent years wholesale employment has amounted to about one quarter of the total (Table 7). Earlier data are scanty, but to judge from the numbers of whole-

Table 7

EMPLOYMENT IN WHOLESALE AND RETAIL DISTRIBUTION, 1929, 1939 AND 1948^a

(census of distribution, thousands of persons)

| | 1929 | 1939 | 1948 |
|---------------------|-------|-------|--------|
| Distribution, total | 7,238 | 7,458 | 10,358 |
| Wholesale | 1,751 | 1,749 | 2,627 |
| Retail | 5,487 | 5,709 | 7,731 |
| Per cent wholesale | 24 | 23 | 25 |

^a Working proprietors are included. Part-time retail employees were adjusted to full-time using payroll data. Unpaid family employees in retail trade, of whom 931 thousand were counted in 1948, are not included. Employment reported in the census of distribution was adjusted as follows for comparability between years. In 1929, average retail employment for April, July, October, and December, and in 1948, for March, July, and November were converted to twelve-month averages using 1939 ratios. Both retail and wholesale employees in 1929 and 1939 were adjusted by 1948 ratios to include central administrative offices. Differences between these figures and those in Tables 1 and 4 are discussed in Appendix A.

sale dealers and commercial travelers reported in the occupation census, wholesale employment seems to have been relatively less important in early years. Of all those engaged in distribution, perhaps one-fifth were in the wholesale sector in 1900, one-sixth or less in 1870.

The trend toward relatively greater employment in wholesale than in retail trade is in conflict with the decline, at least since 1889, in the fraction of finished goods passing through wholesale channels (see Chapter 5, Table 20). The inference is either that productivity rose less rapidly in wholesaling than in retailing, or else that an in-

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creasing share of wholesaling activity was devoted to the handling of unfinished goods (e.g. industrial equipment), or that both of these changes occurred. Unfortunately no data are available for testing these hypotheses.

Women in Distribution

The 1939 census of distribution reported women as 34 per cent of all retail employees and 19 per cent of all wholesale employees, or an average of 30 per cent for distribution as a whole. These figures are doubtless correct in indicating a higher proportion of women in

Table 8

WOMEN AND GIRLS IN THE LABOR FORCE, 1870-1950 ^a
(per cent of total for both sexes)

| | Distribution | | | |
|------|---|-------------------------------------|----------------|--------------------------------|
| | Pre-1940 Census Concept, Identifiable by Occupation ^b | Present Census Concept ^c | | Entire Economy ^d |
| | | IDENTIFIABLE BY OCCUPATION | ALL ENGAGED | |
| 1870 | 2.2 | n.a. | n.a. | 14.8 |
| 1880 | 4.2 | n.a. | n.a. | 15.2 |
| 1890 | 6.9 | n.a. | n.a. | 17.2 |
| 1900 | 9.7 | n.a. | n.a. | 18.3 |
| 1910 | 13.0 | 17.0 | n.a. | 19.9 |
| 1920 | 15.8 | 20.7 | n.a. | 20.4 |
| 1930 | 15.8 | 21.0 | 24.8 | 22.0 |
| 1940 | n.a. | n.a. | 27.1 | 24.3 |
| 1950 | n.a. | n.a. | 33.8 | 27.5 |

n.a. = not available.

^a This table is based entirely on population census data; the censuses of distribution have collected only scanty information by sex. Persons seeking work are included as well as those in employment. The figures in any one column may be considered comparable.

^b Ten years old and over (see Alba M. Edwards, *Comparative Occupation Statistics for the United States, 1870 to 1940*, Census of Population, 1940, pp. 110, 127). In the pre-1940 concept, trade included banking, insurance, and real estate; also auctioneers, undertakers, and advertising agencies; and it did not include restaurants and bars. Persons were included in the industry only when so identified from their occupation.

^c Fourteen years old and over (see *ibid.*, pp. 69-72). Exclusion of those under fourteen makes slight difference, but exclusion of persons attached to banking, etc. (see preceding note), and inclusion of restaurant personnel sharply raise the proportion of women. Inclusion of persons whose industry is not identifiable from their occupation, made possible in 1930 and 1940 by the asking of an industry question, raises the percentage of women still further (for "all engaged" see *Census of Population, 1930*, Vol. v, *Occupations*, and *Census of Population, 1940*, Vol. III, *The Labor Force*; for 1930, restaurants were separated from hotel workers using 1940 ratios).

^d 1870-1930: Ten years old and over (see Edwards, *op.cit.*, p. 91). 1940 and 1950: Fourteen years old and over.

retailing than in wholesaling, but they overstate the degree to which distribution depends upon the female section of the labor force. The reason is that in the figures just quoted part-time workers (who are particularly likely to be women) have not been deflated to a full-time basis and proprietors (who often are men) are omitted.

A surer indication of the extent of female employment (including self-employment) is given by the occupation count (Table 8). The figures for "all engaged," which rise from 25 per cent in 1930 to 34 per cent in 1950, may be accepted as reliable. However, women are relatively more common in nondescript occupations that cannot be readily identified as belonging to distribution than they are among "dealers," "clerks in stores," and other occupations characteristic of retail or wholesale trade. For this reason all estimates of female employment in trade prior to 1930 understate its extent. Despite these qualifications the figures in Table 8 suggest that, at least prior to World War I, the employment of women grew more rapidly in distribution than in the economy at large. In 1870, so far as one can judge, female store clerks seem to have been uncommon, although already at that time a majority (for instance) of Macy's employees were women.³ Of course the relatively considerable share of women in the labor force as a whole in early years reflects the large numbers in such a characteristically feminine occupation as domestic service.

Part-Time and Unpaid Family Workers

In some industries, for instance manufacturing, a count of the number of wage and salary earners is a fair measure of man-years of employment. And an average of twelve monthly counts gives a still better estimate. Not so in distribution. Here, as in farming and the professions, the number of wage and salary earners is a relatively poor guide to the man-years of employment in the industry. Thus the 1948 Census of Business reported 8.2 million persons on the payroll of retail or wholesale establishments not counting part-time employees in retailing. If we add 1.9 million working proprietors, we obtain 10.1 million as a minimum estimate for the man-years in wholesale and retail trade. It is a minimum estimate because, in addition to the persons already mentioned, the 1948 census reported 1.3 million part-time workers on the payroll and 0.9 million unpaid family workers. Only in agriculture do these groups present a comparable problem in estimating man-year employment.

In 1948 each part-time worker received on the average just one-third of the compensation of a full-time employee. Therefore, it is

³ Ralph M. Hower, *History of Macy's of New York, 1858-1919*, Harvard University Press, 1943, pp. 193-194.

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often useful (as in Table 7) to count three part-time as the equivalent of one full-time employee.⁴ Probably the unpaid family workers also worked part time, but no comparable method exists for reducing them to a full-time status. The extent to which either group figures in the occupation count (Tables 1 to 3, and 8) is doubtful: see further discussion in Appendix A.

The data here discussed relate to a single workweek in November; hence "part-time" means persons working less than a full workweek. For full-time employees in retailing, November numbers are about 3 per cent, and for part-time employees 10 per cent, above the annual average.⁵ The November figures in Tables 7 and 9 therefore are somewhat inflated through proximity to the seasonal peak in December. But the number of full-time (and part-time) workers at the December peak would be still higher. Indeed, it is obvious that the part-time employees reported for the census week are not hired to satisfy a seasonal need for help but rather to assist at the peak hours of the day or week. Such part-time workers probably were employed more or less regularly throughout the year. The need for them reflects the propensity of the consumer to shop in the afternoon rather than in the morning, at the end of the week rather than at the beginning. Although it occurs at a different time of the year, a seasonal peak in employment is also found in agriculture and other sectors of the economy. The daily and weekly peaks, too, are shared by some other industries, e.g. transportation.

The large number of unpaid family workers in distribution, first counted in 1948, also is reminiscent of agriculture. As in farming, numerous small family businesses call upon various members of the household for assistance, especially during periods of peak business. Of the 9½ million workers reported by the retail census, one in seven was a part-time employee and one in ten an unpaid member of the proprietor's family. The distribution of these workers by kind of store is quite uneven, as may be seen from Table 9. The largest proportion of part-time workers is to be found neither in food stores nor restaurants but in variety followed by furniture stores. Motor-vehicle and farm-equipment dealers scarcely use part-time workers at all. Part-time workers seem to be used chiefly where selling requires small

⁴ This procedure undoubtedly understates the man-years involved because the average hourly compensation of part-time is lower than that of full-time employees. In the present instance (Table 7) the understatement is offset, partly or wholly, by the presence of unknown numbers of working proprietors who worked part-time and full-time employees who worked fewer than twelve months.

⁵ The statement rests on March, July, and November figures for 1948 and on an average of twelve monthly figures for 1939, the latter being considered an annual average, and the seasonal pattern assumed the same in the two years.

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skill and little technical knowledge. The distribution of unpaid family workers, on the other hand, is quite different, being clearly correlated with store size. Thus food stores, lunch counters, bars, country general stores, radio stores, gas stations, liquor stores, florists, and

Table 9

PART-TIME EMPLOYEES AND UNPAID FAMILY WORKERS IN RETAILING, 1948 ^a

| | Number of Stores | Total Workers per Store | Part-Time Paid Employees as % of Total Workers | Unpaid Family Members as % of Total Workers |
|-----------------------------|------------------------|----------------------------------|--|---|
| Retail distribution, total | 1,769,540 | 5.4 | 14 | 10 |
| Food | 504,439 | 3.7 | 13 | 19 |
| Restaurants, cafeterias | 130,192 | 8.0 | 13 | 8 |
| Lunch counters | 62,933 | 3.9 | 15 | 17 |
| Bars | 152,433 | 4.1 | 13 | 14 |
| General | 21,557 | 3.8 | 10 | 22 |
| Department | 2,580 | 327 | 19 | 0 |
| Dry goods | 29,754 | 7.3 | 21 | 7 |
| Variety | 20,210 | 17.5 | 40 | 2 |
| Apparel, shoes | 115,246 | 6.3 | 18 | 5 |
| Furniture, home furnishings | 29,031 | 6.9 | 31 | 5 |
| Household appliances | 29,700 | 5.2 | 8 | 7 |
| Radios | 7,231 | 3.4 | 8 | 15 |
| Motor vehicles | 43,999 | 12.8 | 3 | 2 |
| Tires, batteries | 20,628 | 4.7 | 9 | 6 |
| Gas stations | 188,253 | 3.0 | 11 | 14 |
| Lumber | 20,803 | 8.9 | 8 | 2 |
| Hardware | 34,674 | 4.7 | 9 | 9 |
| Farm equipment | 17,615 | 5.7 | 5 | 6 |
| Drugs, with fountain | 39,724 | 7.2 | 21 | 6 |
| Drugs, without fountain | 16,072 | 4.4 | 16 | 9 |
| Liquor | 33,422 | 2.8 | 9 | 13 |
| Fuel (except fuel oil) | 14,953 | 6.1 | 11 | 5 |
| Hay, grain, feed | 18,213 | 4.5 | 7 | 8 |
| Jewelry | 21,269 | 4.6 | 7 | 8 |
| Florist | 14,749 | 3.8 | 13 | 18 |
| Cigar | 14,526 | 2.6 | 8 | 18 |

^a All figures are from the *Census of Business, 1948*. Employment at warehouses and administrative offices was reported but not included here. In this table total workers include working proprietors, part-time paid employees and unpaid family members, as well as full-time paid employees; part-time have not been reduced to full-time workers (as was done in Table 7). Breakdown does not add to total because several small categories have not been shown separately.

cigar stores run below average in size but employ more unpaid help than the average. But department and variety stores, and motor-vehicle and lumber dealers, which tend to be above average in size, employ scarcely any unpaid help. Obviously family-owned stores tend to be small, and it is in such stores that family help is available.

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Summary

Between 1870 and 1950 the share of the labor force engaged in distribution, as in other service industries, increased rapidly at the expense of the commodity-producing industries. To a small extent, but to a small extent only, the differential trend can be explained by the relatively large reduction of weekly hours of work in distribution. A major part of the explanation must lie elsewhere.

Today one worker is employed in wholesale for every three workers in retail trade, a proportion that formerly was somewhat lower. Among workers in distribution the proportion of females has increased sharply. Formerly lower than in the economy at large, the percentage of women workers in trade now is greater than elsewhere. Retailing employs many part-time workers. It also is distinguished by numerous working proprietors and unpaid family members, a feature which recalls the agricultural labor force.