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LABOR FORCE

Susan B. Carter

For much of human history, and in much of the world even today, the vast majority of the population work for a living. Except for those too young, too old, or too sick, and except for the "idle classes" – those with power or resources to command food, clothing, and shelter from others – people work, and do so for most of their lives.

In contrast to this common human reference to labor, the term "labor force" has a technical definition that was created and refined during the social, economic, and political crises accompanying the Great Depression of the 1930s. To determine an individual's status according to the labor force concept, people are asked about their activities during a specific reference week and, on the basis of their answers, are classified as either employed, unemployed, or out of the labor force. The labor force, according to this measure, is the sum of the employed and the unemployed.

The employed are defined as those adults who, during the reference week, (1) did any work at all as paid employees, worked in their own business, in their profession, or on their own farm, or who worked fifteen hours or more as unpaid workers in a family-operated enterprise; plus (2) those who did not work but who had jobs or businesses from which they were temporarily absent due to illness, bad weather, vacation, child care problems, labor dispute, parental leave, or other family or personal obligations – whether or not they were paid by their employers for the time off and whether or not they were seeking other jobs.[1] Each employed person is counted only once, even if he or she holds more than one job. Multiple jobholders are counted in the job at which they worked the greatest number of hours during the reference week. Included in the total are employed citizens of foreign countries who are residing in the United States. Excluded are persons whose only activity consists of unpaid work around their own home, such as housework, painting, repairing, and so forth, or volunteer work for religious, charitable, and similar organizations.

The unemployed are those who had no employment during the reference week, but who were available for work and who had made specific efforts, such as contacting employers, to find work during a specified period. Those who are neither employed nor unemployed are classified as "out of the labor force." Additional details for assigning individuals across the categories employed,

[1] "Adults" were defined as persons fourteen years of age and older through 1947 and persons sixteen years of age and older beginning in 1947. There are two values for the labor force in 1947, one for each age grouping. See Table Ba478–486.

unemployed, and out of the labor force are spelled out in the text for Table Ba478–486.

The U.S. Bureau of Labor Statistics (BLS), in collaboration with the Census Bureau, first implemented the labor force concept in 1940. It was devised during the 1930s to assist macroeconomic policymakers who needed an indicator that would tell them whether their interventions into the economy were having the desired effect of lowering unemployment. An earlier definition of unemployment was based on replies to the question, "Do you have an occupation?" and, if not, "Are you willing and able to work?" Analysts found that people in objectively similar situations often answered these questions differently. For this reason, the answers could not be used reliably to compare labor force participation rates across individuals or cities, or to compare changes in such rates over time. The cornerstone of the modern labor force concept is the objectivity of the criteria used to assign individuals across categories: clearly specified activities rather than attitudes, and a clear reference period for which the criteria are applied (Lebergott 1975).

Although the labor force concept is highly precise on the questions "who is in and who is out of the labor force" and "who is employed and who is unemployed," it does not distinguish among many other aspects of labor that are critical to the development of the economy and to the well-being of workers. For example, persons working sixty hours a week, those working one hour a week, and those on vacation are all included "in the labor force" and "employed" and on equal footing in the official framework. Workers with highly developed skills and those supplying purely manual labor are counted equally. Much of the work done by women is not counted at all. For these reasons, most historical or policy questions involving change in the labor force must be studied in conjunction with data on change in hours of work, the skills of the workforce, wages, working conditions, occupations, child care and other family services, and household production.

Despite its limitations, "labor force" has proved to be a highly useful concept for policymakers. Statistics on the unemployment rate and labor force participation are among the most commonly cited indicators of the health of the economy, often making headlines when the latest figures are released. Increases in the unemployment rate and decreases in the labor force participation rate correlate strongly with other measures of economic downturn. Indeed, for some scholars, these labor market indicators are the premier measures of economic fluctuations (see the essay on economic fluctuations, recessions, and depressions in Chapter Cb).

Modern Labor Force Estimates

The three major sources of data on the size and composition of the labor force are the decennial censuses of population, the Current Population Survey (CPS), and the Current Employment Statistics survey (CES). The census and CPS are surveys of households; the CES is a survey of employers.

The census of population made its first inquiries regarding work behavior in 1850, when it asked free males fifteen years of age and older to report their occupation, if any. In 1860, the census extended the inquiry to free women. The year 1870 is the first for which occupation statistics are available for the majority of the black population, as they were enslaved and their occupations not enumerated at the time of the earlier censuses. Not until 1940 did the census shift its questions regarding work behavior to reflect the labor force concept discussed previously.[2]

The effort that would become the CPS was also begun in 1940 when the census initiated a monthly national sample survey of households. For studies of the labor force in the second half of the twentieth century and beyond, the CPS is the most widely used source. These data are also the source for official estimates of unemployment. The CPS provides labor force data at a much higher frequency and with more personal background characteristics than does the census. The major background characteristics are age, sex, marital status, presence of children, race, Hispanic origin, industry, occupation, and unemployment according to reason and duration. Tables Ba478–506 provide an overview of labor force estimates based on the CPS. More than ten other tables provide additional detail. Here, we report annual averages calculated from the monthly figures.

The CES is the third major source of national, historical labor force data. These data are collected by the BLS from the monthly payroll records of a sample of nonfarm business establishments. The firms submit the data voluntarily. In 1999, the Bureau surveyed 400,000 establishments employing about a third of all wage and salary workers. The surveys provide detailed industry data on employment, hours, and earnings of workers on nonfarm payrolls. The CES counts workers each time they appear on a payroll during the reference period. Thus, unlike the CPS, a person with two jobs is counted twice. Tables Ba840–848 and Ba866–879 provide an overview of labor force estimates based on the CES. Many tables in this chapter and in others provide additional industry detail.

Historical Labor Force Estimates

The evident value of the labor force concept for understanding the development of the economy has prompted scholars to devote considerable effort to developing historical labor force and unemployment estimates consistent with the modern definition. The principal starting point for all of these estimates is the census of population.

From 1850, when it first asked about occupation, through 1930, after which it abandoned the approach, census employment figures were based on the "gainful worker" concept. A gainful worker is defined as a person (over a given age) who reports an occupation. Scholars have devoted considerable attention to the comparability of the gainful worker and labor force concepts and have achieved widespread agreement on three points. First, the gainful worker and the labor force concepts probably would have yielded similar statistics for prime-age males had both questions been asked at the same time. Second, the gainful worker and labor force concepts produce different estimates for youthful and older males and for females of all ages. This is because when the census asked about occupation, it did not indicate the period of time for which the question of occupation pertained. This was not a serious problem in the case of prime-age males, because most of them were employed year-round, but many scholars believe that the question elicited inconsistent responses from youthful and older males and from females. Stanley Lebergott (1975, p. 124) considered this a serious problem:

[2] See the Integrated Public Use Microdata Series (IPUMS) Internet site for a convenient listing of the precise questions asked by census enumerators and the portion of the population to which the questions were directed at each census date.

> The question as posed by the enumerator made no reference to time. The response thus varied substantially with the individual. Many persons who were retired or permanently disabled and who had not worked for some time reported their former line of work and were counted as gainful workers. On the other hand, many employed persons did not enter themselves as gainful workers, because they considered themselves as students or housewives and their current employment as only temporary.

Finally, the third point of scholarly consensus is that although the instructions to enumerators regarding the occupation question became more precise (and lengthy) over the years, they were generally consistent from one census to the next, except in the case of the 1910 Census. In that year, the census included special instructions to enumerators that substantially raised the gainful worker rates of children and women – especially black women – relative to reports for the previous and following censuses. For example, the labor force participation rate of black women rises from 43.7 percent in 1900 to 58.1 percent in 1910 and then falls back down to 42.9 percent in 1920, according to the official census definition (series Ba424). The special entreaties to enumerators also reduced the recorded labor force participation rates of older men. The interpretation of the 1910 figures is the subject of a large literature.[3]

Prime-Age Males

Because the gainful worker and labor force concepts produce similar results for prime-age males, the estimation of this segment of the labor force for the period 1850–1930 is a fairly straightforward matter. That said, scholars who developed these estimates have invested tremendous effort to ascertain that the overall estimates and estimates for individual sectors are consistent with other evidence on the development of the economy.[4]

To greatly simplify a complicated procedure, the estimation process for prime-age males for the years 1850–1930 involves taking the gainful worker figures of the censuses, purging them of evident errors, adding in the male slaves who were omitted from the occupational counts of 1850 and 1860, and checking the resulting levels and trends for consistency with other relevant statistical series.

Perhaps the most serious estimation problem for the prime-age male labor force for these years has nothing to do with the overall size of the labor force but is with the distribution of laborers between agriculture and nonagriculture. The problem arises because the census of occupations categorized many agricultural workers as "laborers, not elsewhere classified." The occupation statistics developed by Matthew Sobek and displayed in Tables Ba1033–3687 make an adjustment to "laborers, not elsewhere classified" for the years 1850–1880 by recoding those who resided on a farm as farm laborers. For all other years it reports laborers exactly as the census reported them. For this reason, the Sobek statistics regarding the occupational distribution of the labor force probably understate the share of the labor force in agriculture for the years 1900–1930. The Lebergott and Weiss estimates of the agricultural labor force, shown in Table Ba814–830, incorporate adjustments to the census figures for agricultural laborers.[5]

Estimates of the prime-age male labor force for the period prior to 1850 required even greater efforts. To produce the estimates presented in Table Ba814–830, both Lebergott and Thomas Weiss began with the 1850 and 1860 figures and worked backward in time. They examined the demographic and geographic structure of the population; the fragmentary data from the censuses of manufacturing that were conducted in 1820 and 1840; and a variety of industry-specific data. For example, Lebergott's estimates of employment in teaching are based on contemporary sources, such as statistics of scholars and schools and local studies, that he then projects to the country as a whole. Weiss took a similar approach except that he generated individual estimates for each state. He evaluates fragmentary data on manufacturing employment in light of demographic data such as age, gender, race, and rural residence in order to judge their consistency and coverage and to improve their overall reliability. The art as well as the science of such work lies in getting all of the pieces of the puzzle to fit.

Historical estimates of the prime-age male labor force are presented in several tables. For the decennial census years from 1800 through 1900, Weiss offers estimates of the labor force participation of males sixteen years of age and older, with disaggregations by race, in Tables Ba1–39. For decennial census years from 1860 through 1990, Sobek offers estimates of male labor force participation rates by five-year age groups in Table Ba391–403.

Females

Estimating the labor force participation rates of women prior to 1940 poses its own difficult set of problems and is the subject of another vast literature. A point of agreement is that the early censuses missed a substantial amount of women's market work. Worker surveys undertaken independently of the population census consistently indicate far more female, but not male, employment.

There are several reasons why women's paid employment was undercounted. One is that census enumerators may have forgotten to ask about women's gainful employment. The commentary on occupation statistics in the Censuses of 1870 and 1880 speculated that women and children employed in factories had been "omitted in large numbers." Special instructions to the enumerators of the 1910 Census that were designed to reduce their oversight of women's work resulted in dramatic jumps in the recorded gainful worker rates for women. When these special exhortations were dropped for the 1920 Census, the recorded gainful worker rates for women returned to their former low levels. A second reason is that the women themselves or their husbands may have been reluctant to report women's gainful employment. As Nancy Folbre and Marjorie Abel note, "both the middle-class 'cult of domesticity' and the working-class concept of the 'family wage' dictated that a wife's proper place was in the home." They refer to census commentary on the 1880 occupation returns that mentions specifically the "indisposition of the persons themselves or the heads of families to speak of them [women] as in employment" (Folbre and Abel 1989, p. 551).

Finally, there is evidence that the census itself – at least in 1880 – published female employment totals that were far smaller than the returns collected by enumerators. Comparing the Public Use Microdata Samples (PUMS) of the manuscript census with

[3] See Smuts (1960); Lebergott (1964); Oppenheimer (1970); Conk (1978); Folbre and Abel (1989); Goldin (1990); and Sobek (2001).

[4] Key efforts are Durand (1948); Carson (1949); Long (1958); Lebergott (1964, 1966, 1975, and 1984); and Weiss (1992, 1999).

[5] For a discussion of the methods underlying these estimates, see Lebergott 1964, pp. 156–61, and Weiss 1999.

the published totals for 1880, Susan Carter and Richard Sutch (1996) discovered that the original enumerations exceeded the published totals by 35, 44, and 146 percent, respectively, for girls ages 10–15, women ages 16–59, and women ages 60 years and older. They deduced that a large share of women who were recorded by census enumerators as "housekeepers" (together with a sizable number of women who reported other occupations) were systematically edited out of the gainful worker totals. This was the case despite the fact that the term "housekeeper" was reserved for those who engaged in housekeeping activity for pay, whereas the term "keeping house" was used for those engaged in housekeeping for their own families.

Thus, there is abundant evidence to suggest that published census estimates of female employment in the gainful-worker era are too low. The question is, by how much? Claudia Goldin (1986) undertook a detailed examination of the 1890 Census returns in an effort to quantify the magnitude of the omissions and to develop female labor force estimates for the pre-1940 period that are designed to be consistent with the labor force concept. She argues persuasively that it was not the shift from the gainful worker to the labor force concept per se that is the source of incomparabilities, but the inappropriate omission of female workers in three particular sectors: boardinghouse keepers, family-based agriculture, and manufacturing.

Theoretically, the shift from the "gainful worker" to the "labor force" concept might have reduced female employment totals if, for example, the gainful worker concept captured women whose part-time and intermittent work would be missed by the labor force concept. Because the labor force concept measures only those who are working or searching for work in a given reference week, an individual in the pre–labor force era would have had to be gainfully occupied on average half of the year and, if engaged in unpaid family labor, for more than fourteen hours per week to be included. Because estimates of women's hours and weeks of work in the late nineteenth and early twentieth centuries indicate that those women who were engaged were engaged mostly full time, Goldin concludes that the gainful worker and labor force definitions would have produced similar employment estimates had both been used to collect data during the period when the census collected female gainful worker statistics (1870–1930).

The standard labor force participation rate in 1890 for women 15–64 years of age is 19.0 percent for all women and 4.6 percent for married women (Goldin 1986, p. 559). Had the omitted female boardinghouse keepers, manufacturing workers, and unpaid family farm laborers been included, Goldin (1986, p. 577) estimates that the labor force participation rate for all women would have been somewhere between 24.6 and 25.7 percent, and the rate for married women somewhere between 12.3 and 14.0 percent. Thus, for married women especially, the inclusion of omitted work has a large effect on their estimated labor force participation rate.

Abel and Folbre (1990) used the manuscript census returns for two small Massachusetts communities in 1880 to make their own adjustments to the official gainful worker figures for married women. They added into the gainful worker ranks those married women living in households with boarders who were not boarders themselves and who were not listed with an occupation. They made similar adjustments for females engaged in family businesses and in home- and factory-based manufacturing. Overall, the Abel–Folbre adjustments (Abel and Folbre 1990, p. 174) raise married women's estimated labor force participation rate from 10.1 to 47.3 percent in one community and from 9.9 to 68.2 percent in the other. Clearly, official and adjusted estimates of women's labor force participation imply substantially different views of women's economic role in the economy at the time.

It should be emphasized that the historical estimates of female labor force participation presented here do not incorporate the adjustments suggested by Goldin or by Abel and Folbre. They therefore certainly understate female employment levels both relative to males at the same time and relative to females in the latter part of the twentieth century.

A different question regarding women's work is whether market-based measures, such as labor force and gainful employment, are misleading when a substantial share of the productive energies of many women are devoted to nonmarket activities. For certain questions, such as how output has changed over time, the market measure produces serious distortions. At least since the late nineteenth century when women's labor force participation began to rise over time, the market measure understates total output in the early years and exaggerates the growth of output over time. Goldin (1986) estimates that in 1890, approximately 14 percent of farm housewives' sixty-five-hour workweek was devoted to household production of the clothing, baked goods, and meals that, by 1980, were purchased on the market. Folbre and Wagman (1993) estimate that in 1800, the total output of the economy would have been somewhere between a fifth and a third larger than standard estimates, had the value of household production been included. For a more extended discussion, see the essay on household production in this chapter. For implications for measures of economic growth, see the essay on national income and product in Chapter Ca.

Youth

There is widespread agreement that the censuses also underreported the occupations of youth relative to those of prime-age males. The reasons are similar to the reasons offered for the underenumeration of women's market work. Employed youth typically worked part-time or part-year. Their status was reported by parents who might consider them primarily as students or who may have wished to conceal their gainful activity. Census enumerators may have failed to ask about the employment status of youth.

It is not clear, however, whether youth employment would have been higher if measured according to the labor force concept. The fact that some employed youths were not recorded as gainfully occupied biases the gainful worker measure downward, as compared with the labor force measure of youth employment. However, there may be an upward bias to the gainful worker measure if, for instance, youths recorded with an occupation worked only a small number of hours each day or only part-time during the year. This issue remains unresolved.

The two estimates of youth employment prior to 1940 that we present here are derived from responses to the census of population's gainful worker question. Weiss's estimates for the decennial census years 1800–1900 pertain to youths ages 10–15 and are disaggregated by sex, race, and legal status (Tables Ba1–24 and Ba40–63). His national estimates were built up from state-level estimates. They are based on the assumption that participation rates for free youths in each state were equal to the average youth participation rate for the years 1870–1910 as developed by Alba Edwards (see Edwards 1943, Weiss 1999, p. 30). For slaves, Weiss assumed a labor force participation rate of 90 percent for males and females in all age groups, including youths. His estimates are based on a close

reading of the scholarly literature and reflect the views of many quantitatively oriented economic historians (see Weiss 1999 for additional detail). By construction, the Weiss figures show largely unchanging labor force participation rates for white boys and girls over the period, but a marked decline in the participation of black youths following the abolition of slavery.

The youth employment estimates prepared by Sobek for the years 1860–1970 are derived from the Integrated Public Use Microdata Series (IPUMS) and are disaggregated by sex and age for the free population ages 10–15 (Table Ba355–390).[6] Beginning in 1880, they show an almost continuous decline in youth participation rates for both boys and girls and at every age. The exception is the apparent rise in the participation rates of 14- and 15-year-olds between 1940 and 1960.

Both the Weiss and Sobek youth employment estimates differ sharply from the older estimates developed by Alba Edwards of the U.S. Census Bureau, who revised the published occupation figures for youths for the years 1870–1940 in an effort to improve their comparability. Edwards's estimates indicate a substantial *increase* in the labor force participation of youths between 1870 and 1900. Over this period, according to Edwards, the employment incidence of boys grew by more than a third, rising from 19.3 to 26.1 percent, while that of girls increased from 7.0 to 10.2 percent. After 1900, he reports that youth employment rates fell dramatically, so that by 1930, fewer than 5 percent of 10- to 15-year-olds were gainfully occupied.

This view of rising youth employment rates during industrialization was challenged by Carter and Sutch (1996), who discovered that the published census totals for youths in 1880 were only 75 percent of the level originally collected by census enumerators. Because the published statistics for 1880 formed the basis for Edwards's adjustment of the 1890 numbers, and because the 1870 statistics were collected and tabulated using the same protocol as in 1880, the Carter–Sutch finding calls into question the validity of Edwards's series. If the IPUMS figures are accepted and substituted for those from the published volumes, the stylized facts of long-term change in youth employment show a decline, not an increase. The Sobek series, which is calculated directly from the IPUMS, naturally shows this decline. The Weiss series, which is based on the assumption that the true youth employment rate is the average of the published rates for the years 1880–1910, shows no trend. Neither of these scholars embraces the view that youth labor force participation was rising during the period of industrialization.

Older Males

Generating estimates of the older male labor force for the years before 1940 involves all of the problems regarding the labor force estimation of prime-age males plus one more. Because the census question regarding gainful occupation did not indicate a reference time period, the gainful worker figures may overstate the labor force participation of elders. Some older workers reported their former line of work even though they were retired. The question is how many.

Roger Ransom and Richard Sutch (1986) proposed removing from reported gainful employment all workers 60 years of age and older who reported six or more months of unemployment – a group they call the "permanently unemployed." They argue that these older men reporting long-term unemployment were, by the modern definition, really retired. If accepted, their calculations imply high but *falling* rates of male retirement between 1870 and 1900 and a small rise between 1900 and 1930. The retirement rate in this context is the percent of men 60 years of age and older who are not gainfully occupied. Jon Moen, Robert Margo, and Dora Costa argue that all of the older, long-term unemployed are properly included in the labor force (Moen 1987, 1988; Margo 1993b; Costa 1998). Moen and Costa generated male retirement rate estimates that are quite low in the nineteenth century and that begin to rise, but slowly, about 1880.

The dispute has important consequences for a variety of issues in American economic and social history. If the Ransom–Sutch estimates are accepted, then the retirement rate for men ages 60 and older had reached one third as early as 1900. This implies that there was little or no trend in the overall participation rates of the elderly between 1900 and 1930 and that New Deal–era social legislation initiated a trend toward increased retirement. If the Moen and Costa estimates are accepted, then retirement rates would appear to have increased throughout the industrial era, and Social Security emerges as just one of several determinants of the relatively high retirement rates of the post–World War II period. Because they remain controversial, we have not included retirement estimates in this work.

Characteristics of the Labor Force

The term "characteristics of the labor force" refers to demographic factors, such as gender, age, race, ethnicity, nativity, marital status, and presence of children; labor productivity factors, such as job experience, education, and vocational training; full versus part-time status; matters of deployment, such as the occupational, industrial, and geographic distribution of the labor force; and legal and institutional factors, such as slavery, contract labor, trade unions, and the size and organization of employing units.

In an economy as dynamic as that of the United States, the characteristics of the labor force are constantly changing. Table Ba-A, together with five brief snapshots taken at roughly fifty-year intervals beginning in 1800, was constructed to highlight the principal shifts. Many of these labor force characteristics are discussed individually and in detail elsewhere in these volumes.

1800

In 1800, America was a largely agricultural economy; approximately three fourths of the labor force were occupied in this one sector (Table Ba814–830). More than 30 percent of the workforce nationally and slightly more than 50 percent of the workforce in the South were slaves. The majority of these slaves were engaged in the cultivation of tobacco for export and in the cultivation of food for their own consumption. Because enslaved women and children were just as likely as enslaved men to work in the fields, women's and children's share of total employment was also high at this time. Slave labor was concentrated in the South, yet certain Northern states also made heavy use of slave labor in 1800. In New York and New Jersey, slaves accounted for 7.5 and 12.7 percent of the labor force, respectively (see Tables Ba79–339 and the essay in Chapter Bb on slavery).

Among the free agricultural labor force, the vast majority were engaged in family-owned farm operations, and most of the others

[6] See the Guide to the Millennial Edition for information on the IPUMS.

TABLE Ba–A Labor force – selected characteristics expressed as a percentage of the labor force: 1800–2000

Year	Agriculture	Manufacturing	Domestic service	Clerical, sales, and service	Professions	Slave	Nonwhite	Foreign-born	Female
1800	74.4	—	2.4	—	—	30.2	32.6	—	21.4
1860	55.8	13.8	5.4	4.8 [1]	3.0 [1]	21.7	23.6	24.5 [1]	19.6
1910	30.7	20.8	5.5	14.1	4.7	—	13.4	22.0	20.8
1950	12.0	26.4	2.5	27.3	8.9	—	10.0	8.7	27.9
2000	2.4	14.7	0.6	38.0 [2]	15.6	—	16.5	10.3 [2]	46.6

[1] Values for 1870 are presented here because the available data for 1860 exclude slaves.
[2] 1990.

Sources

Agricultural share of the labor force: 1800 and 1860 from Thomas Weiss, series Ba829–830; 1910 and 1950 from Matthew Sobek, series Ba652–653; and 2000 from U.S. Bureau of the Census, *Statistical Abstract of the United States: 2002*, Table 591.

Manufacturing share of the labor force: 1860 from Stanley Lebergott, series Ba814 and Ba821; 1910 and 1950 from Sobek, series Ba652 and Ba657–658; and 2000 from *Statistical Abstract of the United States: 2002*, Table 591.

Domestic service share of the labor force: 1800 and 1860 from Lebergott, series Ba814 and Ba828; 1910 and 1950 from Sobek, series Ba1033 and Ba1042; and 2000 from *Statistical Abstract of the United States: 2001*, Table 593.

Clerical, sales, and other service occupations as a share of the labor force: 1870–1990 from Sobek, series Ba1033, Ba1038–1039, and Ba1043.

Professionals as a share of the labor force: 1870–1950 from Sobek, series Ba1033–1034; and 2000 from *Statistical Abstract of the United States: 2001*, Table 593.

Slave share of the labor force: from Weiss, series Ba1–2, Ba9–10, Ba40–41, and Ba48–49.

Nonwhite share of the labor force: 1800 and 1860 from Weiss, series Ba1–2, Ba5–6, Ba40–41, and Ba44–45; 1910 and 1950 from Sobek, series Ba1033, Ba1089, and Ba1117; and 2000 from *Statistical Abstract of the United States: 2002*, Table 561.

Foreign-born share of the labor force: 1870–1990 from Sobek, series Ba1033 and Ba1145.

Female share of the labor force: 1800 and 1860 from Weiss, series Ba1–2 and Ba40–41; 1910 and 1950 from Sobek, series Ba1033 and Ba1061; and 2000 from *Statistical Abstract of the United States: 2002*, Table 561.

Documentation

Note that "clerical, sales, and service" excludes domestic service.

were slave plantation owners or white overseers on slave plantations. The labor of women and children in the fields was considerably less prevalent among the free when compared with the slave population. This is not to say that free women and children were idle. Rather, the women were engaged in household production primarily intended for the use of their families, while children assisted in farm and household chores and were engaged in various sorts of skill development. Older children were also frequently engaged in land-clearing and other farm-building activities. The labor of independent Northern farmers and their families was supplemented by that of indentured servants and other contract laborers. It is difficult to determine from extant records how prevalent contract labor was for the economy as a whole, although a number of local studies suggest that this form of labor was fairly common, especially in the Middle Atlantic region.[7] Outside of agriculture, the primary occupations in 1800 were connected with ocean-going transportation and domestic service (Table Ba814–830). Many workers engaged in different occupations at different points during the year, working, for example, in agriculture during the spring planting and fall harvest, in fishing during the summer, and in home manufactures during the winter.

1860

Jumping ahead a little more than half a century to 1860 on the eve of the Civil War, the American labor force is familiar in some ways but markedly different in others. Perhaps the most significant change in the labor force over these sixty years was the growing difference between labor force characteristics in the North and South.

In the South, slavery remained a powerful institution. It grew in profitability and expanded geographically in a westward direction. The invention of the cotton gin in 1793 and its rapid diffusion in the years that followed greatly enhanced the value of the short-fiber cotton that was well suited to that region's soil and climate. This technology – in combination with rising world demand for raw cotton stimulated by the Industrial Revolution in textiles manufactures – made cotton "king" and shifted the majority of slave laborers out of tobacco into this newly profitable crop. Cotton cultivation spread steadily westward within the "Cotton Belt," a region that stretched from South Carolina and the Piedmont of Georgia in the East through central Alabama, Mississippi, Louisiana, and southeastern Arkansas. By 1860, it had even made inroads into eastern Texas. The shifting geographic location of the slaves who cultivated this cotton can be seen in Table Bb1–98. The slave share of the Southern labor force remained roughly constant, but this constancy masked strikingly different developments within the region. States of the Cotton South experienced marked growth in the slave share of their labor force, so much so that by 1860, slaves accounted for approximately 70 percent of the labor force in the states of South Carolina, Georgia, and Mississippi, and upward of 60 percent in a number of neighboring states (see Tables Ba79–339). Slaves declined not only as a share of the labor force but even in absolute numbers in the states of Delaware and Maryland (see the essay in Chapter Bb on slavery). Despite the rapid growth of the slave population, slave ownership remained profitable, and the average price of slaves rose through most of this period (see Sutch 1965 and Table Bb209–214).

Except for a brief flurry of manufacturing efforts in the 1840s when world cotton prices temporarily declined, the Southern economy remained firmly agricultural throughout the antebellum era (Bateman and Weiss 1981). Gavin Wright (1986, 1987) explains the South's lack of manufactures and also its lack of towns, schools, and transportation improvements in terms of the economic logic of the institution of slavery. Under slavery, asset holders' wealth takes the form of movable human property instead of immovable land, homes, and factories. Because slaveholders' assets are mobile, they have little incentive to invest in the infrastructure – towns, roads, and schools – which stimulates a rise in the price of these immovable homes, farms, and shops. Because slave assets "crowd out" physical capital in the portfolios of slave owners, investment

[7] See the essay on labor in this chapter and Rothenberg (1992).

in physical capital is reduced and economic development is held back (Ransom and Sutch 1986).

In the North, both slavery and indentured servitude largely vanished from the labor force in the early years of the nineteenth century. Independent self-employed family enterprises and "free" hired labor emerged as the dominant institutions within the labor force. Agriculture had fallen as a share of total employment and its character had changed. Prompted by substantial improvements in internal transportation, Northern agriculture expanded westward to take advantage of more fertile soils and cheaper land. Farms became increasingly specialized, concentrating in the cultivation of grains and cereals in the West and orchard crops, vegetables, and dairy products in the East (Atack and Bateman 1987).

During the first half of the nineteenth century, the Northern labor force also began to move out of agriculture and into manufacturing, construction, trade, transportation, and services. This movement was at first gradual, but after the 1820s, it began to pick up considerable momentum as the gap in productivity between manufacturing and agriculture expanded.[8] Virtually all of the 18 percentage point drop from 74.4 to 55.8 percent in agriculture's share of the total labor force that appears in Weiss's estimates for the period 1800–1860 is due to the decline in the relative importance of agriculture within the Northern states (Table Ba814–830).

To a disproportionate extent, the movement of the labor force out of agriculture involved the incorporation of groups that had not heavily participated before these industrial transformations. One group was composed of young adult females who left their family farm households for wage employment, most famously to work in the cotton textile mills of New England, but also in a variety of other manufacturing industries and in a variety of services (Goldin and Sokoloff 1982). The growing importance of these young women to the labor force, especially of New England in this period, can be gleaned from a study of Tables Ba79–339, from which one can calculate the growing share of free adult women in the labor force. For example, these estimates put the female share of the 1860 labor force ages 16 years and older at 22.4 and 21.2 percent in Rhode Island and Massachusetts, respectively.

Foreign-born workers from Europe constituted the other important addition to the Northern labor force during the first half of the nineteenth century. Significantly, these immigrants did not venture into the slave South but flocked in large numbers to the free labor markets of the North. Immigration from Europe to the North grew gradually over the first part of the nineteenth century and intensified in the 1840s, when Irish seeking to escape their country's disastrous potato famine emigrated to America. Irish emigration to the Northern states continued even after the crisis of the famine had subsided. The Irish were joined by immigrants arriving from England, Scotland, Germany, and other areas of northwestern Europe. These immigrants were attracted by the manufacturing and construction jobs (primarily in the construction of canals and railroads) available in New England and the Middle Atlantic states. (See Table Ad106–120 for annual estimates of flows of European immigrants beginning in 1820 and Table Ad231–245 for immigrant occupation at the time of their arrival in the United States.) Some historians credit the rapid expansion of American industry during this period to this large influx of foreign labor. Without this augmentation to the supply of labor, wages could have risen to the point that further expansion of manufacturing might not have been profitable. Foreign laborers were more likely than their native-born counterparts to take up positions as wage laborers in manufacturing, construction, and transportation. The foreign-born were underrepresented among self-employed farmers and even among farm laborers. Because output per worker was considerably higher outside as compared to within agriculture, the increasing concentration of the labor force in nonagricultural activities was a major source of improvement in output per worker economywide (see the essay on national income and product in Chapter Ca).

The expansion of Northern manufacturing undercut the markets and the income of many American artisanal craftsmen who had previously dominated the production of these goods. In industries such as iron implements, textiles, stonecutting, and woodcutting, to name only a few, the wages of skilled craftsmen fell relative to those of common labor (Table Ba4253–4267). One response of artisanal workers to these developments was to form, for the first time, organized craft labor unions as a way of gaining more control over development within their industries. During economic downturns, labor demonstrations took place in many Northern cities; by 1860, several trades could boast national organizations that represented their interests.[9]

1910

On the eve of World War I, the labor force looked markedly different from what it had been a half-century earlier. Slavery had been abolished by the passage of the Thirteenth Amendment to the Constitution in 1865. Agriculture had shrunk to less than a third of total employment; manufacturing now employed one in five workers. Clerical, sales, and service positions outside of domestic service had grown in relative importance by more than threefold. The foreign-born and women (there is some overlap in these two categories) each accounted for a little more than a fifth of the workforce (see Tables Ba1033–1074 and Ba1131–1158). Large-scale establishments powered by inanimate forces such as water, coal, steam, and the recently introduced electricity were the norm. At the same time, differences between the Northern and the Southern labor markets were as prominent as they had been on the eve of the Civil War.

The most important change in the Southern labor force during the half-century following 1860 was the South's defeat in the Civil War and the subsequent abolition of slavery. Ransom and Sutch emphasize that one immediate effect of the abolition of slavery was that former slaves could decide for themselves about how much labor to supply. In response to this newfound freedom, former slaves radically reduced their labor force participation to fit the norms of other free laborers:

> Emancipation gave the ex-slave the freedom to lighten his burden and, for the first time, reserve a portion of his time for himself. The slave was literally worked to the limit of his economic capacity. Once free, he quite naturally chose to work less, so that he might reserve a portion of each day in which to enjoy the fruits of his labor, fruits that had previously been taken from him by his master. The result was that the amount of labor offered by each freedman and his family was substantially less than when slavery forced every man, woman, and child to work long hours throughout the

[8] Sokoloff (1986) and the essay on national income and product in Chapter Ca.

[9] See the essay on labor unions in this chapter and Wilentz (1984).

> year. Rather than work like slaves, the freedmen chose to offer an amount of labor comparable to the standard for free laborers of the time. (Ransom and Sutch 1977 [2001], p. 44)

The authors estimate that the withdrawal of former slave labor was on the order of 28 to 37 percent of the total black labor force (Ransom and Sutch 1977 [2001], Appendix C). Their estimates include separate calculations for withdrawals from the labor force and also changes in days worked per week and hours worked per day for those who remained engaged. Ransom and Sutch argued that the rate of labor force withdrawal differed across demographic groups. The Weiss calculations presented here reflect this view. For adult males, Ransom and Sutch and Weiss estimate that the decline was relatively modest. By contrast, among adult women and among children of both sexes, the labor force withdrawal was substantial. Weiss estimates that the total black labor force – including those who were formerly free, in addition to those who were formerly enslaved – declined by 12.4 percent for males and 60.0 percent for females between 1860 and 1870. Recall that the labor force records whether a person is in or out; it does not take account of adjustments in days or hours of work by those who continue to participate (series Ba17 and Ba56). As evidence suggests that many ex-slaves who retained their attachment to the labor force nonetheless reduced their days or hours of employment, the Weiss figures underestimate the total work reduction of ex-slaves.

Ransom and Sutch go on to demonstrate that the sizable reduction in black labor in the South had profound implications for many institutions and economic outcomes in the postbellum Southern economy. Rather than working as wage laborers as Southern whites had hoped, the blacks' withdrawal from the labor force enabled them to bargain successfully for the farm tenancy, which gave them considerably greater autonomy. Wright (1986, 1987) demonstrates how the abolition of slavery stimulated other positive developments within the Southern economy. These included increased manufacturing activity and improved movement of Southern laborers from low- to high-wage regions within the South. Nonetheless, even by 1910, the Southern labor market remained isolated from that of the rest of the nation. Southern wages were low and few Southern workers moved from the low-wage South to the high-wage North (see the essay on labor in this chapter for additional details).

In the North, the characteristics of the labor force also changed substantially between 1860 and 1910. Continued improvements in transportation, led by the significant expansion of the railroad network, including the completion of the transcontinental railroad in 1869, further stimulated the westward movement of the labor force and Northern agriculture's continuing specialization in marketable crops. Agricultural productivity nationwide grew substantially between 1870 and 1910, with virtually all productivity improvements occurring in the North (series Da1119). Because of these agricultural productivity gains, agricultural employment *fell* as a share of total employment.

In America, between the Civil War decade and 1910, farmers' and farm laborers' share of the total workforce fell from 46 percent to 31 percent nationwide (Table Ba1033–1046). A disproportionate share of this transition of the labor force out of agriculture occurred within the North.

The largest relative employment gains nationwide occurred among clerical, sales, service, and professional occupations. In 1870, none of these individual sectors employed more than 3 percent of the labor force nationwide; collectively they employed less than 8 percent of the workforce. By 1910, however, these occupations had more than doubled their share, registering 19 percent of the total labor force (Table Ba1033–1046). At the same time, the employment of operatives, generally engaged in semiskilled manufacturing work, rose as well. From a rather substantial 13 percent of the labor force in 1870, operatives came to occupy 16 percent of the national labor force by 1910 (Table Ba1033–1046). Manufacturing operatives were increasingly employed in large manufacturing establishments where they had less say in the organization of their work and the terms of their employment. These shifts in the balance of employer and employee power prompted a whole host of responses, including strikes, formation of labor unions, passage of labor legislation, and the rise of internal labor markets characterized by job ladders, employer-sponsored retirement schemes, and other forms of personnel management (Nelson 1975; Jacoby 1985).

Enabled by another remarkable transportation improvement – the ocean-going steamship – immigrants continued to arrive from Northern and Western Europe in large numbers and were joined at the end of the nineteenth century by immigrants from Southern and Eastern Europe. Early in the period, there had also been a brief influx of immigrants from China and Japan, but these flows were halted by legislation and international agreements that reduced immigration from Asia to a trickle by 1910 (see the essay in Chapter Ad on international migration).

The immigrants tended to locate wherever wages were high and employment was growing most rapidly at the time of their arrival. Immigrants during this period were attracted to the burgeoning manufacturing and construction sectors. While 22 percent of the total 1910 labor force were foreign born, foreign-born workers accounted for 31 percent of all operatives and 41 percent of laborers outside of agriculture (Tables Ba1131–1158). Not only did immigrant laborers facilitate the expansion of these growing sectors over the long run, but they also played an important role in overcoming short-run bottlenecks. Because immigrants timed their arrival (and departure) to coincide with the availability of employment opportunities, their involvement in the American economy allowed for longer economic expansions and shorter contractions than would have been the case had employers been forced to rely on domestic labor supplies alone (Carter and Sutch 1999).

Women's employment had also grown as a share of the labor force over this period as women began to enter new industries and occupations. In 1910, women accounted for 21 percent of the labor force, up from 15 percent in 1870 (Tables Ba1033–1046 and Ba1061–1074). Women's share of professional employment grew from 27 percent to 45 percent over the same period, largely because of their increasing employment in teaching (Perlmann and Margo 2001). Women also made significant advances in clerical, sales, and, to a lesser extent, service work (Rotella 1981). At the same time, women's employment outside the home remained largely restricted to the period of life after the end of schooling and before marriage. Few married women were employed in wage work during the period. Those married women who did engage in employment outside the home were likely to be married to men who were unemployed or disabled or who otherwise faced difficulty in earning an adequate income (Goldin 1990).

A different milestone for the American labor force over the second half of the nineteenth century was the achievement of near-universal literacy by 1910. Among persons 14 years of age and older, the percentage illiterate in 1910 was only 7.7. A

disproportionate share of the illiterate population were blacks living in the South who had not yet overcome the educational disadvantages imposed by slavery. Among blacks 14 years of age and older in 1910, 31 percent were illiterate. Among whites, only 5 percent of the native-born but 13 percent of the foreign-born were illiterate (Table Bc793–797). This would be a remarkable achievement for any country at the beginning of the twentieth century, but it was especially notable in America, as such a large proportion of the labor force arrived as young adults, having received their education in countries that were behind in their educational development.

So far we have emphasized long-term trends in the characteristics of the labor force between 1860 and 1910, but an important new development during this period was the appearance of labor market fluctuations that condemned large numbers of wage workers to involuntary unemployment for extended periods of time. The most severe depressions of this period occurred from October 1873 to March 1879; from March 1887 to May 1888; from January 1893 to June 1894; from December 1895 to June 1897; and from May 1907 to June 1908 (see Table Cb5–8 and the essay on economic fluctuations, recessions, and depressions in Chapter Cb). These industrial downturns prompted worker unrest and encouraged the formation of labor unions and legislative initiatives designed to protect industrial workers from some of the consequences of unfettered labor market operation (Keyssar 1986).

1950

By 1950, the United States was clearly the world's largest and most powerful economy, and its labor force looked markedly different from what it had been just forty years earlier. Manufacturing was the country's single largest industrial sector, occupying 26 percent of the labor force. Clerical, sales, service, and professional occupations had grown more rapidly, while agriculture and domestic service work had declined. Foreign-born workers had declined to less than 9 percent of the labor force, their lowest share in more than a century and a half. While women's share of total employment changed only slightly, white women's occupational distribution was substantially altered. White women had largely abandoned domestic service by 1950 and moved into white-collar occupations in the professions, into nondomestic services, and especially into secretarial and clerical work, which by 1950 had become the single largest occupational category for white women workers. Almost a third were engaged in office work at that date (Table Ba1103–1116).

Blacks had moved out of the rural South in large numbers to take up jobs in urban, industrial employment. A high school diploma had become the educational norm. The labor market of 1950 was regulated by a vast array of new laws at the federal, state, and local levels that affected a range of labor market outcomes, including the minimum wage, overtime pay, worker health and safety insurance, and retirement. A few years earlier, Congress had passed the Employment Act of 1946, charging the federal government with responsibility for maintaining maximum employment.

Between 1910 and 1950, the pace of economic growth quickened, partly because of the continued growth in capital per worker and also because of the increasing importance of knowledge-based improvements in technology and industrial organization (see Table Ca-C in Chapter Ca). In the first half of the twentieth century, these latter factors had become the major source of increases in output per capita (Abramovitz and David 2000). The rapid advance in productivity prompted substantial shifts of the labor force across industries and occupations. The manufacturing sector grew. The agricultural sector began to contract beginning in the 1920s, when food prices fell and many farmers' incomes were not sufficient to cover their expenses (series Ba3759, Cc68, and Da1295). Stimulated by technological advances and stimulating their further development was the continuing growth in the educational attainment of the labor force. Whereas the majority of the workforce had completed only primary school at the beginning of the century, by 1950 high school graduation had become the norm.

Punctuating these long-term trends were several unique and turbulent events. The United States was involved in two world wars; it endured a crippling, eleven-year depression; and it closed its doors to mass immigration. The outbreak of the world war in Europe in 1914 had a powerful impact on the American labor force. The arrival of immigrants from Europe slowed considerably, as fewer potential immigrants were allowed to leave their home countries and as transportation across the Atlantic became riskier and more expensive. All the while, demand for American manufactured products soared as warring nations sought armaments, military provisions, and civilian goods that their own factories were unable to adequately supply under wartime conditions. The combination of reduced foreign labor and increased labor demand led to rising wage rates and employment shortages. These conditions inspired Northern industrialists, for the first time on a large scale, to begin recruiting Southern blacks for their Northern industrial positions. These labor recruitment efforts initiated the "Great Migration" of blacks out of the South (Collins 1997). In 1910, only 11 percent of the black population lived outside the South, but by 1950, 32 percent of the black population and a considerably larger percentage of the black labor force did so. For most blacks, the abandonment of the South also meant the abandonment of agriculture for industry. This Great Migration produced large gains for blacks in terms of wages, education, and political expression (Margo 1990). It played an important role in the integration of Southern and Northern labor markets (Wright 1986, 1987; Rosenbloom 2002).

Following World War I, immigration returned to its prewar levels but was soon halted by the severely restrictive regulations embodied in the Quota Acts of the 1920s. The high unemployment associated with the onset of the Great Depression of the 1930s brought the small remaining immigrant flow to a complete halt. In fact, more foreign-born persons left the United States for other countries than arrived here from abroad. There was a limited resumption of immigration during World War II, but the flows remained small. Thus, by 1950, the foreign-born share of the labor force was considerably smaller than it had been for well over a century.

The economic boom of the 1920s witnessed acceleration in the growth of large corporations and the development of elaborate personnel management systems. Corporations expanded their clerical, sales, service, and professional staffs and opened many of these new positions to female workers. The prosperous 1920s, however, were followed by the Great Depression of the 1930s, the most catastrophic of the recurrent industrial depressions that had first appeared in the latter half of the nineteenth century. At its depth in 1932, almost a fourth of the total labor force and a third of the nonagricultural labor force were unemployed (Table Ba470–477). Despite a partial recovery in 1937, the Great Depression lasted fully eleven years, ending only when the government began mobilizing the economy to fight World War II (see the essay on economic fluctuations, recessions, and depressions in Chapter Cb).

During the 1930s, the government expanded both its size and its reach. It enacted a broad range of measures that substantially altered the operation of the labor market and that remained prominent institutional features of the economy at the end of the twentieth century. Federal social security, old-age assistance, and unemployment insurance were all introduced at this time (see the essay on social welfare in Chapter Bf). So were laws that enhanced organized labor's ability to recruit new union members and to pursue its interests vis-à-vis employers. Because these laws were national in scope, they played an important role in standardizing the operation of labor markets in different regions of the country, in particular in bringing conditions in the low-wage South onto a par with those in the rest of the nation. Although scholars differ on the details of whether this New Deal legislation would have been enacted about that time even in the absence of the Great Depression, all agree that the legal and institutional changes of that decade played a powerful role in changing the nature of labor market operation in the years that followed (Bordo, Goldin, and White 1998).

The onset of World War II prompted further changes in the American labor force. Unemployment fell as the government geared up for wartime production and drafted young adult males into military service. By 1945, almost 12 million men and a quarter of a million women were engaged as military personnel on active duty (Table Ed26–47). The number of males engaged in active duty at this time is equivalent to about two thirds of the total male population 15–29 years of age in that year (Table Aa125–144). To accomplish its production goals, the government enticed millions of women – married and single – into the labor force. This wartime work experience permanently changed public perceptions of women's economic roles and is widely believed to have contributed to the marked expansion of women's roles in the years that followed (Goldin 1990).

2000

From an historical perspective, perhaps the single most striking characteristic of the 2000 labor force is the prominent role of women. In 2000, women comprised nearly half of the total labor force, and almost half of these female workers were married. The growth in women's share of the labor force was accomplished through two complementary processes, an increase in women's participation rates and a decline in men's. The share of women 16 years of age and older participating in the labor force grew from 33.9 percent in 1950 to 60.2 percent in 2000 (Table Ba535–550). Overall, men's participation rates fell from 86.4 percent to 74.7 percent, with virtually the entire decline occurring among older men. In 2000, only 67 percent of males 55–64 years of age and 18 percent of those 65 years of age and older were labor force participants. This compares with 87 percent and 46 percent, respectively, in 1950 (Table Ba519–534).

Foreign-born workers were a much more prominent presence in the 2000 labor force than they had been fifty years earlier. Immigrant flows had resumed in the post–World War II era, and they were fed by entrants from different parts of the world. In 1950, the overwhelming majority of the foreign-born workforce was of European origin, whereas by 2000, persons from Asia and Latin America formed the majority. The successive waves of migration from Latin America were so large in the previous fifty years that, in 2000, almost 11 percent of the total labor force was of Hispanic origin (Tables Ba551–570).

The 2000 labor force was highly educated. Thirty percent had a college degree, while fewer than 10 percent had not completed high school (U.S. Census Bureau 2002, Table 564). White-collar work in the professions and in clerical, sales, and service occupations accounted for over half of the total workforce (Table Ba1033–1046); manufacturing had declined to almost half its 1950s level, while agriculture had shrunk to a mere 2 percent of the labor force economywide (Table Ba652–669).

Unions were far less powerful than they had been a half century earlier. Union members accounted for only 13 percent of the workforce in 2000 (series Ba4788 divided by series Ba479). At the same time, unemployment posed less of a threat to workers. Between 1950 and 2000, unemployment averaged 5.7 percent, down from an average of 6.8 percent during the previous fifty-year period. Moreover, prior to 1950, unemployment had reached 22.9 percent in 1932 and exceeded 10 percent for a total of eight years. In the post-1950 period, the highest level of recorded unemployment was 9.7 percent in 1982 (series Ba475 and Ba485).

This new face to the 2000 labor market was the product of a complex set of developments that included both continuity and change compared with the previous period. Among the most important are the continuing growth of labor productivity, rising incomes, and low unemployment; the resumption of large-scale immigration; and the revolution in the social and political roles of minorities and women.

Labor productivity continued to advance, with improvements in the quality of inputs, such as more educated labor and more sophisticated machinery and organization, leading the advance.[10] This labor productivity growth, combined with growth in the labor-to-population and capital-to-labor ratios, produced an overall rate of growth of real gross domestic product per capita of 2.2 percent per annum, a rate that exceeded that for any of the previous periods discussed here (Table Ca-C in Chapter Ca). A 2.2 percent annual growth rate sustained for fifty years translates into a threefold increase in real per capita income.

The growth in both labor productivity and per capita income influenced the deployment of the labor force in a variety of ways. As incomes rose, consumers shifted demand away from standardized products and toward custom-made manufactured goods, imported specialty products, and services, especially health care, transportation, education, and insurance. The rise in demand for these new goods, increasing international specialization and trade, and rapid technological advance prompted shifts in the deployment of the labor force across industries. Manufacturing employment as a share of total employment fell from 26 percent to 15 percent. Within manufacturing, the share of workers employed by the very large firms (those employing 1,000 or more workers) fell as well from 33 percent to only 20 percent of the labor force (series Ba4705). Business services – such as advertising, building services, personnel supply services, and computer and data processing services; educational services; and other professional services such as health, legal, and social services – more than doubled their labor force share since 1950 to reach 5.9, 9.4, and 12.9 percent of the labor force, respectively, by 2000 (Table Ba652–669).

The growing female share of the paid labor force is bound up with these industrial and occupational shifts in a variety of interesting and mutually reinforcing ways. Women's activities figure in the demand side, because it was women's willingness to reallocate their time from unpaid household work to the paid labor force that contributed to the strong and growing effective demand for products such as education, transportation, and insurance, which cannot

[10] Abramovitz and David (2000) and the essay on productivity in Chapter Cg.

be produced in the home. Women's activities figure in the supply side, because their high levels of education and labor market entry have facilitated the rapid growth of employment without a rapid increase in the costs of production.

After World War II, immigration to the United States resumed. With the recovery of the economy, the American labor market was once more attractive to potential immigrants. Furthermore, the United States had created loopholes in the program of strict numerical control of immigration. In acknowledgment of strategic wartime alliances and in an effort to influence the character of postwar international relations, the United States loosened bans on immigration from Asia, created special admission categories to accommodate persons displaced by World War II, and encouraged the immigration of the highly educated. These programs were expanded with the onset of the Cold War that followed (for a list of these programs, see Table Ad-J in Chapter Ad; for numbers admitted by program, see Table Ad989–1004).

Another source of foreign-born labor in this period was migrant labor for agriculture, which was drawn largely from Mexico. Tight labor markets during World War II produced an agricultural laborers program that was continued into the 1950s and early 1960s. During most of the 1950s and early 1960s, the number of workers entering the United States under the auspices of this program was more than double the number of persons admitted as regular immigrants (Table Ad1023–1029). When the United States ended the program unilaterally in 1964, the migrant labor flows continued, but in an undocumented form.

In 1965, the United States repealed the Quota Acts of the 1920s that had starkly restricted immigration from much of the world and substituted the Preference System. The Preference System allowed for higher annual levels of immigration and greatly facilitated the entry of immigrants from Asia (see the essay in Chapter Ad on international migration). Following the mid-1960s, the share of the American labor force born in Asia and Latin America grew rapidly. These foreign-born workers in the late twentieth century were a more diverse group than those a hundred years earlier. Back then, the majority of immigrants came out of agricultural backgrounds and took up places in unskilled occupations in the growing manufacturing sector of the economy. There were few professionals, but also few agricultural workers. At the end of the twentieth century, a much higher share of the foreign-born workforce was employed in professional positions than was true a century earlier. At the same time, it is also true that a disproportionate share of the foreign-born population is employed as agricultural laborers and as manual service workers in the hospitality industry. In 1990, the foreign-born share of the agricultural labor force was more than double its share of the labor force overall (Tables Ad231–255 and Ba1131–1158 and Figure Ba-B).

We postpone the discussion of changes in the labor market roles of minorities and women during the second half of the twentieth century to the next section on labor force participation.

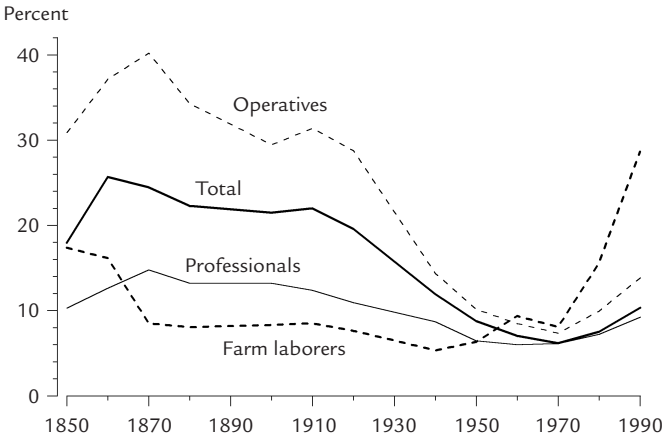

FIGURE Ba-B Foreign-born share of employment, by major occupational group: 1850–1990

Sources

Series Ba1131–1132, Ba1139, Ba1142, Ba1145–1146, Ba1153, and Ba1156.

Labor Force Participation

Although most workers report that their own labor force participation is a necessity rather than a matter of choice, the historical record reveals enormous variation over time in the participation rates of different groups. For example, in the nineteenth century, labor force participation of married women was rare, and that of youth and older men was much more common than today. Thus, a long-term perspective reveals that societywide labor force participation rates are clearly flexible.

Economists explain patterns and trends in labor force participation with reference to an economic model originally developed to explain consumers' choices among commodities (Killingsworth 1983). According to this model, the individual is assumed to select between two goods, one purchased in the market and the other produced at home. Leisure is included among the home-produced goods. Individuals participate in the labor force in order to earn the money they require for the purchase of these market goods. They face a number of constraints in this process: their time is fixed at twenty-four hours per day; their assets and nonmarket income are not boundless; their productivities and returns in the market and nonmarket venues are limited in specific ways; and they have biophysical requirements for sleeping and eating.

This consumer choice model of labor force participation is generally recast from an individual to a family or household perspective to take account of the fact that individuals' decisions are influenced by the wages and the household productivity of other family members. According to this model, family members make their labor supply decisions simultaneously, rather than piecemeal, and so it remains to be explained why families sent older children into the labor force while keeping the wife/mother in household labor in the late nineteenth century but did the opposite in the late twentieth century.

Labor force participation may also be cast in a life-cycle perspective, in which individuals' decisions regarding current activity are made with an eye to the future and are influenced by the value of assets that they have already accumulated. A typical life-cycle employment pattern involves working and saving as a young adult and then reducing the work effort and drawing down savings at older ages (Modigliani 1966).

The economist's labor supply model was developed to explain individual differences in labor force participation at a single point in time. For example, why is one 58-year-old employed in the labor force while a neighbor is retired? Is it differences in earnings opportunities, income of spouses, pensions, health, or something else? Alternatively, one might ask why education is positively correlated with labor force participation. Is it simply that better-educated individuals have access to higher wages, or is there some independent

effect of education itself? A primary goal of such investigations is to answer policy-related questions. One might be interested, for example, in predicting the impact of a proposed change in Social Security benefits on the probability of retirement at different ages. Appropriately, for this purpose, such modeling focuses on factors that distinguish among individuals at some single point in time and leaves aside factors that influence all individuals and that change slowly over time.

To explain long-term change in labor force participation, one must bring these "background characteristics" explicitly into the analysis. Economic historians distinguish among two major categories of background characteristics: cohort effects and trends.

Cohorts – or, more specifically, birth cohorts – refer to individuals born about the same time. "Cohort effects" refer to developments that distinguish the life experience of one birth cohort from another. Familiar examples are war, famine, economic depression, political struggles, legislative change, and technological developments, such as the advent of television, the automobile, or airline travel. Such events appear to have a lifelong impact on those coming of age at the time they occur (see the essay in Chapter Af on cohorts). The impact of such events is reinforced by the fact that, for a variety of reasons, individuals' behavior depends to some extent on the behavior of those around them (Schelling 1978). Thus, for example, individuals are more likely to marry at young ages if their peers are doing so.

Many decisions that affect lifetime labor supply behavior are made as young adults. Especially pertinent are decisions regarding education, marriage, family size, and geographic location. For example, a woman who has a large number of children may find that she is unable to respond to an unexpected decline in discrimination or to an increase in wage rates for many years, perhaps ever. Cohort effects can differ markedly from one birth cohort to the next.

Trends also influence long-term change in labor supply. The term "trends" refers to social norms, legal regimes, and institutions that change over time and that affect all individuals in the economy. Such norms, laws, and institutions are typically not part of the economist's model of labor supply precisely because the economist focuses on differences across individuals or cohorts at a single point in time, whereas norms, laws, and institutions are typically the same for everyone. Nonetheless, if the focus is on long-term change, then trends may be quite important. To take one example, discrimination against women in professional employment or social attitudes that stigmatize married women's employment may lead some women to decide against labor market participation altogether. A reduction in such discrimination and stigma may be more important than changes in wages in explaining change in women's labor force participation over time.

Goldin (1983, 1990) parsed the determinants of change in women's labor force participation between 1940 and 1970 into the three categories embraced here: point-in-time effects, such as income and wages that can improve or deteriorate from one year to the next; cohort effects, such as educational attainment, marital status, and fertility, which are generally fixed by age 30 or so; and trends in difficult-to-quantify factors, such as social norms, laws, and institutions. She concludes that each of these categories, on its own, can account for only about a third of the total change in women's labor force participation over time. In other words, it is important to consider all three categories.

Male Labor Force Participation

The long-term pattern of male labor force participation since 1870 is shown in Figure Ba-C and Table Ba417–424. In nineteenth-century America, an estimated 90 percent of adult white males 16 years of age and older, and a slightly higher percentage of nonwhites, were engaged in the labor force. Beginning about 1920, this high rate of labor force participation began to decline so that by 2000, the respective participation rates of whites and nonwhites were only 75 percent and 71 percent (Table Ba551–560).

The entire decline in male labor force participation over the twentieth century occurred at the younger and, especially, the older ages; the participation rates of males 20–44 years of age changed not at all (Figure Ba-D and Table Ba519–534). Young males increasingly delayed their entry into the labor force in order to extend their schooling, while older males began their retirement at increasingly younger ages. Earlier retirement is by far the largest component in the overall decline in the labor force participation of men over time. As Table Ba519–534 indicates, the labor force participation rate of males 55–64 years of age was close to 90 percent between 1947 and 1960. During the 1970s and 1980s, this rate fell substantially but then remained essentially unchanged during the 1990s. In 2000, the labor force participation rate of males 55–64 years is 67.3 percent.

The long-term trend toward more retirees who begin their retirement at increasingly early ages is thought to be a reflection of three principal developments: rising real incomes, the movement out of self-employment, and the rise of institutions such as Social Security and old-age pensions. Rising incomes have allowed individuals to enjoy more of all goods, including more retirement. Self-employment has given way to wage and salary employment in large business enterprises that have been able to offer increasingly attractive rewards to employees (Tables Ba910–983). Nonetheless, the improved earnings in wage and salary work come at the expense of less flexibility regarding the extent, pace, and content of the work. The self-employed worker controls these qualities himself or herself, which means that in self-employment, the worker can accommodate the various personal circumstances that change with

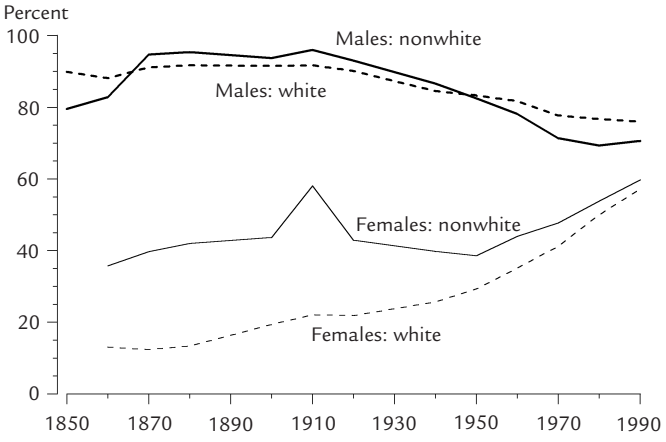

FIGURE Ba-C Labor force participation rate, by sex and race: 1850–1990

Sources

Series Ba419–420 and Ba423–424.

Documentation

These series cover noninstitutionalized civilians age 16 and older.

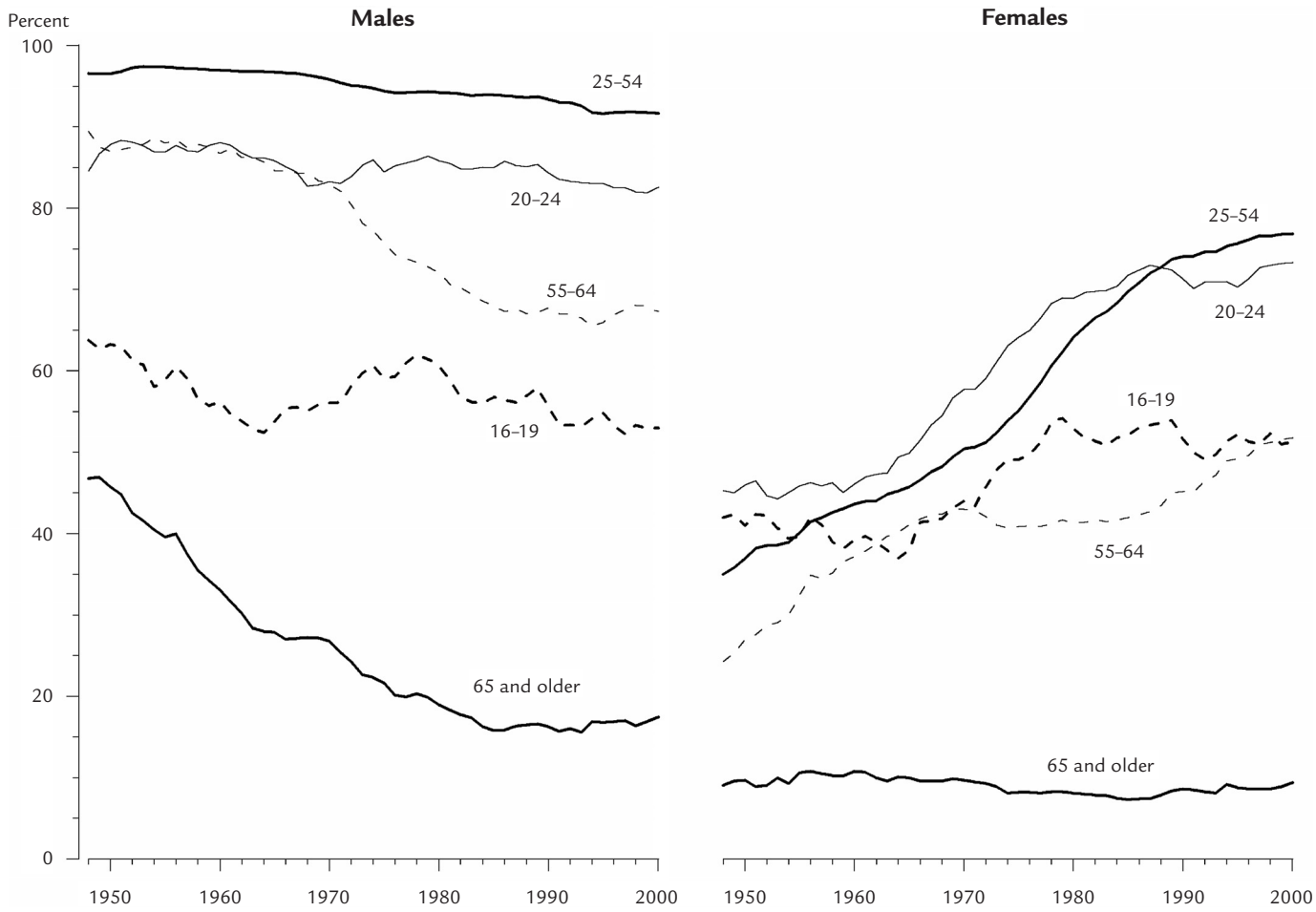

FIGURE Ba-D Labor force participation rate, by sex and age: 1948–2000

Sources

Series Ba528–534 and Ba544–550.

Documentation

The labor force participation rates for the 25–34, 35–44, and 45–54 age groups are fairly similar over time. For display purposes, these groups have been averaged, using weights based on the number of workers in the groups (series Ba522–524 and Ba538–540).

age. Large enterprises tend to adopt elaborate and rather inflexible internal personnel policies that limit workers' ability to make such adjustments. In fact, some employment policies of large firms, pension policies in particular, are specifically designed to encourage workers' early retirement. These firm-based pensions reinforce the effect of Social Security, veterans' benefits, and other public pensions in encouraging older workers to withdraw from the labor force at relatively young ages. A different long-term trend working in the opposite direction is improvements in health. Dora Costa has shown that over the twentieth century, not only has mortality fallen, but the average level of health has also improved (Costa 1998). Because poor health is one reason why workers retire, health improvement, taken by itself, ought to have prompted reductions in retirement over time. This has not happened. Overall, then, rising real incomes, the movement out of self-employment, and the rise of pensions have overwhelmed the effects of long-term improvements in health, leading to substantially lower rates of labor force participation among older males over time.

Labor force participation rates of males, but especially older males, also vary with the business cycle. Downturns in the economy and increases in the unemployment rate are associated with reductions in the labor force participation, whereas periods of economic expansion lead to increases (Coleman and Pencavel 1993; see also Table Ba519–534). It is also the case that older males with the lowest levels of education exhibit the lowest levels of labor force participation and that differences in the participation rates of those with the highest and the lowest levels of educational attainment have grown over time (compare series Ba511 and Ba514). Taken together, these data suggest that for at least some older males, difficulty in obtaining employment may play a role in their decision to leave the labor force. They are also consistent with the view that interesting work conducted in a pleasant environment may be increasingly necessary in order to keep older workers in the labor force.

It is interesting that long-term changes in wage rates appear to have little or no effect on the labor force participation decisions of males. According to the simple model of labor supply described previously, an increase in the market wage has two offsetting effects. On the one hand, an increase in the wage means that a given hour's worth of work generates more income and therefore more command over market-produced goods and services. This produces a positive relationship between the wage and labor force participation. On the other hand, an increase in the wage increases

income and therefore offers the possibility of purchasing more of all goods, leisure and early retirement included. This consideration produces a negative relationship between the wage and labor force participation. The first effect has been shown to dominate for males who are already labor market participants; that is, higher wages appear to induce male workers to work longer hours. However, for males both in and out of the labor force, changes in the wage rate do not appear to affect the participation decision one way or the other (Pencavel 1986; Coleman and Pencavel 1993; Blundell and MaCurdy 1999).

Female Labor Force Participation

Figure Ba-C and Table Ba417–424 display official statistics concerning the long-term pattern of female labor force participation. These statistics show a sizable, steady advance for white women since the first census estimates of female employment in 1860. At that time, only 13.1 percent of 16- to 64-year-olds were gainfully occupied, according to the census count. By 1990, the rate was almost 60 percent. The long-term pattern of nonwhite women's labor force participation is complicated by the experience of slavery and then emancipation. An estimated 90 percent of enslaved women were engaged in the labor force. The 1870 Census, the first following emancipation, estimates the labor force participation rate of all nonwhite women at 39.2 percent, a rate higher than that of white women at the time but far below that of women under slavery. Over time, the labor force participation rate of nonwhite women rose so that in 1990, it too stood at almost 60 percent. As described in detail previously, scholars have shown that these official estimates certainly understate the extent of women's paid employment in the nineteenth and early twentieth centuries. However, even after adjusting for these underestimates, the substantial rise in women's labor force participation remains.

In the nineteenth century, many women lived their lives without ever becoming engaged in market work; for most of those who did participate, the experience was a relatively brief life episode (Tables Ba425–469 and Ba571–578). In 1880, the first year for which female labor force participation rates by marital status are available, 33.7 percent of single, 23.5 percent of widowed and divorced, but only 5.7 percent of married women were labor force participants. Over the twentieth century, the participation of women in all marital status categories grew, with the largest gains made by married women who were living with their husbands (the official category is "married, spouse present"). In 1999, 68.7 percent of single, 61.2 percent of married, and 49.1 percent of widowed and divorced women 16 years of age and older were labor force participants (Table Ba571–578).[11] As one can infer from these statistics, by the end of the twentieth century, a large proportion of women were participating in the labor force throughout their adult lives, even while caring for young children. In 1999, fully 59.2 percent of married women with spouse present and with children under the age of 3 were in the labor force (Table Ba579–582).

The process by which the female population transitioned from low to high rates of labor force participation can be summarized in a simple phrase: women's labor force participation has increased across the board. Women's labor force participation increased within every age group. Between 1948, when the modern annual data on women's labor force participation begins, through our last year of data, 1999, women's labor force participation increased in each and every age group (Table Ba535–550 and Figure Ba-D). Only among young adults and only in recent years has there been a trending down of female labor force participation. This is a case in which the labor force participation rates of young women mirror those of young men. Both increasingly postponed labor market entry in order to extend their schooling.

Women's participation at every age has increased with each successive birth cohort. For many years, economists characterized women's labor force participation over the life cycle as a "two-peaked" pattern, that is, heavy participation before marriage, withdrawal from the labor force at the time of marriage or birth of the first child, and then a return to the labor force after the youngest child was in school. This two-peaked pattern is suggested by cross-sectional data displaying the labor force participation rates of women of different ages at some point in time (see Figure Af-A in Chapter Af). However, Goldin (1990) has shown that an entirely different pattern emerges if one rearranges the data in a way that highlights the actual experience of successive cohorts of women as they age. For example, to view the labor market experience of women born in 1920, select the labor force participation rate of 20-year-olds in 1940, 30-year-olds in 1950, and so on. This measure is called a "cohort" measure because it follows the actual experience of a group of women, all of whom were born at the same time. The labor force participation rates of successive cohorts of women born in the twentieth century are shown in Figure Af-B in Chapter Af. In this figure, it is clear that all cohorts of women born in the twentieth century increased their labor force participation as they aged, at least up to age 55. The apparent withdrawal of women from the labor force during the peak child-bearing years that is so striking in cross-sectional data for a single year does not represent the actual experience of any true cohort (see the essay in Chapter Af on cohorts).

Women's labor force participation increased at every level of family income, though much more rapidly in high-income than in low-income households. In the nineteenth century, female labor force participants tended to come from the more economically disadvantaged segments of the population – daughters and wives of men who were sick, injured, unemployed, missing, or dead. Over the twentieth century, the expansion of white-collar professional, managerial, clerical, sales, and service occupations and women's entry into these positions prompted substantial increases in labor force participation among women from middle- and upper-income households. By 1940, 49 percent of college-educated women were in the labor force, as compared with only 22.9 percent of women with less than a high school education. By 1990, the respective percentages were 82.0 and 47.2 (Table Ba507–518). At the same time, the educational attainment of successive cohorts of women rose. In 1940, the percentage of the female population 25 years of age and older who had completed four or more years of college was only 3.8 percent. By 1997, the figure was 21.7 percent (series Bc750). Together, the increase in women's educational attainment and the disproportionately rapid growth in the labor force participation of well-educated women powered the growth in female labor force participation overall.

Although it is clear how women's labor force participation increased, it is considerably less clear exactly *why*. The simple economic model of labor force participation highlights nonwage income, and the market wage has two potentially powerful influences.

[11] The average age of the widowed and divorced women is considerably greater than that of women who are single and married, husband present. This age effect is the primary reason for their low participation rate.

An increase in a woman's nonwage income (typically the income of her spouse) is expected to reduce her labor force participation, and yet, even though the income of married men increased steadily over time for most (but not all) married men (Tables Ba4224–4233, Ba4381–4390, Ba4440–4483, Ba4512–4520, and Be67–84), married women's labor supply has increased, rather than decreased, as the model might lead us to expect.

Of course, women's wages have also increased over time (Tables Ba4224–4233 and Ba4512–4520). As noted earlier, an increase in women's wage produces two offsetting effects. On the one hand, it encourages labor force participation through what is called the "substitution effect." An increase in the wage rate makes it easier to acquire, say, bread by abandoning work in one's own kitchen, working for wages, and then spending the resulting income to purchase bread from a bakery. On the other hand, an increase in the wage will increase potential income, offering the possibility of purchasing more of all goods, leisure (and home cooking) included. Among women, the substitution effect has been found to predominate. That is, rising wages seem to encourage women to enter the labor force. At the same time, the rise in women's labor force participation rates, especially after World War II, far exceed the rise that would be predicted by the rise in wage rates alone (Goldin 1983, 1990; Pencavel 1998). To fully understand this long-term increase, we need to consider cohort effects and trend variables as well.

We have already noted in the descriptive section of this essay that successive cohorts of women have increased their involvement in the paid labor force (Figure Af-B). To some extent, these changes can be attributed to factors such as increased education, postponement of marriage, and reduced fertility – developments that have improved the rewards of women's market work and facilitated their labor force participation. Women's educational attainment has increased steadily over time. In fact, changes in the space of just a generation or two are truly enormous. For example, among women born between 1911 and 1920, 53 percent of whites and 85 percent of nonwhites had not completed high school by the time they reached their twenties; among the next generation, born between 1931 and 1940, the respective percentages were only 34 and 58. Jumping ahead to the cohort born between 1961 and 1970, only 11 percent and 14 percent of white and nonwhite women, respectively, had not completed high school (Table Af295–336). Over the same time period, college graduation became increasingly common. Among women born between 1911 and 1920, only 5 percent of whites and 2 percent of nonwhites had graduated from college, whereas among the cohort born between 1961 and 1970, the respective proportions were 23 percent and 17 percent (Table Af355–390).

Not all changes from one cohort to another facilitated labor force participation, however. White women born between the two world wars were far more likely to marry and have large families than women born into earlier and especially later cohorts. Among the cohort of white women born between 1911 and 1920, 62 percent were married by the time they reached their twenties; jumping ahead to the cohort born between 1931 and 1940 reveals a marriage rate in this age group of 77 percent. These high marriage rates, however, disappeared quickly. Among white women born between 1951 and 1960, only 56 percent were married by their twenties. Fertility followed the same pattern across cohorts, with depressed fertility for women born prior to World War I, elevated fertility for women born between the world wars, and sharply reduced fertility among the cohorts of women born after World War II. The sharply reduced marriage and fertility rates, together with their high levels of education, are an important element of the explanation for the long-term increase in female labor force participation rates, especially for the acceleration after 1970.

The emphasis in the previous paragraph on cohort-by-cohort change in educational attainment, marriage, and fertility decisions on labor force participation does not imply that these prior changes are made independently of labor market developments. On the contrary, these seemingly personal decisions have been shown to respond to a variety of economic forces societywide. For example, in a highly influential book, Richard Easterlin (1980) argues that the high marriage and fertility of cohorts born in the interwar period appear to be a response to high household incomes in the 1950s – incomes that far exceeded the income expectations they had formed as young adults growing up during the Great Depression of the 1930s. Likewise, Easterlin argues that the sharply reduced rates of marriage and fertility displayed by the post–World War II baby boom generation are a response to the disappointing economic conditions when this generation came of age during the 1970s.

"Trends" also play an important role in explaining the secular increase in women's labor force participation over time. In contrast to "point-in-time effects" and cohort effects, trends are evolving influences with largely universal impacts. We highlight here two trends especially evident in the twentieth century that have received considerable attention in the scholarly literature on women's labor force participation. The first is the rise of a consumer culture, coupled with advances in the technology of household production. The second is change in the social norms, laws, and institutions regarding the employment of women outside the home. Although we discuss these trends individually, they are closely intertwined with each other.

Economic historians have traced back many centuries the linkage between the introduction of new market goods and change in basic norms of family life, including norms regarding labor force participation. For example, Jan DeVries (1994) argues that the introduction of new textile, art, and home improvement commodities in eighteenth-century Europe provided a powerful incentive for workers to work longer hours in order to be able to afford these attractive new products.

In American history, the expanding offerings of new consumer goods are also strongly linked to changing patterns of work, especially to changes in women's work. Prior to American industrialization, when consumer goods were largely imported and expensive, families produced most of what they consumed. They raised their own food, processed some for storage, and prepared their daily meals. They built their own homes and produced household goods, such as soap, candles, brooms, toys, furniture, and mattresses. They also produced their own thread, cloth, and apparel. The appearance of inexpensive commercial substitutes for many of these products, along with the advent of American industrialization and improvements in internal transportation, prompted many families to abandon home production and purchase from the market much of what they had formerly produced at home. Household production fell (Tables Ba4999–5081), sales of commercially produced products rose, and many young people, especially women, left home to work in industrial employment. These new industrial workers were drawn disproportionately from large, relatively prosperous rural families that no longer required their assistance with home production. As Thomas Dublin (1994, p. 118) put it,

"although economic motives undoubtedly loomed large for these women workers, family economic need was not the principal motivation that led them to enter the mills. Mill employment offered young single women economic and social independence unknown to previous generations of New England women." Although historians offer different views of its relative importance, there is ample evidence that for many of these young women, one of the attractions of earning their own wages was the opportunity to purchase more fashionable dresses and hats for themselves and household furnishings for when they married. Some women worked in order to further their schooling. All of these goods were, at the time, newly available consumer goods. They were attractive in that they enabled these young women to better connect with the larger world beyond their rural origins (Dublin 1981).

The impact of these new goods on married women's work was more complex. On the one hand, the appearance of inexpensive consumer goods allowed married women to forgo many arduous and time-consuming activities such as soap and candle making. The appearance of utilities, such as running water, indoor plumbing, gas, and electricity, eliminated the necessity for other back-breaking tasks, such as hauling water, tending wood or coal furnaces and stoves, and removing the soot that such heating devices produced (also see the essay on utilities in Chapter Dh). At the same time, Ruth Schwartz Cowan (1983) shows that productivity enhancements offered by the commercial substitutes for household production and by the new household technologies shifted, but did not reduce, married women's work in the home. She argues that social standards for cleanliness and for other household services – especially child care and meal preparation, but also standards of leisure for husbands and children – rose faster than household productivity. The result, which she signals in the title of her influential book, *More Work for Mother*, was more time spent in household work for married women and less participation in paid labor.

Joel Mokyr (2000) argues that rising social standards for household cleanliness in the late nineteenth century were due, at least in part, to the scientific discovery of the germ theory of disease. A practical implication of the germ theory is that good hygiene could reduce the incidence of disease and speed the recovery of the ill. In Mokyr's view, the widespread acceptance of the germ theory helped to raise the social valuation of women's traditional household maintenance chores. Cleaning became more than a cosmetic or aesthetic improvement, according to this new view; it was an integral input into the health and well-being of the family. As commercial sources of housecleaning and nursing services were largely unavailable to all but the very wealthy, he argues, families maximized their well-being by deploying mothers' labor in the home.

In the twentieth century, new consumer goods began to have a more direct effect on the allocation of married women's labor. On the one hand, new goods that unambiguously reduce household work, such as prepared foods and meals eaten away from home, became much more popular and readily available. For example, over the twentieth century, but especially since the 1950s, expenditures on food consumed away from home grew substantially. By 2000, such expenditures accounted for almost 40 percent of all expenditures on food (Tables Cd1–77 and Cd153–263). On the other hand, families' consumption bundles shifted to include goods such as automobiles, various types of insurance (old age, health, homeowners, and automobile), and college education. As Clair Brown (1994) notes, an important characteristic of all of these goods is that by their nature, they cannot be produced in the home. For married women to acquire them for their families, they must enter paid employment.

Overall, then, expenditures on kitchen and other household appliances soared, along with expenditures on goods that by their nature must be produced in the market (series Cd180). Over the same period, women's time spent in household work declined, and time spent in market work has grown (Tables Ba4641–4646 and Ba5096–5119).

Changing social norms, laws, and institutions also impact women's labor force participation. The precise impact of such factors is difficult to quantify, of course, but it is clear that they have played an important role in shaping long-term change in women's market work. To describe one example, Joel Perlmann and Robert Margo (2001, Chapter 3) examine differences across recently settled Illinois counties in 1850 in their propensity to employ female teachers. Illinois in this period is an interesting case study because its underlying economic environment was largely homogeneous, but it was settled by migrants from a variety of regions throughout the East that had different but entrenched attitudes regarding women's roles and, in particular, the acceptability of women as teachers. Perlmann and Margo show that most of the variation in women's employment in school teaching across Illinois communities in 1850 is explained by acceptability of women's teaching in migrants' communities of origin. If women taught in the counties from which settlers had come, then women were likely to teach in the new communities established by these pioneers. However, if in the next town over, pioneers arrived from communities in which teaching was men's work, then even in their new Illinois environment, they employed men but not women as teachers.

Given the evident power of such social norms, what, specifically, describes the profound changes in American women's labor force participation rates over time? A partial answer is that, at a fundamental level, there appears to be no necessary connection between the technical characteristics of employment in any particular occupation or industry and the gender composition of employment. In a study that was especially well constructed to standardize for the effects of industry, industrial technology, and norms regarding the length of the workday and worker safety protections, Gary Saxonhouse and Gavin Wright (1984) demonstrate that occupations deemed "men's work" in Japan can be "women's work" in the United States and vice versa. Differences between these social definitions appear to depend entirely on the relative supplies of male and female labor in the two countries at some influential point in time. Occupations designated as men's work in nineteenth-century America (clerical work, for example) are women's work today (Rotella 1981; Davies 1982). The reverse is also true. Occupations, such as assisting with childbirth, evolved over time from women's to men's work (Walsh 1977).

Again, when and under what circumstances do social norms regarding women's and men's work change? The scholarly literature identifies several underlying conditions that appear to extend social definitions of employment to include women and to encourage women's involvement. Foremost among these are temporary shortages of male workers, the appearance of new technologies, and rapid expansion in the demand for workers, including work reorganization. Thus, Perlmann and Margo find that temporary shortages

of male teachers during the Civil War prompted school boards in many communities across the country (including recently settled communities in Illinois, which had never before employed women to teach school) to hire women for the first time (Perlmann and Margo 2001). Significantly, the (positive) wartime experience of such communities with their (temporary) wartime female teachers appears to have permanently changed their attitudes regarding the acceptability of women for teaching posts. At the conclusion of the Civil War, and beyond, the female share of the teaching force across communities was above the prewar level, despite the return of male teachers who had been called away for wartime military deployment.

Myra Strober and Carolyn Arnold (1987) tell a similar story regarding the feminization of the bank teller occupation during World War II. The demand for banking services, which continued and expanded during wartime, coupled with markedly reduced supplies of male labor, prompted banks to reorganize financial services delivery in a way that created jobs for women and redirected a greater share of the banking labor force toward service activities. Even with the war's end and the return to the civilian labor force of former male bank employees, the structure of bank occupations retained its heavy reliance on female workers.

There are other stories as well. Elyce Rotella (1981) and Margery Davies (1982) explain women's entry into clerical work in terms of the rapid increase in demand for workers in the occupation; the development of new technologies, especially the typewriter; and the reorganization of work, which removed record keeping as a stepping stone to a managerial position and redefined it as a new, self-contained work category. Mary Roth Walsh (1977) accounts for the narrowing of opportunities for women in health care over the nineteenth century in terms of the development of occupational licensing procedures with legal clauses that directly or indirectly excluded women.

Social norms regarding responsibility for the care of children, the aged, and the infirm are another arena with enormous implications for women's labor force participation. Historically, societies have vested such responsibilities in women. Although some European nations have accepted increasing social responsibility for such matters, especially over the latter half of the twentieth century, the United States has not. Norms regarding women's responsibility for such care have changed far more slowly than norms relating to the style and content of women's paid employment. Thus, employed women, to a far greater extent than employed men, must juggle the demands of career and family. Many women responded by delaying marriage and reducing their fertility in order to pursue careers. Women who are already mothers when they enter employment are often faced with difficult choices as they balance the demands of child care and employment.

Over the long term, legal changes have greatly enlarged the sphere for women's self-determination and participation society-wide. Many of these have had direct effects on women's labor force participation. Before the mid-nineteenth century, for example, control over married women's earnings and assets rested with their husbands. Wives were required to obtain their husbands' permission in order to participate in the labor force, sign contracts with merchants, and engage in many other activities essential to earning an independent livelihood. Table Ba5091–5095 displays the timing of the repeal of such laws on a state-by-state basis, beginning with Maryland in 1842 and concluding with Utah in 1897.

In the latter part of the nineteenth century, following a noticeable increase in women's industrial employment, states began to regulate the hours and working conditions of women and children. Women's night work and hours of employment per working day were restricted in many states, and women were excluded from employment in mining and certain types of manufacturing processes that were deemed to pose a risk to their health or to that of their unborn children. Ronnie Steinberg (1982) has compiled a useful summary of these regulations on a topic-by-topic and state-by-state basis for the period 1900–1970. The overall effect of such legislation is not entirely clear. Women's hours of work fell in response to the passage of restrictive hours legislation, but they fell no faster than men's hours over the same time period. Women's employment in the regulated manufacturing industries did not fall. These findings suggest that this Progressive-era protective legislation for women workers may have improved the ability of male workers who were not directly affected by the legislation to bargain for reduced hours and safer working conditions, so that hours fell and safety improved for both male and female workers (Goldin 1990, Chapter 7). Thus protected by law, more women were able to seek employment without encountering opposition from parents, husbands, and the general community.

In the years that followed, the emphasis of gender-specific employment legislation shifted from special protection for women workers to gender equality in wages and employment. Key legislative developments were the Equal Pay Act of 1963; Title VII of the Civil Rights Act of 1964; Executive Order 11246 (1965) and Executive Order 11375 (1967), or "Affirmative Action"; and Title IX of the Educational Amendments Act of 1972. "Comparable worth" legislation was passed by a number of states beginning in the 1980s but did not achieve national coverage. An Equal Rights Amendment to the Constitution was first introduced in Congress in 1923 and passed by Congress in 1972; however, it was not ratified by the necessary thirty-eight states by the July 1982 deadline (it was ratified by thirty-five states).

It is difficult to specify the precise impact of legislation on women's labor force participation, occupations, wages, and educational attainment over time. The limitations of such a legislative approach are obvious. The Equal Pay Act of 1963 required only equal pay for workers in essentially the same job with the same employer. Because gender-based occupational segregation at the time of the law's passage was extensive (Table Ba4207–4213), the law applied to only a small proportion of the jobs in which women worked. Title VII of the Civil Rights Act of 1964, in prohibiting discrimination in all aspects of employment – hiring, firing, training, promotion, and compensation – was potentially far more powerful. Scholarly studies do find positive impacts of such laws (see Blau and Ferber 1994 for a review of the evidence).

Unemployment

Since the advent of the modern labor force concept in the 1940 Census, the unemployed have been defined as noninstitutionalized civilians 16 years of age and older (14 years and older before 1947) who had no employment during a particular reference week but who were available for work and who made specific efforts to find a job within the previous four weeks. Job-search efforts might include applying to an employer, registering with an employment service, or checking with friends regarding employment

opportunities. Persons on layoff from a job and expecting recall are also classified as unemployed according to this definition. The unemployment rate is calculated by dividing the number unemployed by the number in the labor force, where the labor force is the sum of the employed and the unemployed. Annual estimates of the number unemployed and the unemployment rate based on these definitions are shown in Table Ba478–486.

Although our focus here is on unemployment, it is important to note that the downturns in economic activity that produce unemployment also produce a number of other labor market adjustments. During downturns, opportunities for highly paid overtime work are reduced (Table Ba4640). Some workers who prefer full-time schedules may be offered only part-time work (Table Ba4614–4625). Others may be offered night work or other less attractive work schedules (Shiells and Wright 1983). Workers with jobs are more likely to be absent from work due to illness, vacation, and other reasons (Table Ba4649–4655). Occupational injury rates also rise during depressions (Table Ba4750–4767).[12]

Historical Unemployment Estimates

Prior to 1940, the government measured unemployment in a number of different ways. The decennial federal census first inquired about unemployment in 1880 when it asked those who reported an occupation how many months out of the previous twelve they had been unemployed. A similar question was asked in 1900. In 1910, the census asked two unemployment questions, one relating to unemployment at the time of the census and a second regarding weeks of unemployment in the previous year.[13] Additional information on unemployment prior to 1940 may be found in surveys conducted by numerous federal and, especially, state agencies. The most important of the federal unemployment surveys were U.S. Commissioner of Labor (1905), U.S. Immigration Commission (1911), and the special U.S. census of unemployment taken in 1937. For a description of unemployment data collected by state agencies, see Keyssar (1986) and Carter, Ransom, and Sutch (1991). Goldin (2000) displays summary statistics on unemployment gleaned from a number of state surveys conducted in the late nineteenth century. Margo (1993a) makes use of state labor bureau data from the 1930s to study unemployment during the Great Depression.

The first annual estimates of unemployment for the period prior to 1940 that are based on the modern unemployment definition were developed by Stanley Lebergott (1964). Lebergott's work was part of a broad-based effort across the economics profession during the 1950s and 1960s to reconstruct the statistical record regarding the long-term growth of the American economy. The goal was a better understanding of the American growth experience that could inform efforts by less developed countries to improve their own standard of living. Lebergott began with the 1940 labor force and unemployment figures and worked backward in time, proceeding in two steps. He first generated estimates of labor force and unemployment for the decennial census years by taking available census data on unemployment by sex and race and adjusting them to better accord with the labor force concept. He referred to these as "benchmark" estimates. He then generated intercensal unemployment estimates by first estimating an annual series on the labor force between census benchmark dates and then subtracting from it annual estimates of employment. These annual estimates of employment were constructed by a wide variety of methods, depending on available evidence in different sectors of the economy. David Weir (1992) offers a clear and concise description of the details of the Lebergott estimation process.

The upward jump in both the unemployment rate and the inflation rate in the early 1980s prompted the economics profession to shift its focus away from economic growth to economic stabilization. At that time, academic interest in the historical unemployment estimates shifted as well. Data developed for the study of growth began to be used for the study of economic stability in long-term perspective. Viewed in this way, these data presented a puzzle. Prices, employment, and gross national product all appeared to have become increasingly stable over time, yet theory suggests that increasingly stable prices should destabilize the economy. The apparent incongruity between theory and evidence spurred a variety of investigations, including a reexamination of Lebergott's unemployment estimates.

This reexamination was inaugurated by Christina Romer (1986a, 1986b), who argued that the apparent increasing stability of the economy over time is an artifact of the methods used to reconstruct economic statistics for the prewar period. Although these methods might have been acceptable for their original purpose – the calculation of long-term growth rates – Romer argued that they exhibited spurious volatility, making the resulting estimates inappropriate for the study of long-term change in economic stability. To drive home her point, Romer (1986b) used "prewar methods" to transform postwar employment and labor force data. The result was a postwar unemployment series that was nearly as volatile as the pre-1930 series. In a widely cited conclusion, Romer (1986b, pp. 2, 32) stated that the apparent increasing stability of the economy over time was a "figment of the data" and that "economists may have misjudged the effectiveness of stabilization policy and the long-run changes in the economy."[14]

Romer's papers prompted a number of scholars to reconsider Lebergott's original sources and methods. A careful, detailed reexamination of his intercensal interpolation methods led Weir (1992) to argue that Romer's criticisms reflected a misunderstanding of Lebergott's methods. For the most part, Weir validated Lebergott's procedures and findings, while calling attention to a number of issues in need of further work. Weir did, however, take exception to two elements of Lebergott's series. One was the unemployment estimates for the 1890s, which Lebergott developed according to a different methodology from the one that he employed for later years. Adapting the procedures Lebergott developed and refined for the years 1900–1940, Weir produces substantially lower unemployment rate estimates for that decade. The second had to do with the treatment of "emergency workers" during the Great Depression. Beginning in 1929 and continuing through 1943, the federal government created a series of employment programs for otherwise unemployed workers. The major programs were the Works Progress Administration (WPA) and the Civilian Conservation Corps (CCC). Together they employed several million workers during their peak years of operation from 1933 through 1941. The numbers employed in such programs were assembled by Michael Darby

[12] These issues, along with other changes that accompany cyclical fluctuations in the labor market, are discussed in Lilien and Hall (1986).

[13] In 1910, the unemployment question was asked of wage and salary workers only. The self-employed and employers were omitted.

[14] For a discussion of Romer's methodology see Goldin (2000), pp. 589–91.

and are shown in series Ba477. Standard practice for the Bureau of Labor Statistics (BLS) at the time was to count these workers as "unemployed." Its rationale was that these people would have been unemployed had they not been assisted by government relief efforts. Therefore, if the unemployment rate is a measure of the failure of the private sector, government relief workers ought to be excluded from the employment figures. Subsequent long-term employment and unemployment estimates constructed by Lebergott continued this practice (Lebergott 1964, pp. 184–5). Darby, however, was interested not so much in the failure of the private economy as in how many workers were receiving paychecks. From his perspective, it was appropriate to count emergency workers as employed. Weir followed Darby and counted the emergency workers as employed, and this treatment made Weir's unemployment rate estimates for the Great Depression considerably lower than Lebergott's. Thus, whereas Lebergott dates the depth of the Depression in 1933 with an unemployment rate of 25.2 percent, Weir estimated that it reached the bottom in 1932 with an unemployment rate of 22.9 percent (Lebergott, 1964, p. 512, and series Ba475).

To provide a century's worth of conceptually consistent data on the labor force, employment, and unemployment, Weir linked his revisions of the Lebergott series with official federal data collected according to the labor force concept, beginning in 1948 and continuing to 1990. A revised and updated version of these federal data is reported in Table Ba478–486. Minor discrepancies in the years of overlap for Tables Ba470–486 reflect revisions to the data made by the BLS after Weir completed his research. For studies that take a long-term view spanning 1948, the Weir series is preferred. For those taking only a post-1948 perspective, the official series is preferred. The Weir estimates through 1947 and the BLS estimates beginning in 1948 are shown in Figure Ba-E.

The long-term unemployment series continues to attract scholarly revisions. Carter and Sutch (1992) use microlevel surveys of workers and firms to recalculate aggregate unemployment rate estimates for the 1890s. They argue that two sources of unemployment have been neglected in the standard calculations: (1) unemployment created by industrial suspensions of operation, in which the entire firm closed for several days to several months, throwing all employees out of work and (2) unemployment created by the failure of business establishments. Because these processes created a large amount of unemployment in this period, their inclusion in the unemployment rate estimates largely offsets the effect of Weir's downward revisions, restoring the depression of the 1890s to its former infamy.

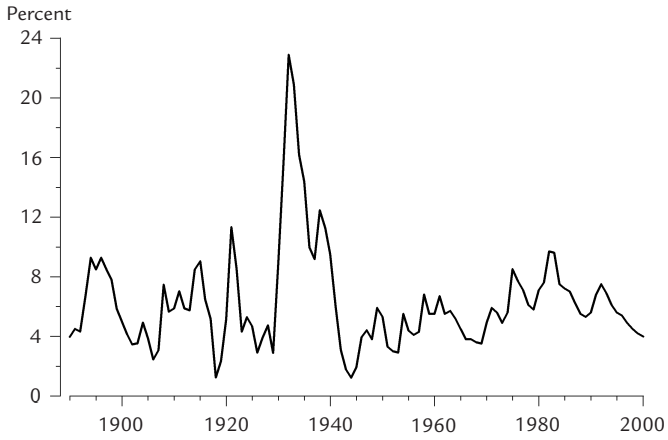

FIGURE Ba-E Unemployment rate: 1890–2000

Sources

Through 1947, series Ba475; thereafter, series Ba485.

John James and Mark Thomas (2003) make use of the IPUMS sample from the 1910 Census to construct a new unemployment rate estimate for that date. Although unemployment data were collected in that census, it was not published in the regular report of that census. Lebergott based his own estimates for that year on a mimeographed report produced by the Census Bureau in 1948. This report showed the distribution of weeks of unemployment by occupation, but excluded information on the demographic characteristics of workers, such as sex and age. On the basis of the evidence available to him, he estimated the unemployment rate of nonfarm employees at 11.6 percent. When James and Thomas examined the IPUMS sample from the 1910 Census, however, they found substantially lower unemployment rates for nonfarm employees – 5.0 percent for 1909 and 5.3 percent for 1910. They convincingly argue that the lower rates ought to be accepted. Since Weir adopted Lebergott's census benchmark unemployment figures, James and Thomas's results suggest that a downward revision to the Weir unemployment rate series in the years surrounding 1910 is warranted as well.

Long-Term Trends in Unemployment

Unemployment is a modern development. In an economy comprising exclusively independent family-owned and family-operated enterprises, unemployment does not exist. Workers in such an economy may endure economic setbacks because of bad weather, disease, or other natural disasters. Their circumstances may be reduced by war or injurious government policy. Alternatively, they may find that competitors have lured away markets for their tradable commodities or have made such markets less remunerative. Yet none of these economic setbacks represent unemployment. Unemployment is the condition of someone who is willing and able to work but who cannot find employment. For the self-employed, there is always something to do, even in slow times. Unemployment, therefore, presupposes a class of workers who are dependent on wage or salary earnings for their livelihood. Even as late as 1900, only about two thirds of the labor force were wage and salary workers (Tables Ba814–830 and Ba910–921).

The history of American unemployment dates from the appearance of "free labor" in the early nineteenth century. "Free" labor in this context refers to labor's legal right to employment at will, especially the legal right to abandon employment without threat of fines or punishment. Although the embrace of free labor was beneficial for laborers overall, the abandonment of labor contracts in favor of free labor also led to employer-initiated terminations of employment – in other words, unemployment.

Alexander Keyssar (1986) provides a colorful, highly readable, and detailed account of the emergence of unemployment in the Massachusetts economy over the course of the nineteenth and early twentieth centuries. Massachusetts is an interesting microcosm from which to view changes in the larger society, as it was an early industrializer and its public officials kept unusually good statistical records of the consequences.

Although theory predicts that industrialization is a necessary precondition for unemployment, Keyssar shows that it is not a sufficient condition. The reason is that the early production of manufactured products took place within an agricultural setting in which any reduction in industrial employment could be offset

by reallocating labor into some alternative sphere. The appearance of modern unemployment, in his story, required the abandonment of agriculture for full-time industrial work. Thus, unemployment is linked to urbanization and to the mass migration of foreign workers, who had no claim to domestic agricultural roots. Because these urban, industrial, and largely foreign-born workers relied wholly on wage labor income for their sustenance and typically had few assets with which to establish a farm or business establishment of their own, these workers were the first Americans to suffer modern unemployment.

Nineteenth-century industrial employment was characterized by frequent interruptions in labor demand. Some of these resulted from seasonal shifts in the supply of raw materials, such as grain, fleece, or fiber. Others resulted from seasonal shifts in demand for industrial products, such as agricultural implements and shoes. Seasonality in both the supply of raw materials and the demand for industrial products remained an important determinant of shifts in the aggregate demand for labor throughout the nineteenth century (Engerman and Goldin 1994).

One response to seasonality as well as to other business disruptions was the suspension of business operations, a widespread practice in the nineteenth century. Firms of that era often closed for a day or two at a time, idling their entire workforce. In normal times, shutdowns were scheduled in advance for vacations and holidays and for routine maintenance and improvements. High or low water, disruptions in the supply of raw materials, and other unforeseen events led to unscheduled closures. Data assembled by Carter and Sutch for the industrial states of Massachusetts, New Jersey, and Pennsylvania for the period 1890–1919 indicate that even in the year of the most continuous operation (1906), firms were closed for an average of one and a half weeks (Carter and Sutch 1992, p. 353). Temporary plant shutdowns were also used to reduce output during economic depressions. In the depression year 1893, for example, average downtime for the industrial establishments in the three states was nearly six weeks. In the modern era, complete plant shutdowns to accommodate disruptions in supplies or reductions in demand are rare (Lilien and Hall 1986, p. 1006; Kniesner and Goldsmith 1987, p. 1244).

Seasonality and industrial suspensions made nineteenth-century unemployment a more democratic and less protracted experience than it is today. In a comparison of the unemployment experience of male nonagricultural workers in 1910 and 1970, Margo (1990) found that the average worker in 1910 was more likely than his grandson in 1970 to become unemployed, but that once unemployed, he was more likely to be quickly reemployed. Margo also found that personal characteristics of workers in 1910 played a small role in determining whether or not a worker would become unemployed.

By the second half of the twentieth century, unemployment became concentrated among minority workers and among those with the fewest job skills (see Figure Ba-F). Over the period since 1954, when the relevant data first become available, nonwhite males have experienced an average unemployment rate that is 5.4 percentage points higher in any given year than that experienced by white males. The additional unemployment rate burden of nonwhite females is 5.2 percentage points (Table Ba583–596). The racial differential in unemployment is especially large during years of high unemployment overall. Thus, in 1983, just a year after the post–World War II unemployment rate peak of 9.7 percent overall, the racial differential in unemployment was 9.7 percent for males and 9.2 percent for females. Put another way, nonwhites

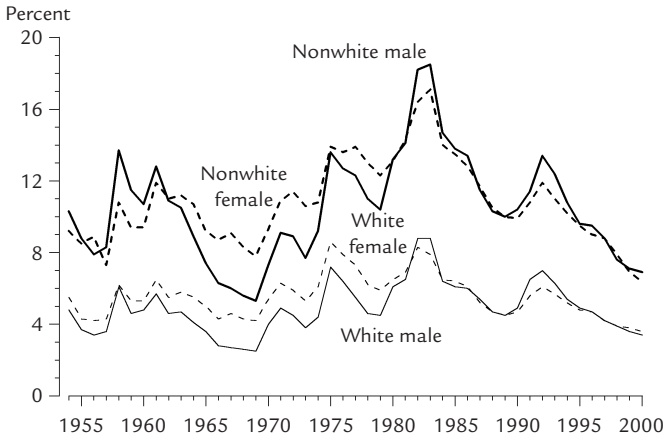

FIGURE Ba-F Unemployment rate, by sex and race: 1954–2000

Sources

Series Ba589–590 and Ba592–593.

experienced unemployment rates that were over twice as high as those of whites during recession years. A comparison of the unemployment rates of males and females of the same race suggests that females' unemployment is more stable across the business cycle than that of males. Economic booms are more effective in reducing male than female unemployment, and economic depressions throw more males than females out of work. This gender difference derives from two sources. One is that men are more likely to be employed in the more cyclically sensitive sectors of the economy, such as construction, transportation, and manufacturing. The other is that men's labor force participation is less sensitive to the business cycle than is women's. This means that in a recession, when men lose their jobs they are likely to remain in the labor force as unemployed persons looking for work. By contrast, when women lose their jobs they are more likely than men to exit the labor force and not be counted as unemployed.

Unemployment duration refers to the length of time a worker who becomes unemployed remains unemployed. Along with the increasingly selective nature of the unemployment experience itself, over the past century the duration of unemployment for those who become unemployed has increased. In the nineteenth century, although workers ran a high risk of unemployment at any particular time, they also stood a good chance of fairly rapid reemployment. In the twentieth century, the average risk of unemployment was lower, but the duration of unemployment was lengthy. For the post–World War II period as a whole, average unemployment duration is 13.0 weeks; for the period since 1975, it is 14.9 weeks (series Ba597). The concentration in the incidence and the lengthening duration of unemployment is attributed to reduced seasonality, growth of firm-specific job skills that give firms the incentive to retain skilled workers during economic downturns, unionization, the development of unemployment insurance, and a shift of employment into relatively stable sectors, such as the professions and services (see Margo 2000, p. 242; Goldin 2000, pp. 591–9).

In addition to factors such as interruptions in the supply of raw materials, seasonal reductions in demand, changes in consumer tastes, or increased market competition that generate unemployment at a particular firm or in a particular industry, macroeconomic factors generate unemployment across many firms and industries simultaneously throughout the economy. A mild rise in overall unemployment is called a contraction or recession; a severe rise is called a depression. Recessions and depressions are

called "macroeconomic" phenomena because they are a product of the interconnected nature of developed market economies. For example, when bad weather interrupts production in a manufacturing plant and its workers become unemployed, those workers typically reduce their own purchases. This may lead to reduced product demand and therefore unemployment in sectors not directly affected by the bad weather. The opposite is true as well. Strong demand for labor in one sector leads to increases in worker income that spill over into increased demand for products and therefore labor throughout the economy. A reduction in unemployment to a previous low is called a recovery; a more sustained reduction in unemployment is called an expansion. The combination of economic contraction and expansion is called a business cycle. For a detailed description of these business cycles, along with a discussion of their causes and consequences, see the essay on economic fluctuations, recessions, and depressions in Chapter Cb. Dates for business cycles beginning in 1790 are given in Tables Cb1–8.

The more highly specialized the economy and the more interdependent its economic actors, the more vulnerable it is to business cycles. One measure of this interdependence is the share of wage and salary workers in the total workforce. For 1800, Lebergott estimates that less than 20 percent of the labor force comprised wage and salary workers; by 1900, this figure had risen to approximately 66 percent; by 2000 it was 93 percent (series Ba981). The rise in the wage and salary share of the labor force is associated with a general increase in the amplitude of unemployment peaks during economic crises in the nineteenth century. Thus, Lebergott (1964, p. 187) estimates unemployment at 3–5 percent of the labor force in the crisis of 1819; 6–8 percent in 1838 and again in 1858; 12–14 percent in 1876; and 6–8 percent in 1885. By far, the worst economic crisis of that century occurred in the 1890s. Carter and Sutch (1992, p. 366) estimate an unemployment rate of approximately 12–14 percent in the peak depression year of 1894 and unemployment rates in excess of 10 percent for the seven-year depression episode running from 1893 through 1899.

Not every downturn was worse than the previous one, but many observers detected a trend toward more violent movements of output and employment over time. Following the financial panic of 1907, Congress created the National Monetary Commission with a mandate to explore strategies for stabilizing the economy. Following the commission's recommendations, Congress in 1913 passed the Federal Reserve Act, which provided for the creation of a central bank to conduct monetary policy and to regulate the workings of the private banking sector. The economy experienced sharp but brief recessions in 1914–1915 and again in 1921–1922. Then, beginning in 1930, unemployment began climbing and reached an unprecedented high of 23 percent by 1932. It was not until 1942, when the economy was mobilized to fight World War II, that unemployment returned to the low levels of the 1920s (Table Ba470–477).

The high Great Depression–era levels of unemployment, together with their unprecedented duration, provoked a political crisis within the United States (and also within many other developed industrial economies that were experiencing similar economic circumstances). In the 1932 presidential election, the Republican incumbent, Herbert Hoover, was defeated by Democrat Franklin D. Roosevelt, who campaigned on the promise of an active role for the federal government in ending the crisis. During his first 100 days in office, Roosevelt sent to Congress a record number of bills designed to give immediate relief to the unemployed, raise the wages of those who remained employed, and indirectly promote employment through programs aimed at reversing deflation and enhancing the profitability of private business establishments. Economic historians generally conclude that these programs worked in the right direction, but that Roosevelt's policies, in particular his fiscal policies, were far too limited to have secured the nation's recovery from such a serious economic depression (see Atack and Passell 1994, pp. 633–46, for an excellent discussion of the debate). In particular, this scholarship cautions against the view that Roosevelt was the first Keynesian. The reference here is to the views of John Maynard Keynes (1935), who argued in *The General Theory of Employment, Interest and Money* that governments should offset reductions in private spending during depressions in order to maintain unemployment at low levels. It was not until America's involvement in World War II that Roosevelt authorized a level of deficit spending that was sufficient to reduce unemployment to its pre–Great Depression level. Nonetheless, the Great Depression left an important legacy regarding the responsibility of the federal government for the health of the economy. This is reflected in the passage of the Employment Act of 1946, which charged the federal government with maintaining the economy at full employment. It is also reflected in the fact that voters in the post–World War II era appear to hold the president responsible for the economic health of the country and regularly refuse to reelect presidents who have experienced a rise in unemployment during their term in office.

The overall success of federal government efforts since World War II to maintain unemployment at low levels is the subject of continuing scholarly debate. David Weir (1992) argues that the postwar economy is significantly more stable than the prewar economy, not only overall but also in every major sector. James and Thomas (2003) conclude that pre-1914 labor markets were more volatile than those of the postwar era, even after they reduce the estimated level of unemployment around 1910. Goldin (2000, pp. 589–91) argues that differences among competing estimates of pre- and postwar employment volatility are not yet fully resolved.

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OCCUPATIONS

Matthew Sobek

Occupations are among the most revealing and valuable pieces of socioeconomic information pertaining to individuals that survive in the historical record. Few types of evidence have been put to as much or as varied use by social scientists. At the level of families and individuals, occupations have been used as indicators of social status, class, and income, among other things. Aggregate occupation statistics for localities, population subgroups, and the nation have likewise been heavily utilized as measures of group economic well-being, social status attainment, labor market structure, and segregation. At the national level, the changing occupational structure can be seen as a manifestation of the socioeconomic opportunities generated by the evolving economy and the distribution of labor and skills demanded. No other single type of evidence provides such a window on the economy and social structure as they intersect at the level of individuals.

The relative ubiquity of historical occupation data is not an accident. Contemporaries have always recognized that the work an individual performs is a singularly important fact about that person. The combined occupations of the population as a whole have long been seen as a measure of the evolution of the economy and the progress of the nation. Francis Amasa Walker – founding president of the American Economic Association and perhaps the most famous superintendent of the U.S. Census – made it clear how much value he placed on the census occupation question: "Whether the industrial or social character of a nation be considered, a true return of the occupations of the people constitutes the most important single feature of the census. . . . The habits of a people, their social tastes and moral standards, would be more truthfully depicted in a complete list of their daily occupations, than ever was done in any book of travels or of history" (U.S. Office of the Census 1872, pp. xxii–xxxiii). Although modern scholars might not wax on similarly, most would acknowledge the unique contributions that occupations have made to research in social and economic history.

Occupation, Industry, and Labor Force Participation

Occupations characterize the type of work performed by a person, such as carpenter, professor, or laborer. In government statistics, occupations are restricted to paid work or unpaid work in a family enterprise that contributes to the production of goods for market. Unpaid domestic labor for one's family does not constitute an occupation (see Folbre 1991). Occupation should be distinguished from industry, which describes the basic activity carried out by the establishment in which a person works (for example, construction or advertising). Industry is concerned with the kinds of goods and services produced, whereas occupation relates to the specific characteristics of the job a person performs, regardless of the product involved. For example, there are bookkeepers (an occupation) in the telecommunications, real estate, and educational industries. Industry and occupation are often confused, and many historical data sources purporting to record occupations very often report industry instead. The two were not always consistently distinguished even in published government statistics (Conk 1978).[1]

Occupation is also conceptually distinct from labor force participation. Labor force participation means working or seeking paid

[1] A series of tables on the industrial breakdown of the working population is also presented in this chapter. The essay, however, maintains its focus on occupations, which pose more complicated questions of measurement and interpretation. In contrast to occupations, the industrial classifications have not changed substantially over time, and their meanings have been little disputed.