
Documentation and methodology

Documentation

The comprehensive portrait presented in this book of changes over time in incomes, taxes, wages, employment, wealth, poverty, and other indicators of economic performance and well-being relies almost exclusively on data in the tables and figures. Consequently, the documentation of our analysis is essentially the documentation of the tables and figures. For each, an abbreviated source notation appears at the bottom, and complete documentation is contained in the Table Notes and Figure Notes found at the back of the book. This system of documentation allows us to omit distracting footnotes and long citations within the text and tables.

The abbreviated source notation at the bottom of each figure and table is intended to inform the reader of the general source of our data and to give due credit to the authors and agencies whose data we are presenting. We have three categories of designations for these abbreviated sources. In instances where we directly reproduce other people's work, we provide an "author/year" reference to the bibliography. Where we present our own computations based on other people's work, the source line reads "Authors' analysis of author (year)." In these instances we have made computations that do not appear in the original work and want to hold the original authors (or agencies) blameless for any errors or interpretations. Our third category is simply "Authors' analysis," which indicates that the data presented are from our original analysis of microdata (such as much of the wage analysis) or our computations from published (usually government) data. We use this source notation when presenting descriptive trends from government income, employment, or other data, since we have made judgments about the appropriate time periods or other matters for the analysis that the source agencies have not made.

Time periods

Economic indicators fluctuate considerably with short-term swings in the business cycle. For example, incomes tend to fall in recessions and rise during expansions. Therefore, economists usually compare business cycle peaks with other peaks and compare troughs with other troughs so as not to mix apples and oranges. In this book, we examine changes between business cycle peaks. The initial year for many tables is 1947, with intermediate years of 1967, 1973, 1979, 1989, and 2000, all of which were business cycle peaks (at least in terms of having low unemployment). We also present data for the latest full year for which data are available (2007, when available) to show the changes over the recent business cycle, which we assume ended in 2007 (at least using annual data).

In some tables, we also separately present trends for the 1995-2000 period in order to highlight the differences between those years and those of the early 1990s (or, more precisely, 1989-95) and the recent business cycle. This departs from the convention of presenting only business-cycle comparisons (e.g., comparing 1979-89 to 1989-2000 trends) or comparisons of recoveries. We depart from the convention because there was a marked shift in a wide variety of trends after 1995, and it is important to understand and explain these trends.

Growth rates and rounding

Since business cycles differ in length, we usually present the annual growth rates in each period rather than the total growth. We also present compound annual growth rates rather than simple annual rates. Compound annual growth rates are just like compound interest on a bank loan: the rate is compounded continuously rather than yearly. In some circumstances, as noted in the tables, we have used log annual growth rates. This is done to permit decompositions. In presenting the data we round the numbers, usually to one decimal place, but we use unrounded data to compute growth rates, percentage shares, and so on. Therefore, it is not always possible to exactly replicate our calculations by using the data in the table. In some circumstances, this leads to an appearance of errors in the tables. For instance, we frequently present shares of the population (or families) at different points in time and compute changes in these shares. Because our computations are based on the “unrounded” data, the change in shares presented in a table may not match the difference in the actual shares. Such rounding errors are always small, however, and never change the conclusions of the analysis.

Adjusting for inflation

In most popular discussions, the Consumer Price Index for All Urban Consumers (CPI-U), often called simply the consumer price index, is used to adjust dollar values for inflation. However, some analysts hold that the CPI-U overstated inflation in the late 1970s and early 1980s by measuring housing costs inappropriately. The methodology for the CPI-U from 1983 onward was revised to address these objections. Other changes were

introduced into the CPI in the mid-1990s but not incorporated into the historical series. Not all agree that these revisions are appropriate. We chose not to use the CPI-U so as to avoid any impression that this report overstates the decline in wages and understates the growth in family incomes over the last few decades.

Instead of the CPI-U, we adjust dollar values for inflation using the CPI-U-RS index. This index uses the new methodology for housing inflation over the entire 1967-2007 period and incorporates the 1990s changes into the historical series (though not before 1978, which makes economic performance in the years after 1978 falsely look better than the earlier years). The CPI-U-RS is now used by the Census Bureau in its presentations of real income data. Because it is not available for years before 1978, we extrapolate the CPI-U-RS back to earlier years based on inflation as measured by the CPI-U.

In our analysis of poverty in Chapter 6, however, we generally use the CPI-U rather than the CPI-U-RS, since Chapter 6 draws heavily from Census Bureau publications that use the CPI-U. Moreover, the net effect of all of the criticisms of the measurement of poverty is that current methods understate poverty. Switching to the CPI-U-RS without incorporating other revisions (i.e., revising the actual poverty standard) would lead to an even greater understatement and would be a very selective intervention to improve the poverty measurement. (A fuller discussion of these issues appears in Chapter 6.)

Household heads

We often categorize families by the age or the race/ethnic group of the “household head,” that is, the person in whose name the home is owned or rented. If the home is owned jointly by a married couple, either spouse may be designated the household head. Every family has a single household head.

Hispanics

Unless specified otherwise, data from published sources employ the Census Bureau’s designation of Hispanic persons. That is, Hispanics are included in racial counts (e.g., with blacks and whites) as well as in a separate category. For instance, in government analyses a white person of Hispanic origin is included both in counts of whites and in counts of Hispanics. In our original analyses, such as the racial/ethnic wage analysis in Chapter 3, we remove Hispanic persons from other racial (white or black) categories; using this technique, the person described above would appear only in counts of Hispanics.

Appendix A

This appendix explains the various adjustments made to the U.S. Census Bureau's March Current Population Survey (CPS) data and the methodology used to prepare the data in the tables discussed on the following pages.

The data source used for our analyses of family incomes and poverty is the March CPS microdata set. Each March, approximately 60,000 households are asked questions about their incomes from a wide variety of sources in the prior year (for example, the income data in the 2007 March CPS refer to 2006). For the national analysis in Chapter 1, we use the data relevant to the year in question.

In order to preserve the confidentiality of respondents, the income variables on the public-use files of the CPS are top-coded, that is, values above a certain level are suppressed. Since income inequality measures are sensitive to changes in the upper reaches of the income scale, this suppression poses a challenge to analysts interested in both the extent of inequality in a given time period and the change in inequality over time. We use an imputation technique, described below, that is commonly used in such cases to estimate the value of top-coded data. Over the course of the 1990s, Census top-coding procedures underwent significant changes, which also must be dealt with to preserve consistency. These methods are discussed below.

For most of the years of data in our study, a relatively small share of the distribution of any one variable is top-coded. For example, in 1989, 0.67% (i.e., two-thirds of the top 1%) of weighted cases are top-coded on the variable "earnings from longest job," meaning actual reported values are given for over 99% of those with positive earnings. Nevertheless, the disproportionate influence of the small group of top-coded cases means their earnings levels cannot be ignored.

Our approach has been to impute the average value above the top-code for the key components of income using the assumption that the tails of these distributions follow

a Pareto distribution. (The Pareto distribution is defined as $c/(x^{a+1})$, where c and a are positive constants that we estimate using the top 20% of the empirical distribution (more precisely, c is a scale parameter assumed known; a is the key parameter for estimation). We apply this technique to three key variables: income from wage and salary (1968-87), earnings from longest job (1988-2000), and income from interest (1968-92). Since the upper tail of empirical income distributions closely follows the general shape of the Pareto, this imputation method is commonly used for dealing with top-coded data (West, undated). The estimate uses the shape of the upper part of the distribution (in our case, the top 20%) to extrapolate to the part that is unobservable due to the top-codes. Intuitively, if the shape of the observable part of the distribution suggests that the tail above the top-code is particularly long, implying a few cases with very high income values, the imputation will return a high mean relative to the case where it appears that the tail above the top-code is rather short.

Polivka (1998), using an uncensored dataset (i.e., without top-codes), shows that the Pareto procedure effectively replicates the mean above the top-code. For example, her analysis of the use of the technique to estimate usual weekly earnings from the earnings files of the CPS yields estimates that are generally within less than 1% of the true mean.

As noted, the Census Bureau has lifted the top-codes over time in order to accommodate the fact that nominal and real wage growth eventually renders the old top-codes too low. For example, the top-coded value for “earnings from longest job” was increased from \$50,000 in 1979 to \$99,999 in 1989. Given the growth of earnings over this period, we did not judge this change (or any others in the income-component variables) to create inconsistencies in the trend comparisons between these two time periods.

However, changes made in the mid- and latter 1990s data did require consistency adjustments. For these years, the Census Bureau both adjusted the top-codes (some were raised, some were lowered; the new top-codes were determined by using whichever value was higher: the top 3% of all reported amounts for the variable, or the top 0.5% of all persons), and used “plug-in” averages above the top-codes for certain variables. “Plug-ins” are group-specific average values taken above the top-code, with the groups defined on the basis of gender, race, and worker status. We found that the Pareto procedure was not feasible with unearned income, given the empirical distributions of these variables, so for March data (survey year) 1996 forward we use the plug-in values. Our tabulations show that, in tandem with the procedure described next regarding earnings, this approach avoids trend inconsistencies.

The most important variable that we adjust (i.e., the adjustment with the largest impact on family income) is “earnings from longest job.” The top-code on this variable was raised sharply in survey year 1994, and this change leads to an upward bias in comparing estimates at or around that year to earlier years. (Note that this bias is attenuated over time as nominal income growth “catches up” to the new top-code, and relatively smaller shares of respondents again fall into that category.) Our procedure for dealing with this was to impose a lower top-code on the earnings data that we grew over time by the rate of inflation, and to calculate Pareto estimates based on these artificial top-codes. We

found that this procedure led to a relatively smooth series across the changes in Census Bureau methodology.

For example, we find that, while our imputed series generates lower incomes among, say, the top 5% of families (because we are imposing a lower top-code) in the mid-1990s, by the end of the 1990s our estimates were only slightly lower than those from the unadjusted Census data. For 2001 forward we do not have any top-code adjustments.

Table 1.2: We decompose the growth of average family income in the following manner (all monetary values are in real terms). We begin with log changes in family income over the relevant time periods—this is the value to be decomposed between annual hours, hourly wages, and other (non-labor) income. For example, in Table 1.2, this equals 14.2% for the lowest fifth over the 1989-2000 period. Family earnings grew 28.3% over this period, and we multiply this value by earnings/income averaged over the two years. For this period, that ratio is 0.505. This result represents the earnings contribution (14.3%) that appears in the table. In order to decompose this value further into the wage and hours shares, we use weights derived from their growth over the period as shown in the table. The hours share, 1989-2000, is thus computed as $(14.4\% / (14.4\% + 13.9\%)) * 14.3\%$, or 7.3%, where 14.4% and 13.9% are the log growth rates of annual hours and annual earnings. The share of income growth attributed to the change in “other” is derived by multiplying its growth over the period by the ratio of other/income, again averaged over the two years (note that for the lowest fifth, this is simply one minus the 0.505 value noted above). It is the nature of this type of log decomposition that if the “other” category is a relatively large share of the total, the decomposition will not perfectly sum to the total, but this is not the case here.

Tables 1.21–1.22: The source for these tables is the March CPS datasets described above. The analysis focuses on married-couple families with children, spouse present, where both spouses were between 25 and 54 years of age. The distributional analysis places 20% of families, not persons, in each fifth.

The annual hours variable in the March data is the product of two variables: weeks worked per year, and usual hours per week. Since allowable values on the latter variable go up to 99, this product can be over 5,000. Such values are clearly outliers, and we decided to exclude cases with annual hours greater than 3,500, which led to the exclusion of between 2% and 5% of cases over the years of our analysis.

For the analysis of income with and without wives earnings in Table 1.22, we create separate quintile cutoffs for the distributions with and without wives’ earnings.

Table 6.10: The methodology for this decomposition is taken from Danziger and Gottschalk (1995, Chapter 5). The change to be explained is the difference in poverty rates between t_0 and t_1 . We first isolate the effect of average income growth by assigning the average growth between the two time periods to all families in t_0 and recalculate the poverty rate (we adjust each family’s poverty line for the increase in the CPI over this period). This procedure holds the demographic composition and the shape of the income distribution constant in t_0 while allowing incomes to grow equally for all

families. Thus, the difference between this simulated poverty rate and the actual t_0 poverty rate is attributable to the growth in average income.

We repeat this exercise for each demographic group in t_0 (we use three family types: married couples, female headed families, and persons living alone (a small residual group of male-headed families is included with married couples, since it was too small to separate out), two races—white and non-white—and three education categories of the family head—less than high school, high school and some college, and college or more). By weighting each of these simulated t_0 rates by their t_1 population shares, we can simulate a t_0 poverty rate that reflects the average income growth and demographic composition of t_1 . The difference between this simulated rate and the one discussed in the above paragraph gives the contribution of demographic change over the time period. Finally, since this second simulated rate incorporates the mean growth and demographic change between the two periods, but not the change in the shape of the distribution, the difference between this second simulated rate and the actual rate for t_1 equals the change in poverty rates attributable to changes in inequality over the two periods.

Appendix B

This appendix provides background information on the analysis of wage data from the Current Population Survey (CPS), which is prepared by the U.S. Census Bureau for the Bureau of Labor Statistics (BLS). Specifically, for 1979 and beyond, we analyze micro-data files provided by the BLS that contain a full year's data on the outgoing rotation groups (ORG) in the CPS. (For years prior to 1979, we use the CPS May files; our use of these files is discussed below.) We believe that the CPS ORG files allow for a timely, up-to-date, and accurate analysis of wage trends keeping within the familiar labor force definitions and concepts employed by BLS.

The sampling framework of the monthly CPS is a “rolling panel,” in which households are in the survey for four consecutive months, out for eight, and then back in for four months. The ORG files provide data on those CPS respondents in either the fourth or eighth month of the CPS (i.e., in groups four or eight, out of a total of eight groups). Therefore, in any given month the ORG file represents a quarter of the CPS sample. For a given year, the ORG file is equivalent to three months of CPSs (one-fourth of 12). For our analysis, we use a sample drawn from the full-year ORG sample, the size of which ranges from 160,000 to 180,000 observations during the 1979 to 1995 period. Due to a decrease in the overall sample size of the CPS, the ORG was shrunk to 145,000 cases from 1996 to 1998, and our current sample comes in at about 170,000 cases.

Changes in annual or weekly earnings can result from changes in hourly earnings or from more working time (either more hours per week or weeks per year). Our analysis is centered around the hourly wage, which represents the pure price of labor (exclusive of benefits), because we are interested in changing pay levels for the workforce and its sub-groups. We do this to be able to clearly distinguish changes in earnings resulting from more (or less) work rather than more (or less) pay. Most of our wage analysis, therefore, does not take into account that weekly or annual earnings may have changed

because of longer or shorter working hours or lesser or greater opportunities for employment. An exception to this is Table 2.1, where we present annual hours, earnings, and hourly weighted wages from the March CPS.

In our view, the ORG files provide a better source of data for wage analysis than the traditionally used March CPS files. In order to calculate hourly wages from the March CPS, analysts must make calculations using three retrospective variables: the annual earnings, weeks worked, and usual weekly hours worked in the year prior to the survey. In contrast, respondents in the ORG are asked a set of questions about hours worked, weekly wages, and (for workers paid by the hour) hourly wages in the week prior to the survey. In this regard, the data from the ORG are likely to be more reliable than data from the March CPS. See Bernstein and Mishel (1997) for a detailed discussion of these differences.

Our sub-sample includes all wage-and-salary workers with valid wage and hour data, whether paid weekly or by the hour. Specifically, in order to be included in our sub-sample, respondents had to meet the following criteria:

- age 18-64;
- employed in the public or private sector (unincorporated self-employed were excluded);
- hours worked within the valid range in the survey (1-99 per week, or hours vary—see discussion below); and,
- either hourly or weekly wages within the valid survey range (top-coding discussed below).

For those who met these criteria, an hourly wage was calculated in the following manner. If a valid hourly wage was reported, that wage was used throughout our analysis. For salaried workers (those who report only a weekly wage), the hourly wage was their weekly wage divided by their hours worked. Outliers, that is, persons with hourly wages below 50 cents or above \$100 in 1989 CPI-U-X1-adjusted dollars, were removed from the analysis. Starting from year 2002, we use CPI-RS-adjusted dollars instead. These yearly upper and lower bounds are presented in **Table B-1**. CPS demographic weights were applied to make the sample nationally representative.

The hourly wage reported by hourly workers in the CPS is net of any overtime, tips, or commissions (OTTC), thus introducing a potential undercount in the hourly wage for workers who regularly receive tips or premium pay. OTTC is included in the usual weekly earnings of hourly workers, which raises the possibility of assigning an imputed hourly wage to hourly workers based on the reported weekly wage and hours worked per week. Conceptually, using this imputed wage is preferable to using the reported hourly wage because it is more inclusive. We have chosen, however, not to use this broader wage measure, because the extra information on OTTC seems unreliable. We compared the imputed hourly wage (reported weekly earnings divided by weekly hours) to the reported hourly wage; the difference presumably reflects OTTC.

TABLE B.1 Wage earner sample, hourly wage upper and lower limits, 1973-2007

Year	Lower	Upper	Year	Lower	Upper
1973	0.19	38.06	1991	0.55	109.84
1974	0.21	41.85	1992	0.57	113.15
1975	0.23	45.32	1993	0.58	116.53
1976	0.24	47.90	1994	0.60	119.52
1977	0.25	50.97	1995	0.61	122.90
1978	0.27	54.44	1996	0.63	126.53
1979	0.30	59.68	1997	0.65	129.54
1980	0.33	66.37	1998	0.66	131.45
1981	0.36	72.66	1999	0.67	134.35
1982	0.39	77.10	2000	0.69	138.87
1983	0.40	80.32	2001	0.71	142.82
1984	0.42	83.79	2002*	0.70	140.05
1985	0.43	86.77	2003*	0.72	143.26
1986	0.44	88.39	2004*	0.74	147.06
1987	0.46	91.61	2005*	0.76	152.10
1988	0.48	95.40	2006*	0.78	156.90
1989	0.50	100.00	2007*	0.81	161.45
1990	0.53	105.40			

* Upper limit adjusted by CPI-RS.

Source: Authors' analysis.

This comparison showed that significant percentages of the hourly workforce appeared to receive negative OTTC. These error rates range from a low of 0% of the hourly workforce in the period 1989-93 to a high of 16-17% in 1973-88, and persist across the survey change from 1993 to 1994. Since negative OTTC is clearly implausible, we rejected this imputed hourly wage series and rely strictly on the hourly rate of pay as reported directly by hourly workers, subject to the sample criteria discussed above.

For tables that show wage percentiles, we “smooth” hourly wages to compensate for “wage clumps” in the wage distributions. This is a standard technique that corrects for the widespread phenomenon of workers reporting their wages as being the closest “round” wage—for example, people making hourly wages of \$6.98 or \$7.03 all reporting wages of \$7.00. The technique involves breaking the hourly wage distribution into 50-cent intervals, starting at 25 cents. To find the smoothed wage associated with a given percentile, we first identify the 50-cent interval within which the percentile falls. We then find (1) what percent of workers make wages within or

TABLE B.2 Pareto-imputed mean values for top-coded weekly earnings, and share top coded, 1973-2007

Year	Share			Value	
	All	Men	Women	Men	Women
1973	0.11%	0.17%	0.02%	\$1,365	\$1,340
1974	0.16	0.26	0.01	1,385	1,297
1975	0.21	0.35	0.02	1,410	1,323
1976	0.30	0.51	0.01	1,392	1,314
1977	0.36	0.59	0.04	1,384	1,309
1978	0.38	0.65	0.02	1,377	1,297
1979	0.57	0.98	0.05	1,388	1,301
1980	0.72	1.23	0.07	1,380	1,287
1981	1.05	1.82	0.10	1,408	1,281
1982	1.45	2.50	0.18	1,430	1,306
1983	1.89	3.27	0.25	1,458	1,307
1984	2.32	3.92	0.42	1,471	1,336
1985	2.78	4.63	0.60	1,490	1,343
1986	0.80	1.37	0.15	2,435	2,466
1987	1.06	1.80	0.20	2,413	2,472
1988	1.30	2.19	0.29	2,410	2,461
1989	0.48	0.84	0.08	2,710	2,506
1990	0.60	1.04	0.11	2,724	2,522
1991	0.71	1.21	0.17	2,744	2,553
1992	0.77	1.28	0.22	2,727	2,581
1993	0.86	1.43	0.24	2,754	2,580
1994	1.25	1.98	0.43	2,882	2,689
1995	1.34	2.16	0.43	2,851	2,660
1996	1.41	2.27	0.46	2,863	2,678
1997	1.71	2.67	0.65	2,908	2,751
1998	0.63	0.98	0.25	4,437	4,155
1999	0.71	1.12	0.21	4,464	4,099
2000	0.83	1.38	0.24	4,502	4,179
2001	0.92	1.46	0.34	4,477	4,227
2002	0.91	1.44	0.33	4,555	4,252
2003	1.07	1.69	0.40	4,546	4,219
2004	1.19	1.90	0.42	4,611	4,195
2005	1.30	2.02	0.51	4,623	4,264
2006	1.49	2.26	0.65	4,636	4,328
2007	1.69	2.55	0.76	4,658	4,325

Source: Authors' analysis.

below that interval, and (2) what percent of workers make wages below that interval. Finally, based on these cumulative percentages, we linearly interpolate the wage value associated with the percentile. For example, suppose that the median (50th percentile) worker reports a wage that falls within the \$9.76-\$10.25 interval. Further suppose that 51% of all workers make wages within that interval or below, and 48% of workers make wages below that interval. To find the hourly wage of the 50th percentile worker, we simply interpolate between \$9.76 and \$10.25, assuming that the 50th percentile worker will fall two-thirds of the way from \$9.76 to \$10.25, (since 50% falls two-thirds of the way from 48% to 51%). In other words, the “smoothed” wage of the median worker is $\$9.76 + (\$10.25 - 9.76) * (50 - 48) / (51 - 48) = \10.09 .

For the survey years 1973-88, the weekly wage is top-coded at \$999.00; an extended top-code value of \$1,923 is available in 1986-97; the top-code value changes to \$2,884.61 in 1998-2005. Particularly for the later years, this truncation of the wage distribution creates a downward bias in the mean wage. We dealt with the top-coding issue by imputing a new weekly wage for top-coded individuals. The imputed value is the Pareto-imputed mean for the upper tail of the weekly earnings distribution, based on the distribution of weekly earnings up to the 80th percentile. This procedure was done for men and women separately. The imputed values for men and women appear in **Table B-2**. A new hourly wage, equal to the new estimated value for weekly earnings, divided by that person’s usual hours per week, was calculated.

In January 1994, a new survey instrument was introduced into the CPS; many labor force items were added and improved. This presents a significant challenge to the researcher who wishes to make comparisons over time. The most careful research on the impact of the survey change has been conducted by BLS researcher Anne Polivka (1996, 1997). Interestingly, Polivka does not find that the survey changes had a major impact on broad measures of unemployment or wage levels, though significant differences did surface for some sub-groups (e.g., weekly earnings for those with less than a high school diploma and those with advanced degrees, the unemployment rate of older workers). However, a change in the reporting of weekly hours did call for the alteration of our methodology. In 1994 the CPS began allowing people to report that their usual hours worked per week vary. In order to include non-hourly workers who report varying hours in our wage analysis, we estimated their usual hours using a regression-based imputation procedure, where we predicted the usual hours of work for “hours vary” cases based on the usual hours worked of persons with similar characteristics. An hourly wage was calculated by dividing weekly earnings by the estimate of hours for these workers. The share of our sample that received such a wage in the 1994-2005 period is presented in **Table B-3**. The reported hourly wage of hourly workers was preserved.

BLS analysts Ilg and Hauzen (2000), following Polivka (1999), do adjust the 10th percentile wage because “changes to the survey in 1994 led to lower reported earnings for relatively low-paid workers, compared with pre-1994 estimates.” We make no such adjustments for both practical and empirical reasons. Practically, the BLS has provided no adjustment factors for hourly wage trends that we can use—Polivka’s work is for weekly wages. More importantly, the trends in 10th percentile hourly

TABLE B.3 Share of wage earners assigned an hourly wage from imputed weekly hours, 1994-2007

Year	Percent hours vary
1994	2.0%
1995	2.1
1996	2.4
1997	2.4
1998	2.5
1999	2.4
2000	2.4
2001	2.5
2002	2.5
2003	2.5
2004	2.7
2005	2.7
2006	2.5
2007	2.4

Source: Authors' analysis.

wages differ from those reported by Ilg and Hauzen for 10th percentile weekly earnings. This is perhaps not surprising, since the composition of earners at the “bottom” will differ when measured by weekly rather than hourly wages, with low-weekly earners being almost exclusively part-timers. Empirically, Ilg and Hauzen show the unadjusted 50/10 wage gap jumping up between 1993 and 1994, when the new survey begins. In contrast, our 50/10 wage gap for hourly wages falls between 1993 and 1994. Thus, the pattern of wage change in their data differs greatly from that in our data. In fact, our review of the 1993-94 trends across all of the deciles shows no discontinuities whatsoever. Consequently, we make no adjustments to account for any effect of the 1994 survey change. Had we made the sort of adjustments suggested by Polivka, our measured fall in the 50/10 wage gap in the 1900s would be even larger and the overall pattern—falling 50/10, rising 90/50, and especially the 95/50 wage gaps—would remain the same.

When a response is not obtained for weekly earnings, or an inconsistency is detected, an “imputed” response is performed by CPS using a “hot deck” method, whereby a response from another sample person with similar demographic and economic characteristics is used for the nonresponse. This procedure for imputing missing wage data appears to introduce artificial differences between union and nonunion members. We restrict our sample to the observations with non-imputed wages only for union wage premium analysis (Table 3.32).

Demographic variables are also used in the analysis. Starting in January 2003, individuals are asked directly if they are Spanish, Hispanic, or Latino. Persons who report they are Hispanic also may select more than one race. For consistency purposes, our race variable comprises four mutually exclusive categories across years:

- white, non-Hispanic;
- black, non-Hispanic;
- Hispanic, any race;
- all others.

In January 2003, the CPS used the 2002 Census Bureau occupational and industry classification systems, which are derived from the 2000 Standard Occupational Classification (SOC) system and the 2002 North American Industry Classification System (NAICS). The new classification system creates breaks in existing data series at all levels of aggregation. Since we have built in “old” and “new” industry and occupation systems in our underline 2000-02 data, we use year 2000 as a break point to create consistent analysis with the “old” code for pre-2000 analysis and the “new” code for post-2000 analysis.

Beginning in 1992, the CPS employed a new coding scheme for education, providing data on the respondent’s highest degree attained. The CPS in earlier years provided data on years of schooling completed. The challenge to make a consistent wage series by education level is to either make the new data consistent with the past or to make the old “years of schooling” data consistent with the new educational-attainment measures. In prior versions of *The State of Working America*, we achieved a consistent series by imputing years of schooling for 1992 and later years, that is, making the “new” consistent with the “old.” In this version, however, we have converted the “old” data to the new coding following Jaeger (1997). However, Jaeger does not separately identify four-year college and “more than college” categories. Since the wages of these sub-groups of the “college or more” group have divergent trends, we construct pre-1992 wages and employment separately for “four-year college” and “advanced.” To do so, we compute wages, wage premiums, and employment separately for those with 16, 17, and 18-plus years of schooling completed. The challenge is to distribute the “17s” to the 16 years (presumably a four-year degree) and 18-plus years (presumably advanced) groups. We do this by using the share of the “17s” that have a terminal four-year college degree, as computed in the February 1990 CPS supplement that provides both education codings: 61.4%. We then assume that 61.4% of all of the “17s” are “college-only” and compute a weighted average of the “16s” and 61.4% of the “17s” to construct “college-only” wages and wage premiums. Correspondingly, we compute a weighted average of 38.6% (or 1 less 61.4%) of the “17s” and the “18s” to construct advanced “wages and wage premiums.” Distributing the “17s” affects each year differently depending on the actual change in the wages and premiums for “17s” and the changing relative size of the “17s” (which varies only slightly from 2.5% of men and women from 1979 to 1991).

We employ these education categories in various tables in Chapter 3, where we present wage trends by education over time. For the data for 1992 and later, we compute the “some college” trends by aggregating those “with some college but no degree beyond high school” and those with an associate or other degree that is not a four-year college degree.



Table Notes

Introduction

- 1 *The major indicators of the 2000s economy from the perspective of working families.* GDP is from U.S. Department of Commerce, BEA (2008). Productivity is from BLS, for nonfarm business. Jobs data are from U.S. Department of Labor, BLS (2008b) data; while unemployment, under-employment, labor force participation and median weekly earnings are from U.S. Department of Labor BLS (2008c) data. Annual hours is an EPI calculation based on CPS March Supplement data (see Appendix A). Median income and poverty is based on the 2008 annual release of U.S. Bureau of the Census income and poverty data.
- 2 *Middle-income growth in the 1990s and 2000s: Earnings and hours.* Authors' analysis of the CPS March Supplement data (see Appendix A). See also Table 1.2, middle fifth.
- 3 *Income growth and income shares of the top 10% of earners.* Analysis of Piketty and Saez (2008) updated from Piketty and Saez (2003) data.
- 4 *Share of income growth by income group.* Based on an analysis of Piketty and Saez (2008) updated from Piketty and Saez (2003) data recomputed using the CPI-U-RS inflation measure for deflating real incomes This analysis identifies the shares of the per household income growth that accrued to each income segment.
- 5 *Economic indicators for African Americans, Hispanics, and all workers.* 1990s represents 1989 to 2000; 2000s is 2000 to 2007.

Chapter 1

- 1.1 *Median family income.* U.S. Census Bureau, Historical Income Tables, Families, Table F-5.
- 1.2 Income growth in the 1990s and 2000s and the roles of earnings, hours, and hourly wages. Authors' analysis of March CPS data; see Appendix A for explanation.
- 1.3 *Median family income by race/ethnic group.* U.S. Census Bureau, Historical Income Tables, Families, Table F-5.
- 1.4 *Full employment, African American family income, unemployment, and inflation.* CBO NAIRU estimates: <http://www.cbo.gov/doc.cfm?index=9706> (see "Key Assumptions in CBO's projections of Potential Output"); Family income, see source re Table 1.3, unemployment and inflation, BLS.
- 1.5 *Median family income by age of householder.* Census homepage, Historical Income Tables, Families, Table F-11.
- 1.6 *Median family income by family type.* Census homepage, Historical Income Tables, Families, Table F-7.
- 1.7 *Shares of family income going to income fifths and to the top 5%.* Census homepage, Historical Income Tables, Families, Table F-2.
- 1.8 *Real family income by income group, 1947-2006, upper limit of each group.* Census homepage, Historical Income Tables, Families, Table F-1.
- 1.9 *Household income shares.* CBO Household Income series: <http://www.cbo.gov/doc.cfm?index=8885>. Data are for all households.
- 1.10 *Effective federal tax rates for all households, by comprehensive household income quintile.* See Table 1.9.
- 1.11 *Effective tax rates for selected federal taxes.* See Table 1.9.
- 1.12 *Federal and state/local revenue as a share of GDP.* See U.S. Department of Commerce, BEA (2008), Tables 3.2 and 3.3.
- 1.13 *Composition of federal and state/local tax revenue, by progressive and regressive components.* See Table 1.12.
- 1.14 *Impact of 2001-06 tax cuts on 2008 income.* Tax Policy Center, T06-0281 (<http://www.taxpolicycenter.org/numbers/displayatabcfrm?Docid=1363&DocTypeD=2>).

- 1.15 *Family income by income categories.* Data provided by U.S. Bureau of the Census.
- 1.16 *The impact in inequality on income shares.* Authors' analysis of ASEC data. See Appendix A.
- 1.17 *Sources of income by income group and distribution of income types.* Based on tabulations from the Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3A) and provided by Peter Orzag.
- 1.18 *Shares of market-based personal income by income type.* From U.S. Department of Commerce, BEA (2008), Table 2.1. Capital gains data are from the Internal Revenue Service Statistics on Income series and include gains as well as losses (see <http://www.irs.gov/taxstats/article/0,,id=175788,00.html>). The capital gains data for 2007 are an estimate based on the growth in CBO forecasts for capital gains from 2006 to 2007 (see <http://www.cbo.gov/ftpdocs/89xx/doc8917/Chapter4.8.1.shtml>, #1069855, Table 4-3).
- 1.19 *Shares of income by type and sector.* Based on U.S. Department of Commerce, BEA (2008), Table 1.13 (available in June 2008). The "corporate and business" sector includes "corporate" and "rest of world." Capital income consists of profits, and net interest. The "government/nonprofit" sector includes the household, non-profits, government enterprise, and general government sectors. The capital income in this sector is the interest and rent earned plus the surplus of government enterprises. The capital and labor income in the corporate sector are not adjusted for the increased presence of 'spread income' or 'realized option income' that is counted as wages but more appropriately should be considered capital income. The data in Table 1.20 do make an adjustment.
- 1.20 *Corporate sector profit rates and shares.* These estimates start with the corporate income from U.S. Department of Commerce, BEA (see note to Table 1.13). Corporate income is corporate profits (with IVA and CCA_{adj}) plus net interest. Compensation is line 10. "After-tax profit rates" account for a tax rate based on the quotient of taxes on corporate income and applied to capital income, as previously defined. Corporate capital data are from the BEA series, the Current-Cost Net Stock of Private Nonresidential Fixed Assets. This is updated to 2007 based on growth in Flow of Funds data on tangible assets. The "capital-output ratio" is corporate capital divided by capital income.

An important adjustment is made to account for the increased presence of 'spread income' or 'realized option income' that is counted as wages but more appropriately should be considered capital income. An estimate of realized option income is subtracted from wages in the corporate sector and added to the capital income in the sector. This income rose to be as high as 2.6% of all

wages in 2000 from 0.0% in 1994. These options, when counted as capital income, raised the estimate of capital income by roughly 15% in 2000 but by only about 6% in 2004. This adjustment relies on estimates of realized option income presented in CBO (2008) and Jaquette et al. (2003). Jaquette (2003) provides estimates of the absolute amount and the wage share for the 1997-2001 period in Tables 1 and 2. CBO (2008) provides estimates of realized option income as a share of wages from 1994 to 2004 in Figure 7. For 1994 the share is zero and our estimates for 1995 and 1996 are based on a straight-line extrapolation from the 1994 and 1997 shares. The 2002 and 2003 shares were provided by Scott Jaquette of CBO. The share for 2004 was set to that of 1997 based on the CBO figure, and it was assumed that this wage share prevailed over the 2005-07 period as well. Based on the estimates of the realized options share of wages in this period, estimates of the absolute amount of realized options (the share times the total NIPA wage bill) were made and used to adjust corporate wage and capital income.

- 1.21 *Annual hours of work, married men and women, 25-54, with children, by income fifth.* Authors' analysis of ASEC data. See Appendix A.
- 1.22 *Real income growth of prime-age, married-couple families with children, and married women's contribution.* Authors' analysis of CPS ASEC data. See Appendix A.

Chapter 2

- 2.1 *Income mobility between quintiles.* Data provided by Greg Acs, from Acs and Zimmerman (2008).
- 2.2 *Intergenerational wealth, parents to children.* See Charles and Hurst (2003).

Chapter 3

- 3.1 *Median wage, compensation growth, and productivity growth in recoveries.* Productivity data are from the BLS and measure output per hour in the non-farm business sector. The wage data are the median hourly wage from Table 3.5 (the sample definition and details of computations of the CPS-ORG wage data are in Appendix B). The wage data are converted to "compensation" using the compensation to wage ratios presented in Table 3.3 and used in Figure 3B.
- 3.2 *Trends in average wages and average hours.* Productivity data are from the BLS and measure output per hour in the non-farm business sector. The wage-level data are based on the authors' tabulations of March CPS files using a

series on annual, weekly, and hourly wages for wage and salary workers (the sample definition in the CPS-ORG wage analysis is used; see Appendix B). The weekly and hourly wage data are “hour weighted,” obtained by dividing annual wages by weeks worked and annual hours worked. The 1967 and 1973 values are derived from unpublished tabulations provided by Kevin Murphy from an update of Murphy and Welch (1989). Their values include self-employment as well as wage and salary workers. The values displayed in this table were bridged from CPS 1979 values using the growth rates in the Murphy and Welch series. Hours of work were derived from differences between annual, weekly, and hourly wage trends.

- 3.3 *Growth of average hourly wages, benefits, and compensation.* The data in the top panel are computed from the U.S. Department of Commerce, Bureau of Economic Analysis (2008) NIPA tables. “Wages and salaries” are calculated by dividing wage and salary accruals (Table 6.3) by hours worked by full-time and part-time employees (Table 6.9). “Total compensation” is the sum of wages and salaries and social insurance. Social insurance is total compensation (Table 6.2) minus the sum of volunteer benefits (sum of health and non-health benefits; see (Table 6.11) and wages and salaries. “Benefits” is the difference between total compensation and wages and salaries. These data were deflated using the NIPA personal consumption expenditure (PCE, chain-weighted) index, with health insurance adjusted by the PCE medical care (chained) index. These data include both public- and private-sector workers.

Employer Costs for Employee Compensation (ECEC) comes from the U.S. Department of Labor, BLS (2008d) data, and provide cost levels for March for private-industry workers, available starting in 1987. We categorize wages and salaries differently than BLS, putting all wage-related items (including paid leave and supplemental pay) into the hourly wage (so that ‘wages’ is comparable to workers’ W-2 earnings). Benefits, in our definition, include only payroll taxes, pensions, insurance, and “other” benefits. The sum of wages and salaries and benefits makes up total compensation. It is important to use the current-weighted series rather than the fixed-weighted series because composition shifts (in the distribution of employment across occupations and industries) have a large effect. Employer costs for insurance are deflated by the medical care component of the CPI-U-RS. All other pay is deflated by the CPI-U-RS for “all items.” Inflation is measured for the first quarter of each year.

- 3.4 *Hourly and weekly earnings of private production and nonsupervisory workers.* From the U.S. Department of Labor, BLS (2008b) Current Establishment Survey data, deflated using CPI-U-RS.
- 3.5 *Wages for all workers by wage percentile.* Based on analysis of CPS wage data described in Appendix B.

- 3.6 *Wages for male workers by wage percentile.* Based on analysis of CPS wage data described in Appendix B.
- 3.7 *Wages for female workers by wage percentile.* Based on analysis of CPS wage data described in Appendix B.
- 3.8 *Distribution of employment by wage level and race category, All and White.* Based on analysis of CPS wage data described in Appendix B. The poverty-level wage is calculated using the preliminary estimate of the four-person weighted average poverty threshold in 2007 divided by 2,080 hours which is 10.20. This figure is deflated by CPI-U-RS to obtain the poverty-level wage levels for other years. The threshold is available at the Census Web site. We calculated more intervals than we show but aggregated for simplicity of presentation (no trends were lost). The data are for non-Hispanic whites.
- 3.9 *Distribution of employment by wage level and race category, black and Hispanic.* See note to Table 3.8.
- 3.10 *Changes in the distribution and level of wage and salaries.* Data taken from Kopczuk, Saez, and Song (2007), Table A-3. Data for 2006 extrapolated from 2004 data using growth rates from Social Security Administration (SSA) wage statistics (<http://www.ssa.gov/OACT/COLA/awidevelop.html>). SSA provides data on share of total wages and employment in annual wage brackets such as for those earning between \$95,000.00 and \$99,999.99. We employ the midpoint of the bracket to compute total wage income in each bracket and sum all brackets. Our estimate of total wage income was 99.1% of the actual. We used interpolation to derive cutoffs building from the bottom up to obtain the 0-90% bracket and then estimating the remaining categories. This allowed us to estimate the wage shares for upper wage groups. To obtain absolute wage trends we used the SSA data on the total wage pool and employment and computed the real wage per worker (based on their share of wages and employment) in the different groups in \$2007.
- 3.11 *Growth of specific fringe benefits.* Based on ECEC data described in note to Table 3.3.
- 3.12 *Change in private-sector employer-provided health insurance coverage.* Based on tabulations of March CPS data samples of private wage-and-salary earners ages 18-64 who worked at least 20 hours per week and 26 weeks per year. Coverage is defined as being included in an employer-provided plan where the employer paid for at least some of the coverage.
- 3.13 *Change in private-sector employer-provided pension coverage.* These data are from the March CPS on pension coverage using the sample described in the note to Table 3.12.

- 3.14 *Dimensions of wage inequality.* All of the data are based on analyses of the CPS ORG data described in Appendix B. The measures of “total wage inequality” are natural logs of wage ratios (multiplied by 100) computed from Tables 3.6 and 3.7. The exception is that the 1979 data for women are 1978-80 averages. This was done to smooth the volatility of the series, especially at the 10th percentile. The “between group inequalities” are computed from regressions of the log of hourly wages on education categorical variables (high school omitted), experience as a quartic, marital status, race, and region (4). The college/high school and high school/less-than-high-school premiums are simply the coefficient on “college” and “less than high school” (expressed as the advantage of “high school” over “less than high school” wages). The experience differentials are the differences in the value of age (calculated from the coefficients of the quartic specification) evaluated at 25, 35, and 50 years. “Within-group wage inequality” is measured as the root mean square error from the same log wage regressions used to compute age and education differentials.
- 3.15 *Real hourly wage for all by education.* Based on tabulations of CPS wage data described in Appendix B. See Appendix B for details on how a consistent measure of education was developed to bridge the change in coding in 1992.
- 3.16 *Real hourly wage for men by education.* See note to Table 3.15.
- 3.17 *Real hourly wage for women by education.* See note to Table 3.15.
- 3.18 *Educational attainment of workforce employment.* Based on analysis of CPS wage earners. The data are described in Appendix B. The categories are as follows: “less than high school” is grade 1-12 or no diploma; “high school/GED” is high school graduate diploma or equivalent; “some college” is some college but no degree; “associate college” is occupational or academic associate’s degree; “college B.A.” is a bachelor’s degree; and “advanced degree” is a master’s, professional, or doctorate degree.
- 3.19 *Hourly wages of entry-level and experienced workers by education.* Based on analysis of CPS wage data described in Appendix B.
- 3.20 *Hourly wages by decile within education groups.* Based on analysis of CPS wage data described in Appendix B.
- 3.21 *Decomposition of total and within-group wage inequality.* Data are from the CPS ORG sample described in Appendix B. “Overall wage inequality” is measured as the standard deviation of log wages. “Within-group wage inequality” is the mean square error from log wage regressions (the same ones used for Table 3.14). “Between-group wage inequality” is the difference between the overall and within-group wage inequalities and reflects changes

in all of the included variables: education, age, marital status, race, ethnicity, and region.

- 3.22 *Hourly wage growth by gender, race/ethnicity.* Based on analysis of CPS wage data described in Appendix B.
- 3.23 *The gender wage ratio.* Wages and ratio are based on 50th percentile from Tables 3.6 and 3.7, CPS ORG data.
- 3.24 *Impact of rising and falling unemployment on wage levels and wage ratios.* The unemployment rate is from BLS (2008c). Wage data are based on analysis of quarterly CPS wage data (see Appendix B). The “simulated effect of change on unemployment” was calculated by regressing the log of nominal wages on lagged wages, unemployment, productivity growth, and seasonal dummies for each included percentile, by gender. Using these models, wages were predicted given a simulated unemployment rate series where in one case the unemployment rate maintained its 1979 level through the third quarter of 1987 (preventing its actual increase), and in the other case maintained its 1995 level through the fourth quarter of 2000 (preventing its actual decrease). “Unemployment contribution to change” shows the wage simulated by the model in the final quarter of the simulation period compared to the actual wage.
- 3.25 *Employment growth by sector.* Employment levels by industry are from the U.S. Department of Labor, BLS (2008b) Current Employment Statistics. Compensation by industry is from the U.S. Department of Labor, BLS (2008d) Employer Costs for Employee Compensation (ECEC) series for March 2005, Table 10 for private-sector workers. Compensation for certain industries is based on U.S. Department of Commerce, BEA (2008) NIPA data for compensation per full-time equivalent worker. College intensity by industry is computed from the CPS ORG data described in Appendix B.
- 3.26 *Annual pay of expanding and contracting industries.* These data reflect the average (annual) wages, benefits, and compensation of the net new employment in each period based on changes in industry composition. The employment data are payroll counts from the U.S. Department of Labor, BLS (2008b) establishment survey and the pay data are from U.S. Department of Commerce, BEA (2008) NIPA data (calculated per payroll employee). The pay of the net new employment is a weighted average of the pay by industry where the weights are the changes in each industry’s employment share over the time period.
- 3.27 *Effect of trade on composition of employment by education level.* Bivens (2008).

- 3.28 *Estimated relative wage impact of trade based on Krugman CGE Model.* Based on Bivens' (2008) re-analysis of Krugman (1995).
- 3.29 *Characteristics of offshorable jobs.* Authors' analysis of data of Blinder (2007), matching Blinder's occupational codes to the BLS, Occupational Employment Statistics (OES) survey <<http://www.bls.gov/oes/>>. See Bernstein, Lin, and Mishel (2007) for details.
- 3.30 *Share of Mexican and other immigrants in workforce.* Data from Figure 1 in Borjas and Katz (2005) and authors' computations of the Current Population Survey for 2000 and 2007.
- 3.31 *Percent distribution of educational attainment of immigrants.* From Table 2 in Borjas and Katz (2005) and authors' computations of the Current Population Survey for 2000 and 2007.
- 3.32 *Union wage premium by demographic group.* "Percent union" is tabulated from CPS ORG data (see Appendix B) and includes all those covered by unions. "Union premium" values are the coefficients on union in a model of log hourly wages with controls for education, experience as a quartic, marital status, region, industry (12) and occupation (9), and race/ethnicity, and gender where appropriate. For this analysis we only use observations that do not have imputed wages. This is because the imputation process does not take union status into account and therefore biases the union premium toward zero. See Mishel and Walters (2003).
- 3.33 *Union premiums for health, retirement, and paid leave.* Based on Table 4 in Mishel and Walters (2003), which draws on Buchmueller, DiNardo, and Valletta (2001).
- 3.34 *Union impact on paid leave, pension, and health benefits.* Based on Table 3 in Mishel and Walters (2003), which draws on Pierce (1999), Tables 4, 5, and 6.
- 3.35 *Effect of declining union power on male wage differentials.* This analysis replicates, updates, and expands on Freeman (1991), Table 2. The analysis uses the CPS ORG sample used in other analyses (see Appendix B). The year 1978, rather than 1979, is the earliest year analyzed because we have no union membership data in our 1979 sample. The "union wage premium" for a group is based on the coefficient on collective bargaining coverage in a regression of hourly wages on a simple human capital model (the same one used for estimating education differentials, as described in note to Table 3.14), with major industry (12) and occupation (9) controls in a sample for that group. The change in union premium across years, therefore, holds industry and occupation composition constant. "Percent union" is the share covered by collective bargaining. Freeman's analysis assumed the union

premium was unchanged over time. We allow the union premium to differ across years so changes in the union effect are driven by changes in the unionization rate and the union wage premium. The analysis compares the change in the union effect on relative wages to the actual change in relative wages (regression-adjusted with simple human capital controls plus controls for other education or occupation groups).

- 3.36 *Union wage premium for subgroups.* Builds on Mishel and Walters (2003), Table 2.3A and Gundersen (2003), Table 5.1 and Appendix C. Premium estimates by fifth are from: Schmitt (2008); Card, Lemieux, and Riddle (2002); and Gittleman and Pierce (2007). Union coverage by fifth is from Schmitt (2008).
- 3.37 *Impact of unions on average wages of high school graduates.* Based on Table 5 in Mishel and Walters (2003).
- 3.38 *Value of the minimum wage.* Historical values of minimum wage from Shapiro (1987) and authors' updates. Deflated using CPI-U-RS.
- 3.39 *Characteristics of workers affected by potential federal minimum wage increase to \$7.25 by 2009.* See Table 1 in Minimum Wage Issue Guide at <http://www.epi.org/content.cfm/issueguides_minwage>.
- 3.40 *Changes in the college wage premium and the supply and demand for college educated workers.* See Goldin and Katz (2008), Table 1. The authors used the original data to break out the most recent period, 2000-05.
- 3.41 *Executive annual pay.* The 1992-2005 data are from a *Wall Street Journal*/William M. Mercer survey (of 350 large industrial and service companies) of CEO compensation. "Realized direct compensation" includes salary, bonus, gains from options exercised, value of restricted stock at grant, and other long-term incentive award payments. These data were made available by the Mercer Company and the data from 1994 onwards are in a report for the Business Roundtable by Cook (2006). The average compensation for 1989 is backed out of the 1995 data by extrapolating the 1989-95 trend in the Pearl Meyer/*Wall Street Journal* data for that period.

The bigger challenge is how to update the series between 2005 and 2007 because of two shifts. One is that the definitions of executive pay provided in proxy statements changed in 2006 making comparability to 2005 problematic. The biggest change in 2006 is that CEO pay, total direct compensation (TDC), included the value of all long-term incentives granted during 2006; the prior proxy definition of CEO pay by contrast included all unvested stock and option awards, including long-term incentives granted in previous years, not just in 2006. The second shift is that the *Wall Street Journal* used a new firm, the Hay Group, to produce its 2007 executive pay data and the survey sample shifted: Mercer used the first 350 companies with annual revenues in excess of \$1 billion

that reported proxy statements for the last fiscal year while the Hay Group selects only the first 200 companies with annual revenues in excess of \$5 billion.

To carry forward the 2005 data to 2006 we relied on the Mercer calculations of the growth of CEO pay in their survey of 2006 compensation (which extrapolates forward the pay levels of those in the Mercer sample of 350 large firms). We went to the published data for all 350 companies <http://online.wsj.com/public/resources/documents/Execpay_ceocomp07.pdf>. There, each CEO's TDC was reported, as well as his or her percent change from the comparable 2005 TDC. This percent change reflects the growth rate of each executive's TDC from the previous year *under the 2006 definition of TDC*, and is therefore an "apples-to-apples" growth rate. The cost of obtaining a consistent definition is that the sample is not all CEOs but those who continued employment from 2005 into 2006.

To link 2006 levels to 2007 levels we used the changes in compensation in the Hay Group survey. In order to get trend data for the Hay study, we asked Steven Sabow, previously of Mercer, to do a data run for us. Though Hay Group only had data for realized TDC in 2007, it had expected TDC in both 2006 and in 2007. He was able to run this data on expected TDC for us in those two years, and so we now have data on the growth of expected TDC from 2006-07. (Expected TDC is the sum of salary + bonus + expected long-term incentive payments, e.g., value of payments at date of grant. Realized TDC is the sum of salary + bonus + realized long-term incentive payments, e.g., vested value of payments.)

- 3.42 *CEO pay in advanced countries.* Total CEO compensation in dollars and the ratio of CEO to production-worker pay are from Towers Perrin (1988, 2003, and 2005). The table uses unweighted average for non-U.S. countries. These data are from a different sample (smaller firms) as the data in Table 3.41 and therefore the U.S. data differ.
- 3.43 *Effect of changing occupational composition on wages and education.* This is a shift-share analysis based on the changes in the employment shares of 754 occupations, and their skill and education levels, according to the most recent BLS projections, in Dohm and Shniper (2007). The education intensities, training requirements, and median annual wage for each occupation are available at <<ftp://ftp.bls.gov/pub/special.requests/ep/OPTDData/>>.

Chapter 4

- 4.1 *Labor force share and unemployment rate by age category.* Authors' analysis of U.S. Department of Labor, BLS (2008c) data at official business cycle peaks and the fourth quarter of 2007.

- 4.2 *Unemployment rates.* Data are from U.S. Department of Labor, BLS (2008c), Table A-1.
- 4.3 *Percentage-point change in unemployment rates between business cycle peaks.* Monthly unemployment data are from BLS (2008c).
- 4.4 *Unemployment rates by gender, race, and educational status.* Data are taken from BLS (2008c), for persons 25 years and older.
- 4.5 *Shares of unemployment and long-term unemployment.* Occupational categories represent only those who reported a civilian occupation. Race/ethnicity shares are calculated using white, black, and Hispanic workers only.
- 4.6 *Underemployment.* Data is taken from BLS (2008c), Table A-12. Regarding involuntary part-time, see also note to Figure 4T.
- 4.7 *Nonstandard workers in the U.S. workforce.* Nonstandard work refers to any work arrangement other than employment in a full-time, full-year wage and salary job. From Ditsler and Fisher (2006), based on analysis of the 2005 Contingent Work Supplement from the February CPS.
- 4.8 *Average years of job tenure by age, gender, and education.* Analysis of Farber (2007), based on data provided to EPI by the author.
- 4.9 *Share of employed workers in long-term jobs by age, gender, and education.* See note to Table 4.8.

Chapter 5

- 5.1 *Distribution of income and wealth.* Unpublished analysis of Survey of Consumer Finances (SCF) data prepared in April 2006 by Edward Wolff for the Economic Policy Institute. Data from the 2007 SCF were not available at the time of this writing.
- 5.2 *Changes in the distribution of wealth.* See note to Table 5.1.
- 5.3 *Changes in average wealth by wealth class.* See note to Table 5.1.
- 5.4 *Households with low net worth.* See note to Table 5.1.
- 5.5 *Wealth by race.* See note to Table 5.1.
- 5.6 *Distribution of asset ownership across households.* Assets considered here are liquid and semi-liquid assets including mutual funds, trusts, retirement, and pensions. It does not include assets such as vehicles, primary residence, or other real estate investments. Also see note to Table 5.1.

- 5.7 *Share of households owning stock.* See note to Table 5.1.
- 5.8 *Average household assets and liabilities by wealth class.* See note to Table 5.1.
- 5.9 *Concentration of stock ownership by income level.* See note to Table 5.1.
- 5.10 *Home ownership rates by race and income.* *Home ownership by race* is the authors' analysis of U.S. Department of Commerce, Bureau of the Census (2008a), Table 20, Homeownership Rates by Race and Ethnicity of Householder from 1994 on. Data prior to 1994 are taken from CPS March Supplement, provided by the Bureau of the Census upon request. "Black" refers to non-Hispanic blacks, "White" refers to non-Hispanic whites, and "Hispanic" refers to Hispanics of any race. *Homeownership by income* is the authors' analysis of the U.S. Department of Commerce, Bureau of the Census (2005), published every two years.
- 5.11 *Retirement income inadequacy.* See note to Table 5.1.
- 5.12 *Household debt by type.* Disposable personal income is personal income less tax and like tax payments. Personal taxes include income, estate and gift, and personal property taxes and motor vehicle licenses. Like-tax payments include passport fees, fines and forfeitures, and donations. Data are taken from Federal Reserve Board (2008a), B.100 Balance Sheet of Households and Nonprofit Organizations via Data Download, Z.1 Statistical Release for March 6, 2008. Data for home equity loans are taken from Table L.218 and is unavailable prior to 1990.
- 5.13 *Financial obligations ratio.* Data refer to annual averages from the Federal Reserve Board (2008b), Household Debt Service and Financial Obligations Ratios. Per the FRB: the *financial obligations ratio (FOR)* adds automobile lease payments, rental payments on tenant-occupied property, homeowners' insurance, and property tax payments to the debt service ratio (an estimate of the ratio of debt payments on outstanding mortgage and consumer debt, to disposable personal income. See note to Table 5.12 for disposable personal income definition). The *homeowner mortgage FOR* includes payments on mortgage debt, homeowners' insurance, and property taxes, while the *homeowner consumer FOR* includes payments on consumer debt and automobile leases.
- 5.14 *Household debt service as a share of household income, by income percentile.* Data are taken from Bucks, Kennickell, Moore (2006), Table 14, p.34.
- 5.15 *Share of households with high debt burdens, by income percentile.* Data are taken from Bucks, Kennickell, Moore (2006), Table 14, p.35.

- 5.16 *Share of households late paying bills, by income percentile.* See note to Table 5.14.

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- 6.1 *Percent and number of persons in poverty and twice poverty.* See U.S. Census Bureau, Historical Poverty Income Tables, Persons, Table 2.
- 6.2 *Persons in poverty, by race/ethnicity.* See U.S. Census Bureau, Historical Poverty Income Tables, Persons, Table 3.
- 6.3 *Percent of children in poverty, by race.* See U.S. Census Bureau, Historical Poverty Income Tables, Persons, Table 3.
- 6.4 *Family poverty, by race/ethnicity of family head and for different family types.* See U.S. Census Bureau, Historical Poverty Income Tables, Families, Table 4.
- 6.5 *Average poverty gap.* Unpublished time series provided by the U.S. Census Bureau. Annual updates are available online (http://pubdb3.census.gov/macro/032007/pov/new28_001_01.htm).
- 6.6 *Poverty by nativity.* See U.S. Census Bureau, Historical Poverty Income Tables, Persons, Table 23.
- 6.7 *Official and alternative poverty thresholds for a family of four.* Official thresholds can be found online (<http://www.census.gov/hhes/www/poverty/threshld.html>). For alternative thresholds, see Garner and Short (2008).
- 6.8 *Official and alternative poverty rates, by demographics.* For official poverty rates see note to Table 6.1. For alternative poverty rates, see Garner and Short (2008).
- 6.9 *Changes in poverty rates and various correlates.* For “poverty rates” see note to Table 6.1; for “productivity” see BLS, measures of output per hour in the non-farm business sector; for “per capita income” see U.S. Department of Commerce, BEA (2008), NIPA Table 2.1; for “unemployment” see BLS; for “Inequality” see U.S. Bureau of the Census, Historical Income Tables, Families, Table F-4, and note to Figure 1I; and for “low-wage growth” see authors’ analysis of CPS ORG hourly wages as described in Appendix B.
- 6.10 *The impact of economic, demographic, and education changes on poverty rates.* See Appendix A. Method based on Danziger and Gottschalk (1996).

- 6.11 *The effects of work supports on family resources and expenses, assuming full receipt.* See Cauthen (2007), Table 2.
- 6.12 *Characteristics of low-wage workers.* Authors' analysis of CPS ORG data; see Appendix B.

Chapter 7

- 7.1 *Employer-provided health insurance, population under 65 years old.* Authors' analysis of the March Current Population Survey, 2001-07. Taken from Gould (2007a), Table 3, "Employer-provided health insurance, population under 65 years old, 2000-06" and updated to 2007.
- 7.2 *Life expectancy (in years) by socioeconomic deprivation groups.* Authors' analysis of Singhl and Siahpush (2006), "Table 3, Number of deaths and life expectancy at birth (in years) by sex and socioeconomic deprivation groups, U.S., 1980-2000," based on data from the U.S. National Vital Statistics System, 1980-2000.
- 7.3 *Percent of persons with total family out-of-pocket burdens by insurance and poverty status.* Total burden includes out-of-pocket premiums for private expenditures on health care services, for persons under age 65. Data were calculated using Medical Expenditure Panel Surveys (MEPS) data.

Chapter 8

- 8.1 *Per capita income using PPPs.* GDP is converted to 2007 dollars and based on PPP exchange rates of 2005, per the Conference Board and Groningen Growth and Development Centre (2008).
- 8.2 *Productivity levels and growth.* Productivity refers to GDP per hour worked. See notes to Table 8.1.
- 8.3 *Employment rates.* Data for 1979-2000 are taken from the OECD (2007d) <<http://dx.doi.org/10.1787/172580205657>>. Data for 2006 are taken from OECD (2007c) <<http://dx.doi.org/10.1787/024835322607>>, in which data for Germany and France are estimated by applying changes between 2005 and 2006 from the European Labor Force Survey, to national estimates for 2005. Employment rates refer to persons aged 15 to 64 (16 to 64 in Norway, Sweden, Spain, and the UK) who are in employment, divided by the working-age population.

- 8.4 *Average annual hours worked.* See OECD.stat (Labor-Labor Force Statistics) and OECD (2007c) <<http://dx.doi.org/10.1787/025031458255>>, Table F, page 263 for 1979 and 2006, “Average annual hours actually worked per person in employment.” This accounts for hours worked over the year divided by the average number of people in part-time and full-time employment. Hours worked data in Greece and Switzerland were unavailable for 2006 at the time of publication.
- 8.5 *Decomposition of per capita income.* For sources, refer to Table 8.1 for per capita income, Table 8.2 for productivity, and Table 8.4 for hours worked. Employment-to-population ratio is calculated from OECD (2008), where latest available data are substituted for the following countries: Australia (2003), Japan (2005), and Canada (2005). See also OECD.stat (Annual National Accounts-Main Aggregates).
- 8.6 *Work and leave policies.* Average Annual Weeks Worked is taken from the OECD (2007e) calculations of individual countries’ surveys including European Union Labor Force Survey (EULFS), Statistics Canada Labor Force Survey, the Australia Labor Force Survey, and the Current Population Survey (CPS) for the United States. Data for statutory minimum vacation days and public holidays assume a five-day workweek. Note that the European Union’s Working Time Directive (1993, 93/104/EC) requires a paid leave floor of four weeks, or 20 days per year, for all EU member countries.
- 8.7 *Work and family policies.* Maternity data for all countries except Australia and the UK are taken from OECD (2007f). Data for Australia were taken from the UN Statistics Division, Statistics and Indicators on Women and Men (2005b) and United Nations (2005a). Data for the UK were updated to 2005 legislation that went into effect April of 2007; see UK’s Department for Work and Pensions <http://www.dwp.gov.uk/lifeevent/benefits/statutory_maternity_pay.asp#what> and the International Social Security Association (2006). Child care data are extracted from the OECD Family Database (variable PF10.2) and attributed to: OECD Social Expenditure Database 1980-2003. Note: The International Labor Organization Maternity Protection Convention (2000) stipulates the period of leave to be at least 14 weeks.
- 8.8 *Employment rates by gender.* Data for 1979-2000 is taken from OECD (2007d). Data for 2006 is taken from OECD (2007c). See note to Table 8.3 for country notes.
- 8.9 *Employment growth.* Employment refers to civilian employment based on Annual Labor Force Statistics (ALFS), accessible through OECD.stat. Note: U.S. employment data of the ALFS is based averages of the Current Population Survey, released monthly.

- 8.10 *Standardized unemployment rates.* Standardized unemployment rates refer to the percentage of unemployed persons as a percent of the civilian labor force. Data for 1979 and 1989 are based on OECD.stat (Main Economic Indicators, Comparative Subject Tables Release 12). Data for 2000 and 2006 are taken from the OECD (2007c). < <http://dx.doi.org/10.1787/024830722817> >
- 8.11 *Unemployment rates by education level.* See OECD (2007b): Unemployment rates and educational attainment by gender in 2005. This was published in November of 2007 as a revision of OECD (2007c).
- 8.12 *Real compensation growth per year.* “Labor compensation per hour” in national currency for the total economy taken from OECD (2007h) in OECD.stat (Unit Labor Costs-Annual Indicators) and converted to real currency using the Price Index provided for each country, prior to calculating growth rates. Countries are limited due to available data.
- 8.13 *Relative hourly compensation of manufacturing production workers.* Percent of Civilian Labor Force in Manufacturing is taken from the U.S. Department of Labor, BLS (2008), Comparative Civilian Labor Force Statistics, Ten Countries, 1960-2006, Table 7: Percent Distribution of Civilian Employment Approximating U.S. Concepts by Economic Sector. According to BLS approximations, production workers make up about 60% to 80% of the total manufacturing workforce in the United States. Index of compensation using market exchange rates is taken directly from U.S. Department of Labor, BLS (2008), International Comparisons of Hourly Compensation Costs for Production Workers in Manufacturing, Supplementary Tables, Table 1, “Indexes of hourly compensation costs in U.S. dollars.” Index of hourly compensation in U.S. dollars using PPPs is based on Table 2, “Hourly compensation costs in U.S. dollars,” converted using purchasing-power parities for GDP taken from OECD (2008), extracted from OECD.stat (Annual National Accounts-Main Aggregates-PPPs & Exchange Rates).
- 8.14 *Annual growth in real hourly compensation of manufacturing production workers.* All data are from the BLS (2008), adjusted to real 2006 dollars. See International Comparisons of Hourly Compensation Costs for Production Workers, Supplementary Tables, 1975-2006, Table 2, “Production Workers: Hourly compensation costs in U.S. dollars in manufacturing, 34 countries or areas and selected economic groups 1975-2006.”
- 8.15 *Household income inequality.* Gini coefficients are taken from the CIA Factbook (see Table 8.16b: where Australia is 2006), with the exception of the United States, which was only available for the year 2007. Thus, for comparative purposes, the Gini Coefficient for the United States is taken from the Luxembourg Income Study for the year 2004. 90-10 ratios are based on OECD (2005). Also see notes to Figure 8C.

8.16 *Poverty rates.* From LIS (retrieved 2006), “Relative Poverty Rates for the Total Population, Children and the Elderly.” Data are unavailable for Japan, Greece, and New Zealand. All data are for 2000 except for Switzerland (2002), Netherlands, Poland, and the UK (1999), Denmark (1997), and Australia and France (1994).

Figure Notes

Introduction

- A *Job growth: 2000s cycle versus average of past cycles.* Based on BLS (2008b) data according to NBER business cycle peaks. See also Figure 4B (months to gain peak level employment) and Figure 4C (employment growth).
- B *Jobs and joblessness.* Taken from U.S. Department of Labor, BLS (2008b) for jobs data, and BLS (2008c) for unemployment and underemployment data.
- C *Real paychecks falling in the downturn.* Hourly and weekly earnings are from BLS (2008b) for non-supervisory production workers. Wages and benefits are taken from BLS (2008d), Employer Costs for Employer Compensation (ECEC) data.
- D *Change in average real family income following peak years, by selected income fifths.* Authors' analysis of U.S. Census Bureau, Historical Income Tables, Families, Table F-3.
- E *Forecasted real family income losses given rising unemployment.* Based on Goldman Sachs projected unemployment of 2008 (5.7%) and 2009 (6.4%), for each income quintile (see annual Census income data, Historical Income Table F3) in 2007 dollars. Elasticities, which correspond to each quintile, are from Timothy Bartik (2002) <www.upjohninst.org>.
- F *Growth in annual earnings by wage group.* See note for Table 3.10.
- G *Ratio of wages of highest earners to those of bottom 90%.* See note for Table 3.10.

- H *Productivity and compensation*: Four recoveries. See Figure 3O.
- I *How likely is it that a son of a low-wage father will attain higher earnings?* See Figure 2C. Based on unpublished data provided by Gary Solon.
- J *College completion by income status and test scores*. See also Figure 2N, accompanied by further analysis.
- K *Intergenerational correlations, father and son, U.S. and Europe*. See also Figure 2H, accompanied by further analysis.

Chapter 1

- 1A Real median family income. See note to Table 1.1.
- 1B Years for median family income to regain prior peak. Authors' analysis of data used for Table 1.1.
- 1C Change in average real family income following peak years, by selected income quintiles. Authors' analysis of U.S. Census Bureau, Historical Income Tables, Families, Table F-3.
- 1D Forecasted real income losses given predicted unemployment. Authors' analysis of data used for Table 1.2. Elasticities are from Bartik (2001).
- 1E Ratio of black and Hispanic to white median family income. See note to Table 1.3.
- 1F *Income growth for middle-income immigrant and non-immigrant families*. Authors' analysis of CPS ASEC data. See Appendix A. Values are for average of middle fifth.
- 1G *Productivity and real median family income growth*. See note to Table 1.1 for income data. See BLS for Productivity (pertaining to nonfarm business).
- 1H Real family income growth by quintile. Authors' analysis of U.S. Census Bureau, Historical Income Tables, Families, Table F-3. 1947 value is unpublished and was provided by the Census.
- 1I Ratio of family income of top 5% to lowest 20%. Authors' analysis of U.S. Census Bureau, Historical Income Tables, Families, Table F-3.
- 1J *Low-, middle-, and high-income growth*. Authors' analysis of U.S. Census Bureau, Historical Income Tables, Families, Table F-1.
- 1K Share of income held by top 1%, 1913-2006. Piketty and Saez (2003), updated to 2006 (available at <http://elsa.berkeley.edu/~saez/>).

- 1L *Income share (investment and labor income), top 0.1%*. See note to Figure 1K.
- 1M *Share of household income, bottom 99.5%*. See note to Figure 1K.
- 1N *Household income growth by income group, pre- and post-tax*. See note to Table 1.9.
- 1O *Change in income shares, pre- and post-tax*. See note to Table 1.9.
- 1P *Real expenditures by income fifth*. BLS data from Consumer Expenditure Survey on expenditures by income class, available at <http://data.bls.gov/PDQ/outside.jsp?survey=cx>.
- 1Q *Increase in consumption inequality*. See Attanasio et al. (2006).
- 1R *Consumption inequality among children*. See Johnson et al. (2005).
- 1S *Inequality and income shares*. Authors' analysis of CPS ASEC data. See Appendix A.
- 1T *Share of capital income received by income groups*. This is based on Congressional Budget Office data presented in the Share of Corporate Income Tax Liabilities section of Table 1B, Shares of Federal Tax Liabilities for All Households, by Comprehensive Household Income Quintile, 1979-2005. These data reflect shares of capital income by income group. These do not sum to 100% (because those with negative incomes are left out of the bottom decile), omitting about 2%. Therefore, the data were rescaled to 100%. These data were developed by CBO for "Historical Effective Federal Tax Rates: 1979 to 2005" (December 2007) and are available in the accompanying workbook at <http://www.cbo.gov/doc.cfm?index=8885>.
- 1U *Capital shares in the corporate sector*. See annual data developed for Table 1.20.
- 1V *Before and after-tax return to capital*. See annual data developed for Table 1.20.
- 1W *Trends in hours worked, weekly and annual*. Authors' analysis of CPS ASEC data. See Appendix A.

Chapter 2

- 2A *Real median income growth by cohort*. Authors' analysis of Census homepage, Historical Income Tables, Families, Table F-11.
- 2B *Intergenerational income persistence, sons and daughters*. Lee and Solon, 2006, Table 1 and 2.

- 2C *Likelihood that low-income son ends up above various percentiles.* Unpublished data provided by Gary Solon.
- 2D *Intergenerational mobility.* See Aaronson and Mazumder (2005), Table 1.
- 2E *Income mobility, children by race.* See Hertz (2006).
- 2F *Percent of children in bottom fifth as adults, based on parents' income fifth, by race.* Julia Isaacs in Haskins et al. (2008), Chapter 6.
- 2G *Mobility in the United States vs. European Union.* Authors' analysis.
- 2H *Intergenerational correlations, fathers and sons, U.S., U.K., Europe, and Scandinavia.* See Corak (2006), Table 1.
- 2I *Mobility for sons of low-income fathers.* See Jantti et al. (2006), Table 12.
- 2J *Mobility for daughters of low-income fathers.* See Jantti et al. (2006), Table 12.
- 2K *Education correlations: parents and children.* See Hertz et al. (2008).
- 2L *Intergenerational mobility: role of education.* See Blandon (2004).
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- 2N *College completion by income status and test scores.* Fox, Connelly, and Snyder (2005).
- 2O *Intergenerational mobility, by college education.* See Haskins et al. (2008), Chapter 8.
- 2P *Cumulative growth in family income volatility since 1973.* See Hacker and Jacobs (2008), Figure 1.
- 2Q *Prevalence of a 50% or greater drop in family income.* See Hacker and Jacobs (2008).

Chapter 3

- 3A *Productivity and median wage by education.* Productivity measured as output per hour in the non-farm business sector. Wage measures are median hourly wages from Table 3.20 converted to compensation by scaling by the compensation/wage ratio in the data from Table 3.3.
- 3B *Hourly wage and compensation growth for production/non-supervisory workers.* See note to Table 3.4. Hourly compensation was estimated based

on multiplying hourly wages by the ratio of compensation to wages for all workers in each year. The compensation/wage ratio is drawn from the NIPA data used in Table 3.3. The compensation/wage ratio for 2007 was set equal to 2006's level plus the percentage point change between 2006 and 2007 in the comparable ratio in the ECEC (Table 3.11).

- 3C *Changes in real hourly wages for men by wage percentile.* See note to Table 3.6.
- 3D *Changes in real hourly wages for women by wage percentile.* See note to Table 3.7.
- 3E *Share of workers earning poverty-level wages, by gender.* See note to Table 3.8.
- 3F *Share of workers earning poverty-level wages, by race/ethnicity.* See notes to Tables 3.8 and 3.9.
- 3G *Top 1% share of total wages and salaries.* See note to Table 3.10.
- 3H *Annual wage growth, by wage group.* See note to Table 3.10.
- 3I *Private-sector employer-provided health insurance coverage.* See note to Table 3.12.
- 3J *Share of pension participants in defined-contribution and defined-benefit plans.* From frequently requested data at the Center for Retirement Research at Boston College, "Private Workers with Pension Coverage, By Pension Type, 1980, 1992, and 2004," using data from the Current Population Survey and the Department of Labor's Annual Return/Report Form 5500 Series <http://crr.bc.edu/images/stories/Frequently_Requested_Data/cps_pension_coverage.xls>.
- 3K *Men's wage inequality.* Based on ratios of wages by decile in annual data presented in Table 3.6.
- 3L *Women's wage inequality.* Based on ratios of wages by decile in annual data presented in Table 3.7.
- 3M *95/50 percentile wage inequality.* Based on ratios of wages by percentile presented in Tables 3.6 and 3.7.
- 3N *College/high school wage premium.* Differentials estimated with controls for experience (as a quartic), region (4), marital status, race/ethnicity, and education, which are specified as dummy variables for less than high school, some college, college, and advanced degree. Estimates were made on the CPS ORG data as described in Appendix B, and presented in Table 3.14.
- 3O *Productivity and hourly compensation growth.* Average hourly productivity and compensation are for the non-farm business sector and available from the

BLS Web site (see major sector productivity and cost index). The compensation series is deflated by the CPI-U-RS. The median compensation of female, male, and all workers is derived by multiplying the compensation/wage ratio (based on the NIPA data discussed in the note to Table 3.3 and Figure 3B) by the real median wage series for each in Tables 3.5, 3.6, and 3.7.

- 3P *Entry-level wages of male and female high school graduates.* See note to Table 3.19.
- 3Q *Entry-level wages of male and female college graduates.* See note to Table 3.19.
- 3R *Health and pension coverage for recent high school graduates.* Computed from the same data as used in Tables 3.12 and 3.13.
- 3S *Health and pension coverage for recent college graduates.* Computed from CPS March Survey data as used in Tables 3.12 and 3.13.
- 3T *Log wage gap profile by cohort.* See Shierholz (2009).
- 3U *Unemployment.* Data are from the U.S. Department of Labor, BLS (2008c).
- 3V *Imports, exports, and trade balance as a share of GDP.* See Bivens (2008).
- 3W *Manufacturing imports as a share of U.S. GDP.* See Bivens (2008).
- 3X *Relative productivity of U.S. trading partners.* See Bivens (2008).
- 3Y *Wage premium of offshorable jobs.* See note to Table 3.29.
- 3Z *Union coverage rate in the United States.* Data are from Hirsch and Macpherson (2003), accessible through unionstats.com <<http://unionstats.gsu.edu/UnionStats.pdf>>, and BLS data on union representation. The data on union coverage begin in 1977 and are extended back to 1973, based on percentage point changes in union membership shares in Hirsh and Macpherson (2003).
- 3AA *Real value of the minimum wage.* Series compiled from series in Table 3.38 (see note) and deflated using CPI-U-RS.
- 3AB *Minimum wage as percentage of average hourly earnings.* Calculated from values of minimum wage (See note to Table 3.38) and average hourly earnings (Table 3.5).
- 3AC *Value of federal minimum wage compared to share of workforce covered by higher state minimums.* Calculation provided by Liana Fox. See Fox (2007), “What a new federal minimum wage means for the states.” <<http://www.epi.org/content.cfm/ib234>>.

- 3AD *Relative demand for college graduates.* Authors' analysis of Goldin and Katz (2008), Table 1.
- 3AE *Ratio of average and median CEO total direct compensation to average worker pay.* Calculated by dividing the CEO average annual pay (see note to Table 3.41) by production non-supervisory workers' average annual pay (hourly average earnings multiplied by 2,080 multiplied by the compensation/wage ratio discussed in note to Table 3.2). The production non-supervisory workers' average hourly pay is available online from the BLS (2008b). CEO pay for the pre-1995 period based on the Pearl Meyers/*Wall Street Journal* survey scaled to the level of the Mercer CEO pay in 1995 (meaning the data rely on the levels of Mercer in 1995 and the growth between earlier years and 1995 as shown in the Pearl Meyer data).
- 3AF *Education requirements of current and future jobs.* See note to Table 3.43.

Chapter 4

- 4A *Labor force and total nonfarm employment.* Considers total employment through August 2008. Labor force data are from U.S. Department of Labor, BLS (2008c) and nonfarm employment is from BLS (2008b).
- 4B *Number of months to regain peak-level employment after a recession, current and prior business cycles.* Data are from U.S. Department of Labor, BLS (2006b).
- 4C *Annualized peak-to-peak growth in employment.* Data are from U.S. Department of Labor, BLS (2008b) data.
- 4D *Gross jobs gains and losses.* Seasonally adjusted data from 1990q2 to 1992q2 are from Faberman (2004). Data from 1992q2 to 2007q4 are from U.S. Department of Labor, BLS (2008a), Business Employment Dynamics, Table 1, Private sector gross job gains and job losses, seasonally adjusted <<http://www.bls.gov/news.release/cewbd.t01.htm>>, based on quarterly state unemployment insurance records submitted by 6.9 million private sector employers.
- 4E *Peak-to-peak annual growth rates by industry.* Data are from U.S. Department of Labor, BLS (2008b), Table B-1.
- 4F *Good jobs as percent of total employment.* From Schmitt (2007), Table 1, *Job, quality over the business cycle, 1979-2006* <<http://www.cepr.net/documents/publications/goodjobscycles.pdf>>. Good jobs are defined as those that pay at least \$17 per hour, have employer-provided health insurance where the employer pays at least some of the premium, and an employer-sponsored pension plan, including 401(k) and similar defined-contribution plans. GDP per

capita is from the Bureau of Economic Analysis (2008), Table 7.1. “Selected Per Capita Product and Income Series in Current and Chained Dollars.”

- 4G *Unemployment rate and its trend.* Unemployment data and trend are from U.S. Department of Labor, BLS (2008c). The trend is calculated by authors using kernel-weighted local polynomial smoothing.
- 4H *Actual and simulated unemployment rate.* Data from BLS (2008c), taken from January 1980 to August 2008. Simulated unemployment rate is what the unemployment rate would be if the distribution of the labor force across age categories had not changed from the first quarter of 1980, but if the unemployment rates within each age category changed as they actually did.
- 4I *Unemployment rates of foreign-born and native-born workers.* Authors’ calculations of BLS (2008c) microdata, CPS ORG (see Appendix B).
- 4J *Long-term unemployment as a share of total unemployment, and the unemployment rate.* Data are from BLS (2008c), through the 2nd quarter of 2008.
- 4K *Unemployment rate and the 2000s recovery period.* “Prior to 2000s recovery” is the period from January 1948 to November 2001. “2000s recovery” is defined as the period from December 2001 to December 2007.
- 4L *Labor force participation rates.* Data are from BLS (2008c) through the first quarter of 2008.
- 4M *Annual labor force participation rate of college graduates.* Authors’ calculation of BLS (2008c) micro data, CPS ORG (see Appendix B).
- 4N *Actual and simulated unemployment rates.* Author’s analysis of BLS (2008c) data through the 2nd quarter of 2008, for people 25 to 54.
- 4O *Employment rates.* Data are from BLS (2008c), employment to population ratio for people 25 to 54, through the 2nd quarter of 2008.
- 4P *Peak-to-peak change in employment rate.* Data are from BLS (2008c) for people 25 to 54.
- 4Q *Peak-to-peak change in employment rates by race and ethnicity.* Authors’ analysis of BLS (2008c) data.
- 4R *Annual employment rates of workers 55 years and older.* Data are from BLS (2008c) for people 55 years and older.
- 4S *Access to job-based retirement plan by work arrangement.* See note to Table 4.7.

- 4T *Part-time status, as a share of total employment.* Authors' analysis of BLS (2008c), Table A-5. Employed persons by class of worker and part-time status, through August 2008. Considers share of workers (16+) working 1 to 34 hours during the reference week as a share of total employment. *Involuntary part-time* refers to those who want and are available for full-time work, but who work part-time for economic reasons, including slack work or unfavorable business conditions, inability to find full-time work, and/or seasonal declines in demand. *Voluntary part-time* refers to those who work part-time for non-economic reasons include medical reasons, personal obligations, retirement or Social Security limits on earnings, along with those who gave an economic reason for working part-time but did not want to work full-time and/or were unavailable to do so during the reference week. In 1994, new methodology was implemented that was stricter in determining whether a worker was involuntarily part-time, making the data before and after 1994 not directly comparable.
- 4U *Employment in temporary help industry as share of non-farm employment.* From BLS (2008b) Current Employment Statistics, through August 2008. See Table B-1 series Historical data, "Employees on nonfarm payrolls by industry sector and selected industry detail," <<http://www.bls.gov/ces/cesbtabs.htm>>.
- 4V *Labor force status post-displacement.* Authors' analysis of Farber (2005), supplemented by unpublished updates provided to EPI by the author.
- 4W *Average decline in weekly earnings for displaced full-time workers who find new full-time work.* See note to Figure 4V.

Chapter 5

- 5A *Growth of household net worth.* Net worth and asset data are from the Federal Reserve Board (2008a), Table B.100, Balance Sheet of Households and Nonprofit Organizations. Data were converted to real dollars using the CPI-U-RS and divided by the number of U.S. households based on Bureau of the Census, Table HH-1 Households by type <<http://www.census.gov/population/socdemo/hh-fam/hh1.xls>>, updated through 2006. The total number of households in 2007 was estimated using growth rate of Total Occupied Units from 2006 to 2007, from the Bureau of the Census (2008a). Note: In 2007, 76% of tangible assets were in household real estate.
- 5B *Distribution of wealth by wealth class.* Data are derived from Table 5.1. All data for 1986 are linear interpolations between 1983 and 1989.
- 5C *Ratio of the wealthiest 1% to median wealth in the United States.* Data derived from Table 5.3.

- 5D *Annual net worth of “Forbes 400” wealthiest individuals.* Data for 1982 to 1999 adapted from Broom and Shay (2000) Table 2. “Forbes 400” Individual Fortunes. Data for 2000-07 are from Forbes (2008) annual lists of the richest Americans.
- 5E *Growth of U.S. stock market.* Standard and Poor’s Composite Index from Economic Report of the President (2008), Table B-95, “Historical stock prices and yields” for 1955 to 2003, and B-96, “Common stock prices and yields” for 2004 to 2007, deflated by the CPI-U-RS in 2007 dollars and indexed to 1960.
- 5F *Distribution of stock market wealth by wealth class.* Data derived from Table 5.8.
- 5G *Distribution of growth in stock market holdings by wealth class.* Data derived from Table 5.8.
- 5H *Home ownership rates.* Yearly average of data published by the U.S. Census Bureau (2008b), Series H-111, Historical Tables, Table 14: “Homeownership Rates for the U.S. and Regions: 1965 to Present” accessible at: <<http://www.census.gov/hhes/www/housing/hvs/historic/histt14.html>>.
- 5I *Home ownership rates by income.* See note to Table 5.10.
- 5J *Home ownership rates by race.* See note to Table 5.10. Data between 1979 and 1982 are unavailable, and substituted using linear interpolations.
- 5K *Debt as a percentage of disposable personal income.* For “all debt and mortgage debt,” see note to Table 5.12. For “consumer credit and home equity loans,” see note to Table 5.13.
- 5L *Distribution of growth in debt.* Calculated from Table 5.8.
- 5M *Consumer bankruptcies per 1,000 adults.* Authors’ analysis of the American Bankruptcy Institute (2008) data on annual non-business filing, from U.S. Bankruptcy Filings table. Data on the adult population, used to calculate bankruptcies per 1,000 adults, are from the Economic Report of the President (2008). The Financial obligations ratio (FOR) is from the Federal Reserve Board (2008b).
- 5N *Home prices and home ownership rates.* Home prices are taken from S&P/Case-Shiller (2008) U.S. National Home Price Index, updated to the 2nd quarter of 2008. Note that the index is calculated monthly using a three-month moving average and published with a two-month lag. Data for homeownership is based on a five-quarter moving average of quarterly data published by the U.S. Census Bureau, Housing Vacancy Survey (2008b), Table 14: “Homeownership Rates for the U.S. and Regions: 1965 to Present.”

- 5O *Homeowners' equity as a percent of home value.* Data are taken from Federal Reserve Board (2008a), B.100 Balance Sheet of Households and Nonprofit Organizations accessible online (<http://www.federalreserve.gov/datadownload/default.htm>) and updated to the 2nd quarter of 2008.
- 5P *Volume of prime and subprime mortgage originations.* Data are used with permission from the Joint Center for Political and Economic Studies. Based on Leigh and Huff (2007), Figure 1, attributed to Joint Center for Housing Studies, State of the Nation's Housing 2007. <<http://www.jchs.harvard.edu/publications/markets/son2007/son2007.pdf>>
- 5Q *Subprime share of loans for home purchase by race.* Data are used with permission from the Joint Center for Political and Economic Studies. Based on Leigh and Huff (2007), Figure 4, with original tabulations of the 2006 Home Mortgage Disclosure Act's Loan Application Register (LAR) data, by staff of the Joint Center's DataBank.
- 5R *Foreclosures per owner-occupied households.* Figure represents the number of foreclosure filings as a proportion of owner-occupied units. Number of foreclosure filings is taken from RealtyTrac (2008) current and previous issues updated to August 2008, and refers to total number of homes in some stage of foreclosure nationwide. RealtyTrac's report includes properties in all three phases of foreclosure: Pre-foreclosures; Foreclosures; and Real Estate Owned, or REO properties (that have been repurchased by a bank). Number of owner-occupied units is taken from the U.S. Department of Commerce, Bureau of the Census (2008b) quarterly data, Series H-111, Table 8. "Quarterly Estimates of Total Housing Inventory for the United States: 1965 – Present."

Chapter 6

- 6A *Poverty and twice-poverty rate.* See U.S. Census Bureau, Historical Poverty Income Tables, Persons, Table 5.
- 6B *Change in poverty and productivity.* U.S. Census Bureau, Historical Poverty Income Tables, Persons, Table 2, and BLS nonfarm business productivity.
- 6C *Poverty rates by race/ethnicity.* See note to Table 6.2.
- 6D *Family poverty gap and family poverty rates.* For poverty gap, see note to Table 6.5. For family poverty rates, see note to Table 6.4.
- 6E *Percent of the poor below half the poverty line.* U.S. Census Bureau, Historical Poverty Income Tables, Persons, Table 5.
- 6F *Poverty, native and foreign born.* See note to Table 6.6.

- 6G *Poverty rates, official compared to NAS alternatives.* Alternative rates published by Census Bureau online (<http://www.census.gov/hhes/www/povmeas/tables.html>). See “Official and NAS based poverty rates.”
- 6H *Official versus alternative poverty rates.* See Garner and Short (2008).
- 6I *Official and relative poverty.* Authors’ analysis, see Appendix A.
- 6J *Real low-wage growth, productivity, and unemployment: Three five-year periods.* Productivity and unemployment from BLS, low-wage growth from CPS-ORG series, described in Appendix B.
- 6K *Poverty rate, actual and simulated.* Authors’ adaptation of analysis by Sheldon Danziger (unpublished). Danziger’s method was to regress the poverty rate of the growth of real per capita income, from BEA (2008) NIPA Table 2.1, and then predict poverty rates based on that simple model. We also add the share of mother-only families to the model.
- 6L *The impact of family structure changes on poverty rates.* See note to Table 6.10.
- 6M *Poverty determinants.* See note to Table 6.10.
- 6N *Annual hours worked, low-income women with children.* Authors’ analysis of ASEC data, see Appendix A.
- 6O *Low-income growth, single-mother families with children.* See CBO (2007). Low-income refers to bottom fifth of the income scale; data are from Figure 6.
- 6P *Diminished effect of safety net: Share of children lifted above deep poverty.* From a memo drafted for the Center for Budget and Policy Priorities June 3, 2008, by authors Sherman, Trisi, and Parrott. Used with authors’ permission.
- 6Q *Percent change in wage given 1 point decline in unemployment.* Authors’ analysis of CPS ORG data. Phillips curve model regresses nominal wage changes on the gender-specific unemployment rate and CPI-RS inflation with one lag (with inflation coefficient constrained to equal one). We include a dummy for post-1995 intercept shift, as in Katz and Krueger (1999). Models for low-wage women include nominal minimum wage when it is significant.
- 6R *Real hourly wages of low-wage workers.* Wages are based on analysis of CPS wage data as described in Appendix B. The poverty-level wage is the hourly wage that, at full-time, full-year work, would lift a family of four above the poverty line. This equals \$10.20 in 2007 dollars.

Chapter 7

- 7A *Employment-based health insurance and Medicaid/SCHIP for children under 18 in the United States.* Taken from Gould (2007b), Figure A, “Employment-based health insurance and Medicaid/SCHIP, 2000-06, children under 18, United States,” based on an analysis of the March Current Population Survey, updated 2001-07.
- 7B *Status of enrollees of the State Children’s Health Insurance Program (SCHIP).* Taken from Somers et al. (2007), Exhibit 2, “Main Reason Coverage Ended Among Recent Enrollees with Private Coverage Prior to Enrollment in The State Children’s Health Insurance Program (SCHIP), 2002.”
- 7C *Duration without coverage, between 2001 and 2003.* Data are from the Survey of Income and Program Participation, based on responses from a nationally representative sample of U.S. households, interviewed once every four months during the life of the panel.
- 7D *Source of health insurance.* Nonstandard work refers to any work arrangement other than employment in a full-time, full-year wage and salary job. This includes part-time workers, self-employed independent contractors, direct-hire temporaries, on call workers and day laborers, temporary help agency workers, wage and salary independent contractors, and contract company workers. Data are from Ditsler and Fisher (2006), as an update to Fisher et al. (2006), based on an analysis of the 2005 Contingent Work Supplement of the February 2005 CPS.
- 7E *Access to health insurance via own employer.* See note to Figure 7D.
- 7F *Absolute difference in life expectancy between top and bottom decile socioeconomic deprivation groups.* See note to Table 7.2.
- 7G *Life expectancy for male Social Security-covered workers (age 60) by earnings group.* Adapted from Waldron (2007), Table 4, “Remaining years of life expectancy for male Social Security–covered workers, by earnings group, age, and year of birth.”
- 7H *Racial disparities in infant mortality.* Infant mortality refers to children in the United States under 1 year of age. Both race groups include people of Hispanic and non-Hispanic origin. From DHHS (2005, 2007), based on data from Center for Disease Control and Prevention, National Center for Health Statistics (National Vital Statistics System of the Linked Birth/Infant Death Data Set).
- 7I *Racial differences in health care insecurity.* From American Worker Survey, conducted in February of 2007 by the Rockefeller Foundation.

- 7J *Growth rate index of health premiums, workers' earnings and overall inflation.* Taken from Kaiser Family Foundation / Health Research and Educational Trust (HRET) Annual Survey of Employer-Sponsored Health Benefits (2007) for selected years. Data on premium increases reflect the cost of health insurance premiums for a family of four, the average of which is weighted by covered workers.
- 7K *Employer contributions to health insurance and wages as a share of total compensation.* Authors' analysis U.S. Department of Commerce, BEA (2008) National Income and Product Accounts (NIPA), Table 2.1, Personal Income and Its Disposition, and Table 6.11B, Employer Contributions for Employee Pension and Insurance Funds by Industry and by Type.
- 7L *Public and private expenditures on health care spending.* OECD health expenditure data are accessible through OECD.stat, and taken as a share of GDP. Data for Netherlands are from 2002 (most recent available). Data for Australia and Japan are based on data from 2004.
- 7M *Life expectancy at birth and health spending per capita.* Data for Australia, the U.S., Canada, Japan, and the Netherlands are from 2004, where data are unavailable for one or both variables in 2005. Data for Poland, Hungary and Belgium are OECD estimates. Country codes are as follows: AUS = Australia, AUT = Austria, BEL = Belgium, CAN = Canada, CZE = Czech Republic, DNK = Denmark, FIN = Finland, FRA = France, DEU = Germany, GRC = Greece, HUN = Hungary, ISL = Iceland, IRL = Ireland, ITA = Italy, JPN = Japan, KOR = Republic of Korea, LUX = Luxembourg, MEX = Mexico, NLD = Netherlands, NZL = New Zealand, NOR = Norway, POL = Poland, PRT = Portugal, SVK = Slovakia (Slovak Republic), ESP = Spain, SWE = Sweden, CHE = Switzerland, TUR = Turkey, UK = United Kingdom, and USA = United States.
- 7N *Infant mortality, per 1,000 live births.* Data from OECD (2007g), accessible through OECD.stat. Variation between countries may be due to variations among countries in registering practices of premature infants (whether they are reported as live births or not).
- 7O *Percent of adults going without needed health care due to costs.* The study measures the percent of adults reporting any of the following access problems due to cost: 1) had a medical problem but did not visit a doctor; 2) skipped a medical test, treatment, or follow-up recommended by a doctor; or 3) did not fill a prescription. Data are based on the 2004 Commonwealth Fund International Health Policy Survey.

Chapter 8

- 8A *Annual growth rates of per capita income.* See table note for 8.1.
- 8B *Productivity growth rates in G-7 countries.* See table note for Table 8.2.
- 8C *Collective bargaining coverage.* See OECD (2004), Table 3.3, “Trade union density and collective bargaining coverage in the OECD countries, 1970-2000.” Data are unavailable for Greece and Ireland. Correlations were made using productivity data cited in Table 8.2, and earnings data based on OECD annual supplement to the Labor Force Survey of Households <<http://www.oecd.org/dataoecd/9/59/39606921.xls>>, accessed through the Directorate for Employment, Labour and Social Affairs. 90-10 ratios are limited to countries with gross weekly, monthly, or annual earnings data available for full-time workers, for which the Current Population Survey is used for the United States. Note: In 2007, collective bargaining coverage in the United States was 13.3%, for all industries, both public and private sectors, according to an analysis of the Current Population Survey. See figure note to Figure 7M for country abbreviations.
- 8D *Relative household income dispersion.* Estimates of earnings used in the calculations refer to gross earnings of full-time wage and salary workers. See OECD (2007c), page 268, Table H based on OECD database on Earnings Distribution.
- 8E *Household income dispersion relative to the U.S. median.* Estimates of earnings used in the calculations refer to gross earnings of full-time wage and salary workers. Data on median earnings for each country is from the OECD, Directorate for Employment, Labour and Social Affairs (see figure notes to Figure 8C) and converted to U.S. dollars using purchasing power parities for GDP. Data for Denmark, New Zealand, Greece, Italy, Norway, Switzerland, and Spain is nonexistent or unavailable past 2002 for weekly, monthly, or annual gross earnings. Data for Finland, France, Ireland, Sweden, and Switzerland correspond to median earnings in 2004 compared to median earnings in the U.S. of the same year.
- 8F *Top 0.1% income share in selected countries.* Country selection is based on available data. Income is defined as annual gross income reported on individual tax returns excluding capital gains and all government transfers, and before individual income taxes and employee’s payroll taxes. Data for the U.S. is from Smeeding and Piketty (2006), updated in Atkinson and Piketty (2007); data for France, the UK, and Canada are from Smeeding and Piketty (2006), Figures 3A and 3B; data for Spain are from Smeeding and Alvaredo (2007), Table B6; data for Japan are from Smeeding and Moriguchi (2007), Table A1.

- 8G *Child poverty rates before and after taxes and transfers.* See Corak (2005), Figure 7: “Child low income rates in the OECD based on market sources and disposable income: late 1990s and early 2000s.” Data for the following countries in this study are attributed to Mira d’Ercole and Förster (2005): Denmark, Switzerland, France, Greece, Ireland, and New Zealand. Data for remaining countries in this study are attributed to the Luxembourg Income Study. Data for Austria, Belgium, and Denmark are for 1997, and data for the Netherlands and the UK are from 1999.
- 8H *Social expenditure versus child poverty.* See OECD Social Expenditure Database 1980-2001 <www.oecd.org/els/social/expenditure>: Chart EQ5.1: “Public social expenditure by broad social policy area, in percentage of GDP, in 2001.” For Child Poverty, see Table 8.16.

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