Growing Apart

THE "NEW ECONOMY" AND JOB POLARIZATION IN CALIFORNIA, 1992–2000

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THE RAPID GROWTH OF ECONOMIC INEQUALITY IN CALIFORNIA (AND in the nation as a whole) during recent decades is a well-established fact. Yet there is ongoing controversy about the causes of this trend and about the forces perpetuating it. Building on the work of Wright and Dwyer (2000–01; 2002), this chapter uses an innovative approach to investigate one especially salient dimension of the new inequality: the transformation of the labor market. Our analysis of the quality of jobs generated in California during the long economic expansion from 1992 to 2000 demonstrates that the state's labor market has become increasingly polarized between "good" and "bad" jobs (defined using a measure of job quality based on hourly earnings), with less job growth in the middle. Based on a comparison between this pattern of job growth and that during another lengthy economic expansion three decades earlier—when new jobs were distributed much more evenly across the job-quality spectrum—we argue that the polarization of the 1990s is central to the recent growth in economic inequality.[1]

Market economies are dynamic, constantly generating new jobs and destroying old ones. Because our analysis focuses on the characteristics of the jobs that were created during the expansion (rather than all existing jobs), it offers an especially revealing glimpse into the likely shape of the future economy. The fact that the types of jobs generated during the 1990s expansion were distributed so differently from those generated in the 1960s, moreover, suggests that the polarization pattern is something new and historically significant. Among the many possible causes of the shift are deindustrialization, deunionization, and deregulation, all of which have radically reshaped the economic landscape over recent decades.

Many commentators have praised the "new economy," built around technology-intensive industries and sectors, as the engine generating large numbers of desirable jobs and improved living standards. Others, in contrast, have pointed to the recent proliferation of low-wage service jobs with limited or no job security or

1. Many thanks to Erik Olin Wright for the inspiration provided by his work on this topic and for his generous cooperation in our effort to tailor the approach he helped develop to the case of California. We also are grateful to Erik, Chris Erickson, and Richard Freeman for helpful comments on an earlier draft.

fringe benefits as an indicator that many working people are not sharing in the wealth generated by the new economy. Our analysis suggests that there is some truth in each of these perspectives, but that both are flawed, partial views. A broader perspective suggests that job growth in California during the final years of the twentieth century had a bipolar character—a pattern that marks a radical departure from the past.

The distribution of the growth in good and bad jobs also varies in its impact on key population groups. Our analysis of California shows that some groups—most notably Latino immigrants—are disproportionately concentrated at the bottom of the job quality spectrum, while others—especially native-born Anglos—are overrepresented at the top. The new inequality, like its older analogues, is deeply intertwined with gender, racial, and ethnic divisions, as well as with the division between immigrants and natives. Yet there is growing job polarization *within* each major population group as well, to a far greater extent than in the past.

Our analysis also uncovers striking variations in the distribution of job growth among geographic regions. Not only is polarization substantially more pronounced in California than in the United States as a whole, but an even sharper contrast exists between the state's two largest metropolitan areas, greater Los Angeles and the San Francisco Bay Area (including San Jose). In the Los Angeles area the 1990s brought an extreme form of polarization; but in the San Francisco Bay Area the same years spawned a strikingly different form of growth, heavily weighted toward "good" jobs. The contrast between these two metropolitan areas suggests that the "new economy" may be a geographically bounded entity, highly concentrated in particular industries and sectors, yet dependent on an entirely different set of economic activities located elsewhere. Another aspect of this regional contrast lies in immigration flows, with a much greater concentration of Latino immigrants with limited education in the Los Angeles labor market than in the Bay Area. It is not surprising that these particular workers are clustered at the bottom of the labor market in both areas. Nevertheless, we argue that their greater presence in the Southland is more a consequence than a cause of the distinct structure of labor demand in the two regions.

The measure of job quality we use here is earnings-based, but our methodology differs from those used in conventional analyses of income inequality. As explained in detail below, we rely on a technique first used by Joseph Stiglitz (U.S. Council of Economic Advisors 1996) and refined by Wright and Dwyer (2000–01) that is based on analysis of median earnings across an occupation-by-industry matrix, using data from the U.S. Current Population Survey (CPS).

The chapter proceeds as follows. We begin with a brief discussion of previous research documenting the recent growth of income inequality in California, a major component of which is the growth of earnings inequality. Next, we lay out our methodology and the rationale for our focus on the jobs generated during periods of economic expansion, differentiating this approach from others and describing its advantages. We then present our results, in a series of comparisons:

- between job-quality patterns in California and those in the United States as a whole during the 1992–2000 expansion;
- between the distribution of jobs generated during the expansion of the 1990s and that of jobs generated during the 1960s expansion, in California and the United States;
- among the distributions of jobs generated during the 1990s for key population groups, specifically by gender, race, ethnicity, and nativity; and
- between the distribution of new jobs generated during the 1990s in the Los Angeles area and that of new jobs in the San Francisco Bay Area.

Finally, in the concluding section we discuss the wider implications of the analysis, with particular attention to the potential impact of job polarization on future economic opportunities for California's workers generally and for key population groups.

INCOME AND EARNINGS INEQUALITY IN CALIFORNIA: RECENT TRENDS

In recent decades income inequality has increased in California more than in the rest of the nation.[2] The basic pattern is one of rising incomes at the top, stagnation in the middle, and decline at the bottom. Bernstein et al. (2002), for example, found that among the poorest fifth of families in California, average real (before-tax) income fell 5.5 percent between the late 1970s and the late 1990s. In contrast, the richest fifth of California families saw their average real income increase by a dramatic 37.4 percent over that period, while the average real income of the top 5 percent of families in the state increased even more, by 50.4 percent. The ratio between the average income of the top 5 percent and the average for the bottom 20 percent grew apace, from 11.2 in the late 1970s to 17.7 in the late 1990s. The gap between the top and the middle of the income distribution also increased in California in this period: the ratio between the average real income of the top 5 percent of families and that of the middle 20 percent grew from 3.5 in the late 1970s to 4.9 in the late 1990s.

Again, although income inequality has grown nearly everywhere in the United States in recent decades, it is more extreme and has grown more in California than

2. Studies produced by the Public Policy Institute of California (PPIC) (Reed, Haber, and Mameesh 1996; Reed 1999) and by the Economic Policy Institute (EPI) and the Center on Budget and Policy Priorities (CBPP) (Bernstein et al. 2002; Mishel, Bernstein, and Schmitt 2001) have examined the case of California in some detail, either in its own right or as part of an analysis of state-by-state variations in the nature and extent of income inequality. These analyses all rely on the March annual demographic supplement to the U.S. Current Population Survey (CPS), which collects annual income data. The PPIC studies track income annually since 1969; the EPI and CBPP analyses compare income during three periods: the late 1970s, the late 1980s, and the late 1990s.

in most other states. California ranks among the top five states both in the absolute level of income inequality in the late 1990s and in the extent of growth in income inequality since the late 1970s (Bernstein et al. 2002: xiv). What is especially striking in California is the absolute decline in real income among the poorest families, something that occurred in only five other states.[3]

If California has fared worse in this respect than the nation as a whole, within the state the Los Angeles metropolitan area has fared the worst. The share of Los Angeles area workers earning poverty-level wages at the end of the 1990s was nearly double that of the San Francisco Bay Area (34 percent versus 18 percent). And whereas the share of poverty-level workers declined in the Bay Area in the late 1990s, it increased in the L.A. area over those years (Ross 2000: 9–10). Similarly, by the end of the 1990s the level of income inequality was far higher in southern than northern California. In the L.A. area the ratio of the average income of the top 20 percent of workers to that of the bottom 20 percent was 25:1, whereas in the Bay Area the equivalent ratio was just over half that level, or 13:1.[4]

Reed, Haber, and Mameesh (1996) and Reed (1999) provide an analysis of income inequality in California that takes into account many different forms of income, including wages and salaries, pensions and annuities, dividends and other investment income, profits from businesses or farms, and so on. They point out, however, that for the majority of families, earnings (wages and salaries) are the primary source of income, and indeed growth in earnings inequality is the major driver of the growth in income inequality.[5] Earnings inequality is also of special interest because it is directly related to changes in the employment structure.

Earnings have long varied by gender, race, ethnicity, and nativity. As Reed (1999) has demonstrated, recent trends in annual earnings inequality among men are generally similar to those in family income inequality in California, with decline at the low end, stagnation in the middle, and large increases at the top between the late 1970s and the late 1990s. Hourly earnings among men show the same trend of decline at the bottom, but with slower growth at the top, suggesting that the rise in male annual earnings among high earners is at least in part a result of an increase in hours worked.

Trends in women's earnings differ in some respects from those of men. Women have enjoyed improvements in real earnings at all levels (in part because of large increases in their hours worked), as well as a modest narrowing of gender disparities in

3. The other states were Wyoming, Arizona, New York, New Mexico, and West Virginia.

4. We computed these ratios from unpublished figures generously provided to us by Bethney Gunderson of EPI, derived from the March Supplement to the CPS, using pooled data for 1998–2000.

5. Rising returns on investment and increased wealth among the most affluent Americans also contribute to the rising income level at the top of the income distribution, although data on nonwage forms of income among the wealthy are limited, making it difficult to estimate the magnitude of this effect. As a result, most analyses understate income among the wealthiest families; in other words, income inequality is even wider than these analyses show (Bernstein et al. 2000; see also Keister 2000 for an analysis of rising wealth inequality).

pay over recent decades. Female hourly earnings have changed less than female annual earnings, although both measures show rising inequality *among women,* which is now at an unprecedented level. Patterns of female earnings inequality are similar in California to those in the rest of the nation, with one important exception: The earnings of female workers at the bottom of the distribution have declined in California since the late 1980s, whereas in the United States as a whole, female earnings at the bottom were stagnant but did not decline during those years.

One might expect that the growth of female employment and the modest decline in the gender gap in pay over the past couple of decades would have helped to moderate the growth of overall income inequality. But the increase in female labor force participation has instead aggravated the problem of income inequality among families, since those at the upper end of the income distribution are more likely than in the past to include two workers with high earnings, while those near the bottom are likely to have two workers with low earnings (Bernstein et al. 2002; Reed 1999). In addition, increased labor force participation among women has not been sufficient to offset the impact of declining real wages among men in middle- and low-income two-earner households (Bernhardt, Morris, and Handcock 1995).

Persistent racial and ethnic inequality has contributed to the overall growth in income inequality as well. As Pastor and Zabin (this volume) show, the median household incomes of all major ethnic groups in the state improved in the second half of the 1990s; but the longstanding pattern of higher incomes among Anglos and Asians, and lower incomes among African Americans and Latinos, has continued to prevail. Over the past 20 years, moreover, hourly earnings data for individual workers indicate that earnings inequality has increased among racial and ethnic groups. Although the real hourly earnings of California's African American workers have increased slightly since the late 1970s, the gap between their median hourly earnings and those of Anglo workers in the state grew from 1.16 in 1979–81 to 1.25 in 1999–2001. The gap between Anglo and Latino median hourly earnings in California grew even more over that period, from 1.40 to 1.73, as real hourly earnings for Latinos fell.[6] At the same time, inequality *within* the state's African American and Latino populations grew over this period. The ratio of hourly earnings between college-educated African Americans and African American high school graduates in California grew from 1.36 to 1.84 between 1979 and 2001; for Latinos the trend was similar, with the ratio growing from 1.48 to 1.83.[7]

These patterns of income and earnings inequality by gender, race, and ethnicity in California are not dramatically different from those in the United States as a whole.

6. We computed these ratios from unpublished data provided to us by Bethney Gunderson of EPI. The data are derived from the CPS, using pooled data sets for 1979–81 and 1999–2001. We computed the ratios here from the data on median hourly earnings among non-Latino Anglos, non-Latino African Americans, and Latinos. Since the CPS did not include a question about place of birth until 1994, it is not possible to compare immigrants and natives for this period.
7. For Anglos this within-group inequality grew even faster, with the ratio rising from 1.48 to 1.92. Similar changes occurred on a national scale, with the ratios nearly identical to those for

But as overall economic inequality has increased more in California than in the rest of the country in recent decades, there is a larger population at the bottom of the income distribution, and within that population female, African American, and Latino wage earners are overrepresented. Gender, race, and ethnicity are also highly salient in our analysis of growth in good and bad jobs, to which we now turn.

METHODS AND DATA

Our analysis draws on Wright and Dwyer's adaptation of a method used by economist Joseph Stiglitz in a report he wrote as chair of the Council of Economic Advisors during the Clinton administration (U.S. Council of Economic Advisors 1996). Stiglitz was interested in learning how many of the new jobs being created during the 1990s expansion were "good" jobs. Using CPS data, he began by defining a detailed occupation-by-industry matrix. Specifically, he used the standard 45-category occupation and 22-category industry classifications, creating 990 potential cells in the matrix, each of which represented a "job." Stiglitz then eliminated those cells with fewer than 10 respondents, which left about 250 jobs. Those jobs accounted for 95 percent of all full-time workers in the country. Stiglitz then computed the change in the number of people in each occupation-industry cell between 1994 and 1996 and found that almost 70 percent of the net expansion was in "good" jobs, defined as jobs with median weekly earnings (for full-time employees) above that of the median cell in the matrix.

Wright and Dwyer (2000–01; 2002) extended and refined Stiglitz's method in several ways. For one thing, they studied the entire 1992–2000 expansion, whereas Stiglitz looked at only the 1994–96 period. In addition, they analyzed the full distribution of jobs, whereas he looked at only the proportion of new jobs that had earnings above the median. Wright and Dwyer also added an historical dimension to the analysis, comparing the job-growth pattern of the 1990s to that for a similar period of economic expansion during the 1960s. Finally, they added demographic and sectoral analyses of job growth, examining the distribution of newly generated jobs among specific groups of workers and sectors of the economy.

Both Stiglitz and Wright and Dwyer define job quality in terms of earnings. Of course, this is only one dimension of job quality (ideally one would want a more comprehensive operationalization that took account of working conditions, job security, and so forth), but it is the one consistently available measure of job quality in the CPS. Moreover, even if earnings is only a rough proxy for overall job quality, it is important in its own right for purposes of analyzing the new economic inequality.

California. The only exception was that in 1979 the ratio for African Americans was lower in California than in the United States (1.36 versus 1.48), although by 2001 the state and national ratios for African Americans were identical. We computed the ratios from unpublished CPS data provided by Bethney Gunderson of EPI.

We applied Wright and Dwyer's method to the case of California and its two largest metropolitan areas. For the 1990s we used 45 occupation categories and 23 industry categories, yielding a matrix of 1,035 possible jobs.[8] The 1960s data are more limited, and so our matrix for that period is smaller, with 30 occupational and 22 industry categories, yielding 660 possible jobs. We calculated median hourly earnings for each job cell in the two economic expansions. (We did so separately for each expansion because the occupation and industry codes have changed over time.)

Next, we rank-ordered the jobs from the lowest to the highest median hourly earnings and then divided them into 10 groups, each of which contains approximately 10 percent of all full-time employees in the first year of the expansion. (The cells are not exactly equal in size because the number of people employed in each job cell varies, and the cells cannot be split up to force a decile to be exactly 10 percent.) In other words, the lowest job-quality decile contains the roughly 10 percent of all full-time employees who held jobs with the lowest median earnings in 1992; the highest job-quality decile contains the roughly 10 percent of all full-time employees who held jobs with the highest median earnings in 1992; and so on.[9] These "job-quality deciles" are the building blocks of the rest of our analysis. The Appendix lists the six largest jobs in each decile and some of their key characteristics.

We calculated the net change in the number of jobs in each of the job-quality deciles from the beginning to the end of each expansion. The results indicate the rel-

8. Like Wright and Dwyer, we used the CPS annual outgoing rotation group (ORG) files for 1983–2000 and the CPS March annual demographic supplement before 1983. Although 1962 is the earliest year with March files available as micro data, because of problems in data quality for the early years, we begin the analysis of the 1960s expansion in 1963. Our analysis therefore omits the first two years of the expansion, 1961 and 1962. We also restricted the sample to full-time employees ages 18–64. Because the CPS ORG files compute earnings differently for employees and the self-employed, we also excluded the self-employed. Another modification we made was to disaggregate one of the 22 industries used in Stiglitz' matrix, "business and repair services," into "business services" and "automotive and repair services." Finally, since the 1960s CPS was based on a smaller sample size than the 1990s CPS, the 1960s data should be interpreted with caution, particularly for California. However, after estimating results using several alternative parameters, we are confident that the general patterns described in the text are valid.

9. We calculated the median earnings for all cells that had any people in them. Cells with small numbers of people in them thus have less valid median earnings estimates because of the very small sample size. The small cells have very little impact on the overall patterns, however, because in the end the large cells swamp the small cells in the analysis. Like Wright and Dwyer, we did not drop small cells, because any cut-off point we chose would be arbitrary, and because they make very little difference. Further, although the median earnings of small cells vary more than those of large cells do, the variation is not large enough to affect our analysis, because the decile ranking of the small cells remains unchanged. For example, if we compare the median earnings of cells calculated using only the first year of an expansion to the earnings calculated using only the last year, the earnings of the small cells will vary more between the two years than will the earnings of large cells. They will not vary enough, however, to change the decile rankings of the small cells in either year. In other words, even the variation in median earnings for small cells is within the parameters of variation in a single decile.

ative growth of good, bad, and middling jobs. Note that this approach measures *net* change, taking into account both job destruction and job creation. We deployed this technique to analyze trends in California, as well as to compare the state to the nation as a whole, during the economic expansions of both the 1990s and the 1960s. For the 1990s we also analyzed the distribution of job growth among key demographic groups and in the state's two largest metropolitan areas.[10]

This approach is distinctive in several ways. First, it focuses directly on changes in the employment structure and changing patterns of opportunity within that structure. Unlike conventional analyses of income inequality like those cited above, this method focuses on the characteristics of jobs rather than the characteristics of individuals. Studying the earnings attached to specific jobs in specific occupational and industrial contexts offers a better basis for understanding the structure of employment opportunity than does limiting the analysis to an aggregation of individual earnings.

Second, this method analyzes job expansion, directing attention to the leading edge of change in the employment structure. Unlike employment projections like those used in Ross and Rothstein's (2000) analysis of job prospects in California, our analysis of job growth during periods of economic expansion does not rely on estimates of future growth, but instead identifies jobs in which expanded opportunities have already emerged.

Finally, our definition of a job as a cell in an occupation-by-industry matrix allows us to capture industrial change as well as occupational change. Since industrial change is at least as important as (and in some respects determinative of) occupational change, this approach offers particularly helpful insights into the dynamics underlying the changing structure of economic opportunity.

PATTERNS OF JOB GROWTH IN CALIFORNIA AND THE UNITED STATES

Our analysis primarily focuses on net job growth during the 1990s economic expansion. Figures 1.1 and 1.2 show the net contribution of each of the 10 job-quality

10. Our analysis of the Los Angeles and San Francisco–San Jose metropolitan areas uses the job-quality deciles calculated for the whole state of California. In the analysis for the United States as a whole, however, we calculated the job-quality deciles using data for the entire nation. (We did a separate analysis, not shown here, using U.S.-based deciles for California. The results of that analysis are generally similar to those shown in the text. The main difference is that the U.S.-based deciles yield a more polarized distribution for California, with more growth at the top and still greater growth at the bottom. The basic patterns for subgroups are the same.) The comparison between the United States and California shown here thus takes into account compositional differences in the employment structures of the nation versus the state. The analyses of demographic subgroups presented below use the same job-quality deciles as those constructed for the United States or California; they are not re-normed within each demographic group. The sample sizes for the demographic subgroups in the two metropolitan areas are relatively small, so that

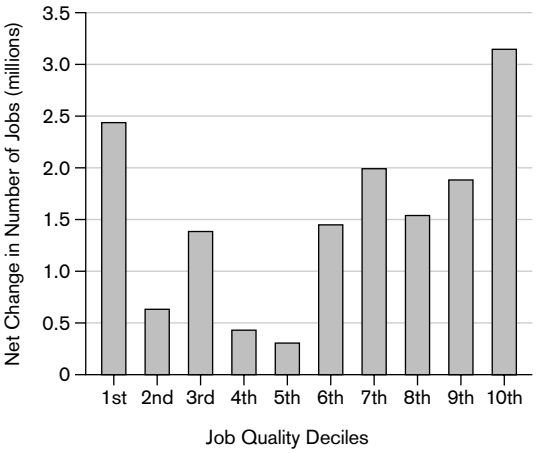

FIGURE 1.1 U.S. Job Growth by Job Quality Decile, Full-Time Workers Ages 18–64, 1992–2000

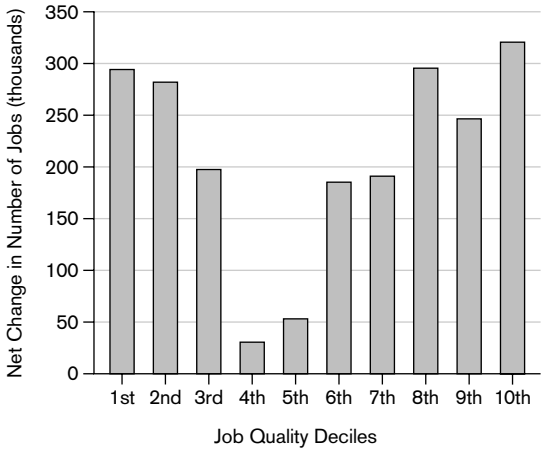

FIGURE 1.2 California Job Growth by Job Quality Decile, Full-Time Workers Ages 18–64, 1992–2000

deciles to the economic expansion of the 1990s, for all full-time workers in the United States and California, respectively. Here we see stark evidence of growing polarization in the nation and especially in the state. If job growth had been distributed evenly across the hierarchy of jobs, the bars shown in the figures would all be equal in height. Instead, in both cases what occurred was a great deal of growth in the upper deciles, minimal growth in the middle (especially the fourth and fifth deciles), and extensive growth at the bottom of the labor market. The pattern for California is somewhat different from that for the United States as a whole, with more job growth in all three of the lower deciles and less concentration of growth in the highest decile (but with greater growth in the eighth and ninth deciles).

These two figures offer strong evidence to support the optimistic claims about the new economy's capacity to generate large numbers of high-quality jobs: The top five deciles had more job growth than the bottom five (although in California the difference between the top and bottom halves of the distribution was smaller). This suggests that more "good" than "bad" jobs were created during this period of sustained economic expansion.

Yet the perspective of those commentators who emphasize the proliferation of undesirable, low-wage jobs also finds support here, for the three bottommost deciles grew a great deal. This is particularly striking in the case of California, where the expansion of low-end jobs was far greater than in the United States as a whole.

The overall pattern is unmistakably one of polarization between good and bad jobs, with a notable gap in the middle. For the United States as a whole, the distribution is arguably J-shaped, but for California the polarization takes a classic U-

these findings should be interpreted with caution, especially for the San Francisco Bay Area. However, we are confident that the general patterns described in the text are valid.

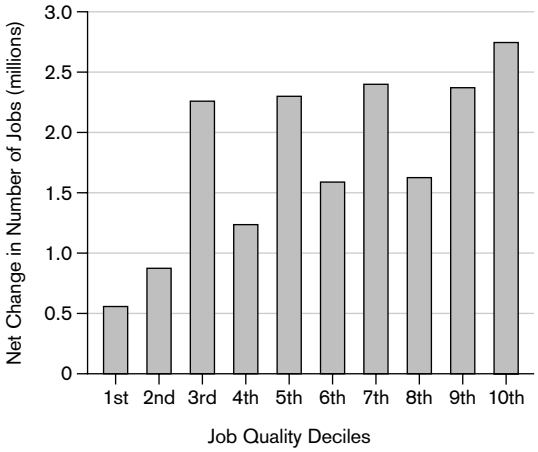

FIGURE 1.3 U.S. Job Growth by Job Quality Decile, Full-Time Workers Ages 18–64, 1963–70.

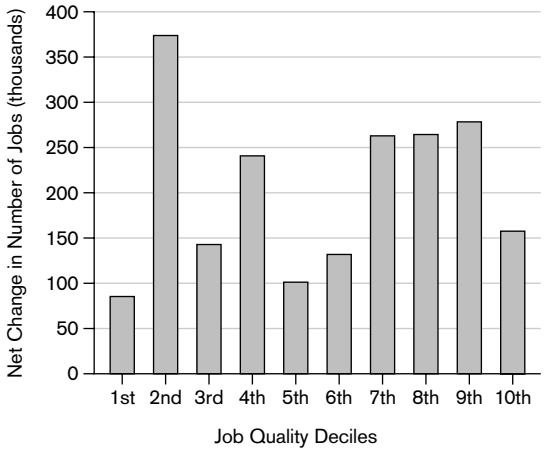

FIGURE 1.4 California Job Growth by Job Quality Decile, Full-Time Workers Ages 18–64, 1963–70.

shape. If one were to rotate the shape of the distribution shown in Figure 1.2 by 90 degrees and center the bars, the result would closely resemble the much-discussed "hourglass economy." Recall that Figure 1.2 is not a representation of the *current* distribution of jobs, but rather of net job growth across the deciles between 1992 and 2000. Yet the fact that the newly generated jobs shown here are so sharply polarized is an alarming portent of the likely shape of the future employment structure.

Examined in historical perspective, the significance of the polarization pattern generated by the 1992–2000 economic expansion is even more apparent. Comparing the results for the 1990s to those for the 1960s economic expansion sharply exposes the ways in which the new economy differs from the old. Figures 1.3 and 1.4 show the pattern of job growth in the United States and California, respectively, during the 1963–70 expansion.[11] The nation as a whole, as Figure 1.3 shows, witnessed strong employment growth in all 10 job-quality deciles during the 1960s, with the exception of the two at the bottom of the distribution. California (Figure 1.4) had a great deal of job growth in the second lowest decile during the 1960s and less growth at the high end. But in California, as in the country as a whole, job growth was far more evenly distributed in the 1960s than in the 1990s (compare with Figures 1.1 and 1.2).

These patterns do not change significantly if we consider two potentially confounding factors. One possibility is that omitting part-time jobs from the analysis overstates the benefits of the new economy, if there were a large concentration of part-time jobs in the lowest deciles. In fact, however, as Figures 1.5 and 1.6 show, in both California and the United States, respectively, the growth in part-time jobs was

11. See note 8 above regarding the data for the 1960s, which are for 1963–70 and do not include the first two years of the economic expansion.

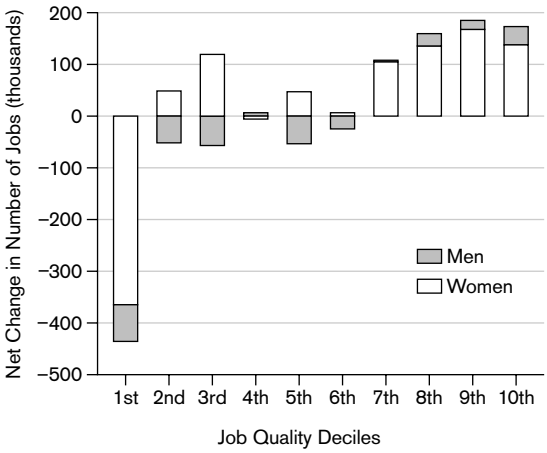

FIGURE 1.5 U.S. Job Growth by Job Quality Decile, Part-Time Workers Ages 18–64 Stacked by Gender, 1992–2000

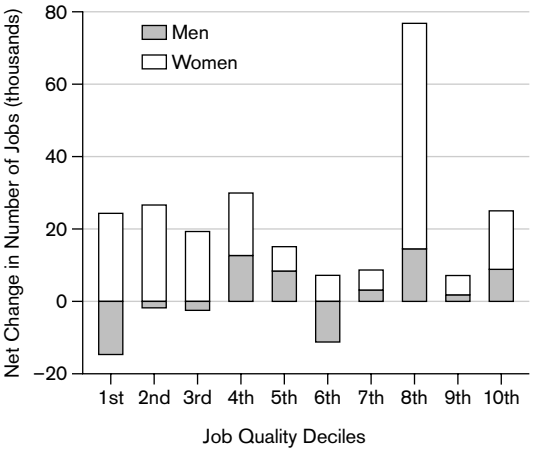

FIGURE 1.6 California Job Growth by Job Quality Decile, Part-Time Workers Ages 18–64 Stacked by Gender, 1992–2000

more concentrated in the upper deciles. This was especially so for the nation overall, where, as Figure 1.5 shows, there was a dramatic net loss in part-time jobs in the bottom decile. The situation was somewhat different in California, but even there, growth in part-time work was greater in the upper half of the distribution.[12] Most of the growth these Figures depict for part-time work was among women, in both California and the nation.

A second possibility, which could distort the overall picture in the opposite direction, is that by including all age groups in the analysis, we overstate growth at the low end of the job-quality spectrum, where the youngest workers (as well as some older workers) may be highly concentrated. If the "bad" jobs generated at the bottom end were largely part of a separate, youth labor market, the policy implications would be somewhat different than if "prime-aged" (30 to 55) workers held these jobs. But as Figures 1.7 and 1.8 show, when we limit the analysis to full-time, prime-aged workers, the basic pattern for the 1990s, for both the state and the nation, is fundamentally similar in shape to that shown in Figures 1.1 and 1.2.

This is less true for California than for the United States, as a comparison of Figures 1.2 and 1.8 suggests. Job polarization is indeed sharper when all age groups are included. But, as Figure 1.9 shows, young workers were even more sharply polarized than their elders were between the very bottom and the upper reaches of the job structure. It is interesting that the group over 55 years old showed the least polarized

12. The spike in the eighth decile in Figure 1.6 is mostly due to rapid growth in two jobs: "teachers except college and universities" in the "educational services" industry, and "health treating and assessment" in the "other medical services" industry. Like part-time work generally, these expanding jobs overwhelmingly employed women workers.

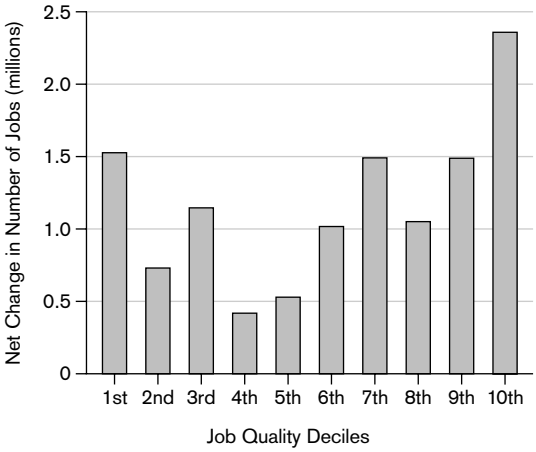

FIGURE 1.7 U.S. Job Growth by Job Quality Decile, Full-Time Workers Ages 30–55, 1992–2000.

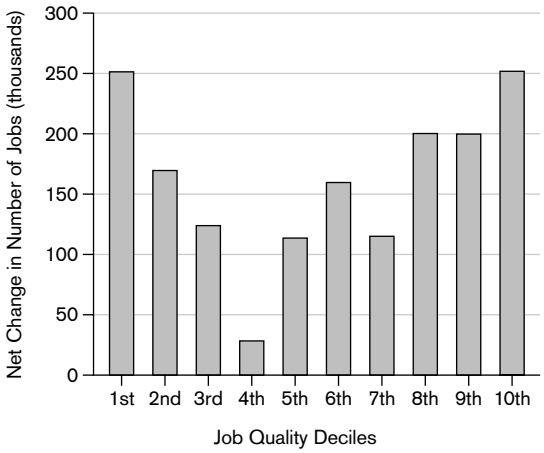

FIGURE 1.8 California Job Growth by Job Quality Decile, Full-Time Workers Ages 30–55, 1992–2000.

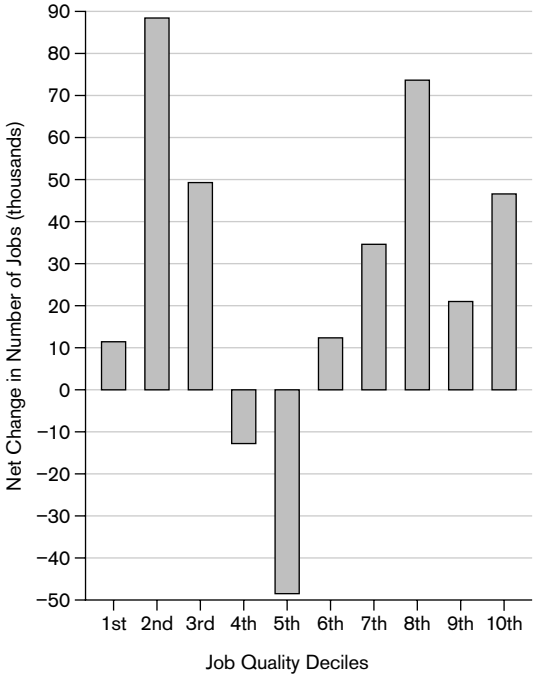

FIGURE 1.9 California Job Growth by Job Quality Decile, Full-Time Workers Ages 18–29, 1992–2000.

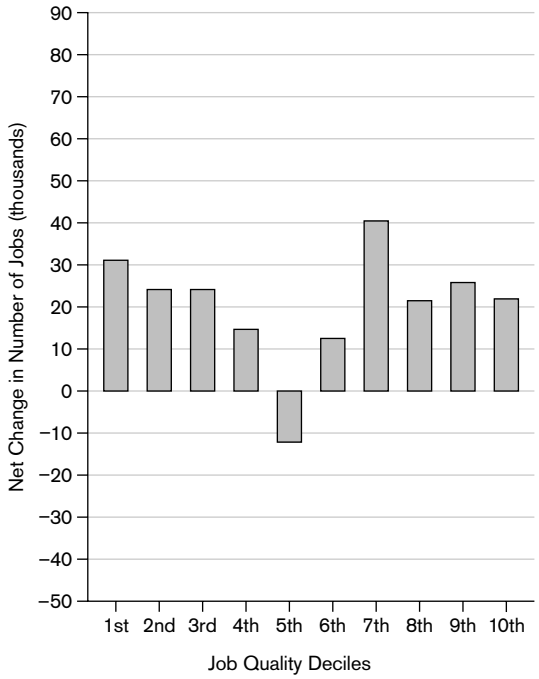

FIGURE 1.10 California Job Growth by Job Quality Decile, Full-Time Workers Ages 56–64, 1992–2000.

pattern of the three age groups, as Figure 1.10 reveals. This striking age cohort effect suggests once again that substantial changes in labor market opportunities have occurred over just one or two generations.

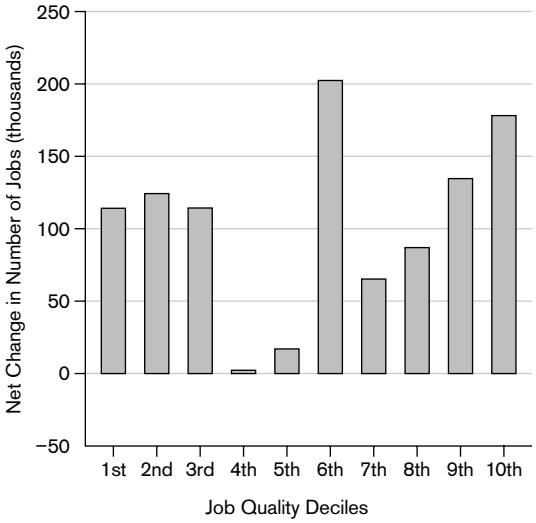

FIGURE 1.11 California Job Growth by Job Quality Decile, Full-Time Male Workers, 1992–2000.

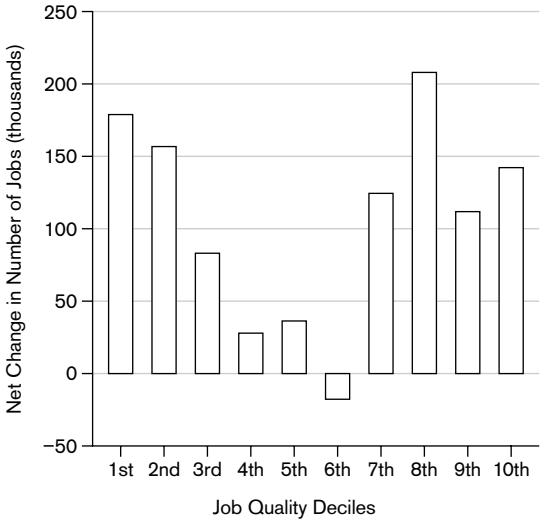

FIGURE 1.12 California Job Growth by Job Quality Decile, Full-Time Female Workers, 1992–2000.

PATTERNS OF JOB GROWTH AMONG KEY POPULATION GROUPS IN CALIFORNIA, 1992–2000

The job polarization pattern discussed above becomes more complex once we examine the way in which job growth was distributed among key demographic groups. Both the 1990s and earlier cycles of economic expansion involved important variations in the distribution of winners and losers by gender, race, ethnicity, and nativity. In the 1990s there was some polarization *within* virtually all subgroups, but the most striking result is that native-born Anglos enjoyed the fruits of the new economy to a far greater extent than all other groups. By contrast, job growth among Latinos, especially foreign-born Latinos, was far more heavily concentrated at the bottom of the job-quality distribution during the 1990s.[13]

Gender was another important dimension of variation. As Figures 1.11 and 1.12 show, the distribution of job growth in California during the 1990s had a polarized character for both men and women. Given the persistence of job segregation by gender, it is not surprising that the specific distributions by decile are far from identical. But there were substantial numbers of women at the upper end of the distribution, and on the whole men fared only slightly better than women did.

This gender pattern contrasts markedly with that of the 1960s. As Figures 1.13 and 1.14 show, at that time job growth among women was heavily concentrated in the

13. Here and throughout the text, we use the term "Latinos" for what the CPS calls "Spanish ethnicity"; "Anglos" for what the CPS calls "non-Hispanic whites"; "African Americans" for what the CPS calls "blacks," and "Asians" refers for what the CPS calls "Asians and Pacific Islanders."

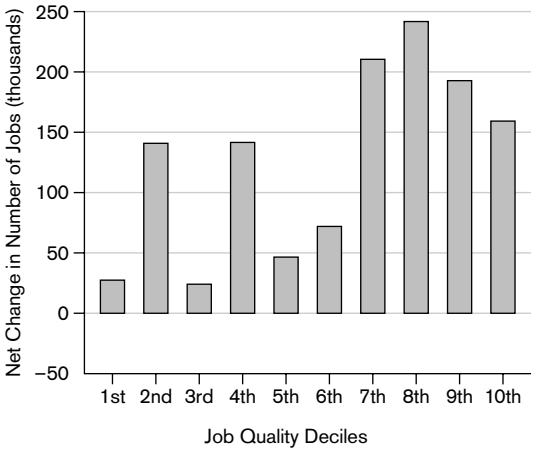

FIGURE 1.13 California Job Growth by Job Quality Decile, Full-Time Male Workers, 1963–70.

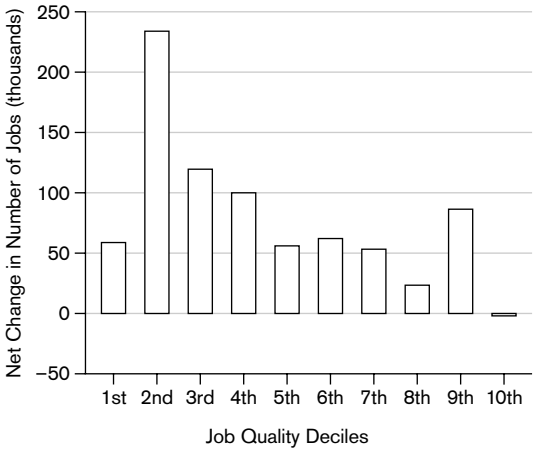

FIGURE 1.14 California Job Growth by Job Quality Decile, Full-Time Female Workers, 1963–70.

bottommost deciles, whereas among men it was markedly skewed toward the upper deciles.

In the 1960s gender differences in job growth were more salient than race and ethnic differences were, but in the 1990s just the opposite was true. As Figures 1.15 and 1.16 show, among both male and female Anglos employed full-time in California, job growth in the 1990s was overwhelmingly concentrated in the top deciles of the distribution, with substantial net job losses in the middle of the distribution and very modest growth (among women only) at the low end. Latino workers—both men and women—were at the other extreme (Figures 1.17 and 1.18), with growth concentrated in the lower half of the distribution, apart from the significant upward spike among men in the sixth decile.[14]

Among African Americans (Figures 1.19 and 1.20) the pattern in the 1990s was again distinctive, with job growth relatively evenly distributed across the quality spectrum, especially among women. The growth in the upper deciles reflected the emergence of a sizable African American middle class. In absolute terms, we might observe, job growth in the upper deciles was actually greater among Latinos than

14. The largest job in this decile is that of construction trades in the construction industry. This particular job is itself internally polarized between relatively low-wage, nonunion, residential construction jobs and highly paid, unionized, commercial construction jobs. Although the CPS does not disaggregate the industry in this way (and thus our analysis here cannot do so either), qualitative evidence suggests that Latinos are far more highly concentrated in the low-wage, nonunion side of the industry (see Milkman and Wong 2000). The large spike in the sixth decile in Figure 1.17 is somewhat misleading in this regard, because if nonunion residential construction jobs were separable from commercial construction jobs, median hourly earnings in the former would likely fall several deciles lower in the job-quality distribution. This is an artifact, then, of our methodology for one of the largest jobs in the entire analysis.

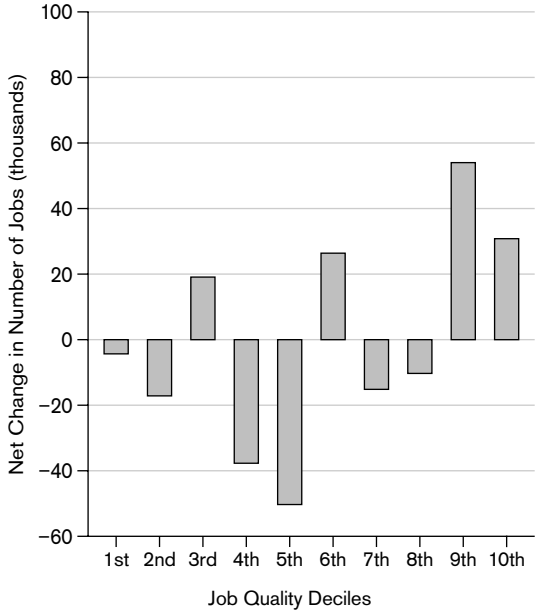

FIGURE 1.15 California Job Growth by Job Quality Decile, Full-Time Anglo Male Workers, 1992–2000.

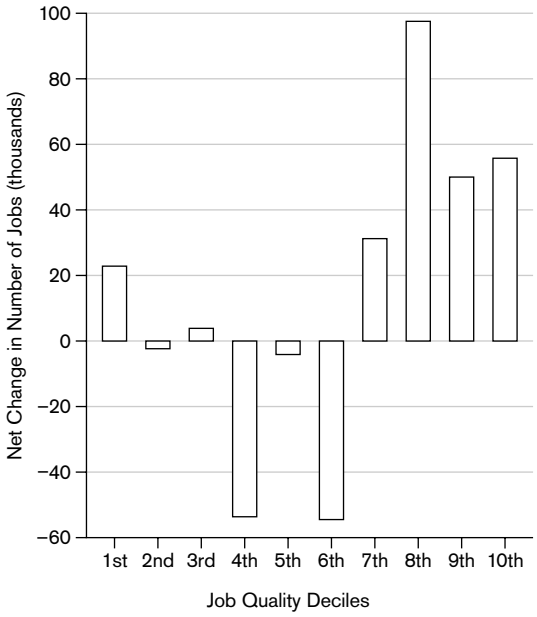

FIGURE 1.16 California Job Growth by Job Quality Decile, Full-Time Anglo Female Workers, 1992–2000.

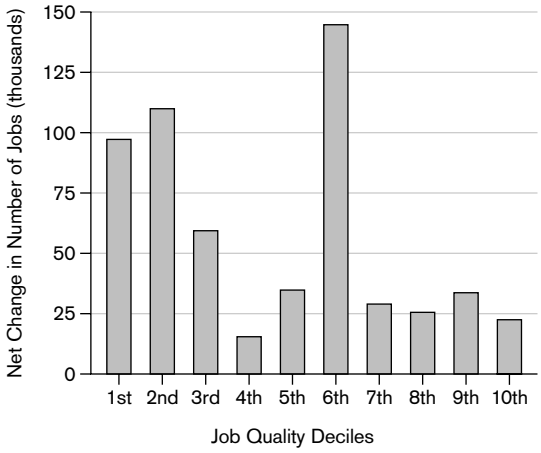

FIGURE 1.17 California Job Growth by Job Quality Decile, Full-Time Latino Male Workers, 1992–2000.

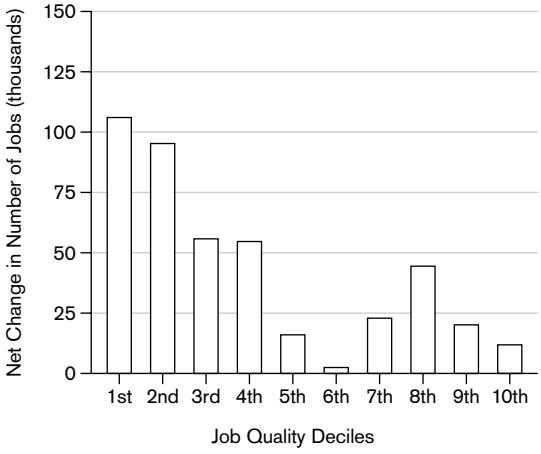

FIGURE 1.18 California Job Growth by Job Quality Decile, Full-Time Latino Female Workers, 1992–2000.

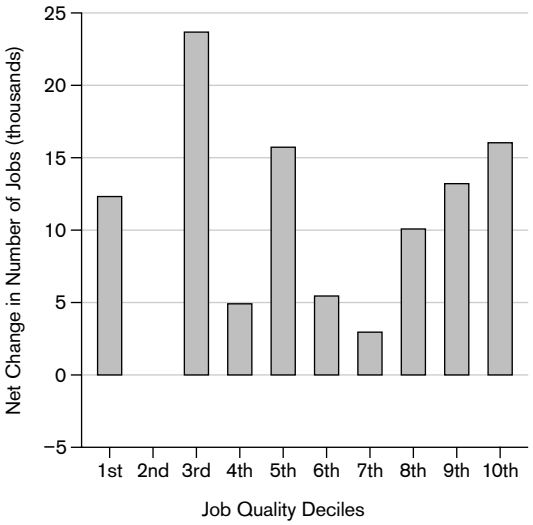

FIGURE 1.19 California Job Growth by Job Quality Decile, Full-Time African American Male Workers, 1992–2000.

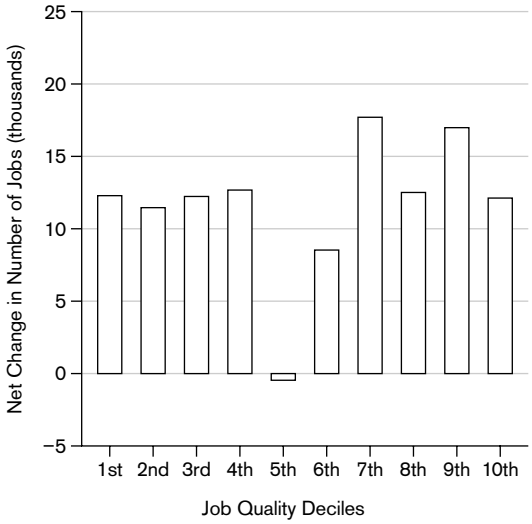

FIGURE 1.20 California Job Growth by Job Quality Decile, Full-Time African American Female Workers, 1992–2000.

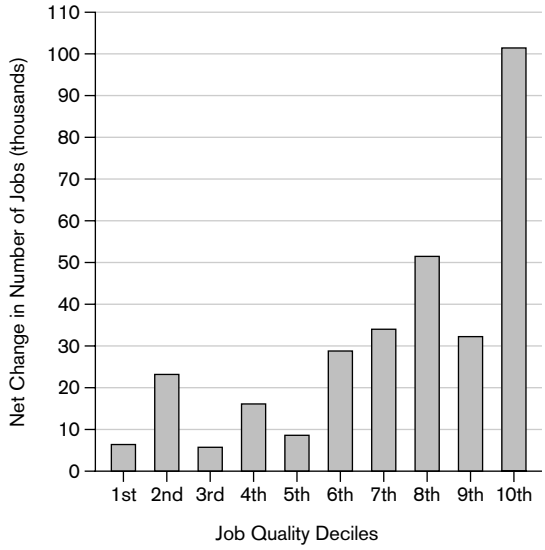

FIGURE 1.21 California Job Growth by Job Quality Decile, Full-Time Asian Male Workers, 1992–2000.

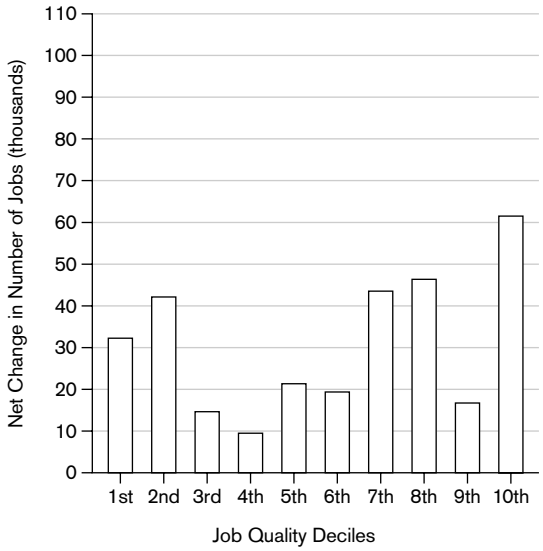

FIGURE 1.22 California Job Growth by Job Quality Decile, Full-Time Asian Female Workers, 1992–2000.

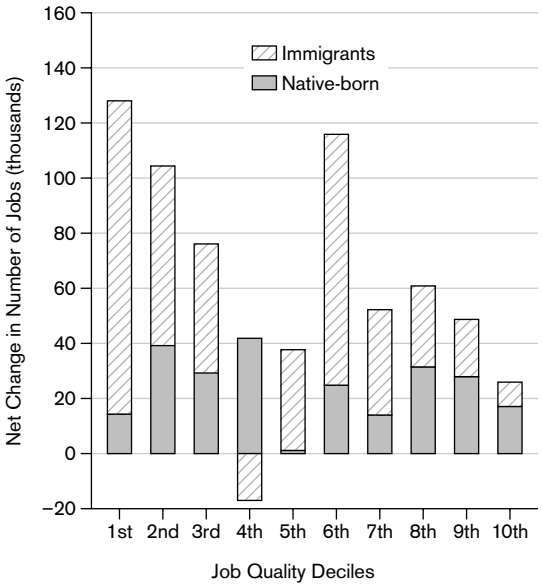

FIGURE 1.23 California Job Growth by Job Quality Decile, Full-Time Latino Workers Stacked by Immigrant Status, 1994–2000.

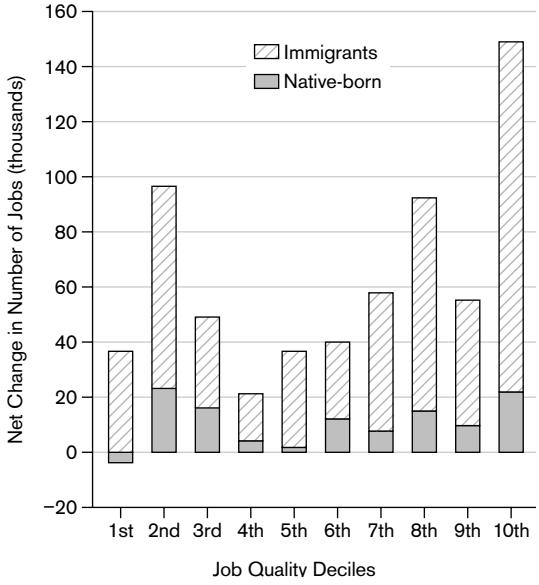

FIGURE 1.24 California Job Growth by Job Quality Decile, Full-Time Asian Workers Stacked by Immigrant Status, 1994–2000.

among the much smaller population of African Americans, but the overall distribution of job growth was skewed heavily downward among Latinos to a much greater degree than among African Americans. The pattern for Asians (Figures 1.21 and 1.22) is a bit closer to that for Anglos, with strong growth in the upper deciles but also substantial growth at the bottom among women (to a much greater degree than was the case among Anglo women).

The other key dimension of variation in California during the 1990s expansion was the pattern of job growth among immigrants, who form a more substantial part of California's labor force than they do in any other state.[15] As Figure 1.23 shows, job growth among immigrant Latinos was far more unevenly distributed across the deciles than it was among native-born Latinos. Among Latino immigrants job growth was concentrated in the bottom three deciles as well as in the sixth, whereas among native-born Latinos the distribution was far more even. The pattern was different for Asians, among whom job growth for immigrants was more concentrated in the upper deciles than was the case for natives, as shown in Figure 1.24.

As the next two figures suggest, one important factor underlying the contrast between the job-growth distributions for Latino and Asian immigrants was the dis-

15. The data are more limited here, since the CPS did not ask respondents about their place of birth until 1994. Thus, the data for our analysis of immigrant-native differences are for the 1994–2000 period only, not the full 1992–2000 economic expansion that is the basis of the rest of the analysis.

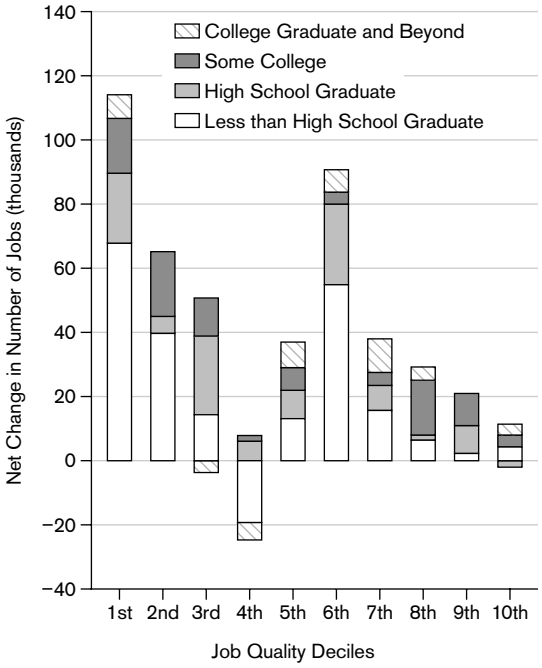

FIGURE 1.25 California Job Growth by Job Quality Decile, Full-Time Latino Immigrant Workers Stacked by Education, 1994–2000.

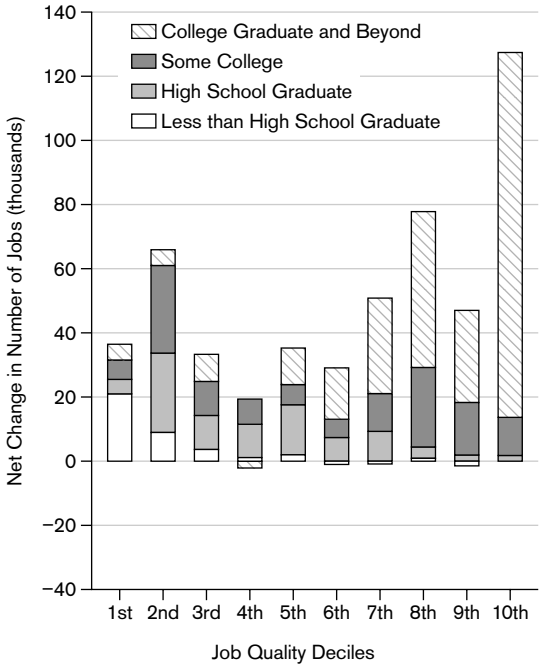

FIGURE 1.26 California Job Growth by Job Quality Decile, Full-Time Asian Immigrant Workers Stacked by Education, 1994–2000.

parate educational levels of the two populations. Figure 1.25 shows the distribution of job growth among Latino immigrants of varying education levels. Although significant numbers of highly educated Latinos had jobs in the bottom three deciles, those in the lowest educational category (not having completed high school) were particularly concentrated there. By contrast, Asian immigrants had much higher average levels of education and tended to be concentrated in the upper deciles, as Figure 1.26 shows.

A TALE OF TWO CITIES: JOB GROWTH IN THE LOS ANGELES AND SAN FRANCISCO BAY AREAS

The statewide trends we have just reviewed obscure critically important differences between the state's two largest metropolitan areas. Just as the polarization of job growth was more extreme in California than in the United States as a whole during the economic expansion of the 1990s, it was even more extreme in the Los Angeles area than in California as a whole. The situation in the San Francisco Bay Area, however, was entirely different: There, the 1990s expansion generated virtually no polarization. Instead, job growth was heavily concentrated in the upper deciles of

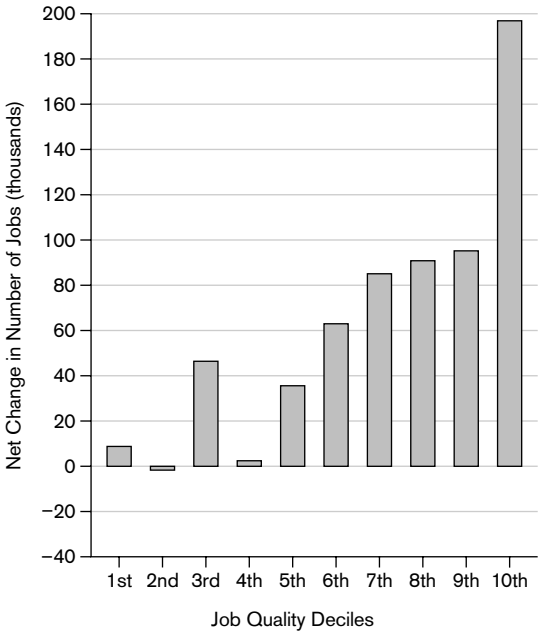

FIGURE 1.27 Bay Area Job Growth by Job Quality Decile, Full-Time Workers, 1992–2000.

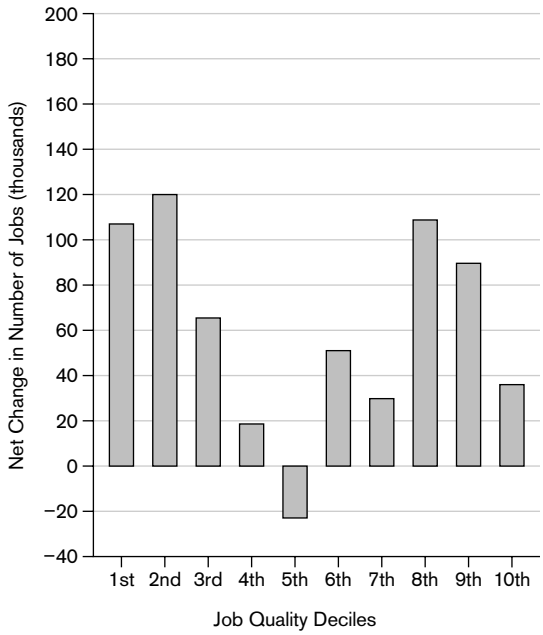

FIGURE 1.28 L.A. Area Job Growth by Job Quality Decile, Full-Time Workers, 1992–2000.

the job-quality distribution. Figures 1.27 and 1.28 portray this regional contrast vividly.[16]

As depicted in Figures 1.29 and 1.30, these two metropolitan areas also differ when we compare the distribution of all jobs (not just the newly created ones) over the job-quality deciles in the year 2000—at the end of the 1990s expansion. Examined from this angle, the contrast between the two regions is not nearly as extreme, suggesting that the north-south divergence is a recent development, rather than the result of some longstanding regional difference. For example, one might expect to see more high-quality jobs in the San Francisco Bay Area because unionization rates were historically higher there than in the L.A. area. But the gap between the two areas' unionization rates has in fact narrowed slightly over the past decade, so this cannot explain the divergence shown in Figures 1.27 and 1.28.[17]

16. The CPS data for these two areas are for two Consolidated Metropolitan Statistical Areas (CMSAs): the Los Angeles–Anaheim–Riverside CMSA, and the San Francisco–Oakland–San Jose CMSA. In the text all references to "Los Angeles" refer to the former CMSA, and all references to "the San Francisco Bay Area," "the Bay Area," or "San Francisco–San Jose" refer to the latter CMSA.

17. In 1991, 17.6 percent of wage and salary workers were union members in the Los Angeles metropolitan area, while the comparable figure for the San Francisco metropolitan area was 19.8 percent. The comparable figures for 2001 were 15.6 percent and 16.8 percent, respectively (see Hirsch and Macpherson 2002: 41, 45, 123, 127).

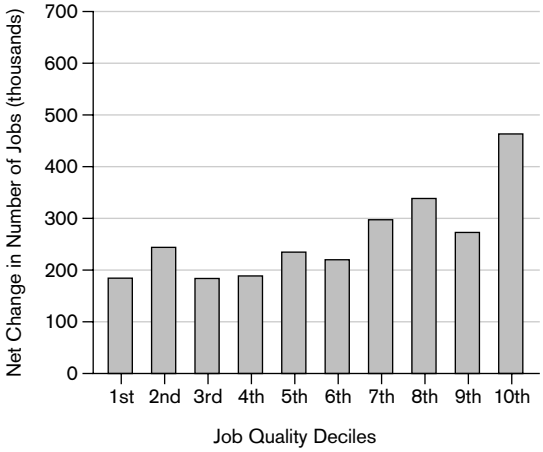

FIGURE 1.29 Bay Area Distribution of Workers across Job Quality Deciles, Full-Time Workers, 2000.

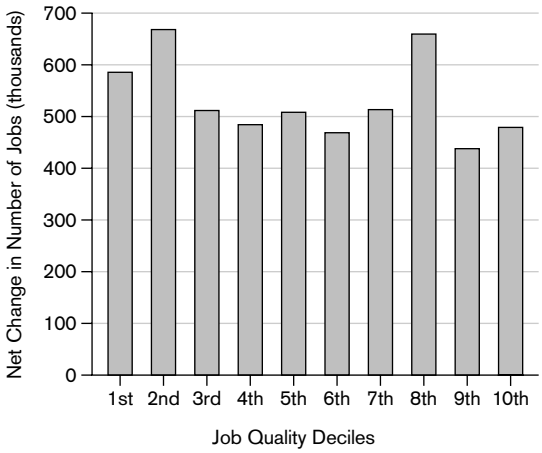

FIGURE 1.30 L.A. Area Distribution of Workers across Job Quality Deciles, Full-Time Workers, 2000.

The striking difference between California's two largest metropolitan areas instead reflects markedly different patterns of labor demand, due in turn to the distinctive composition of occupational and industrial growth in each area during the 1990s. As Figures 1.31 and 1.32 show, one key dimension of the contrast involves "high technology" occupations and industries.[18] In Los Angeles high-tech job growth was modest during the 1990s and almost entirely concentrated in the upper job-quality deciles, while large net job losses occurred in the middle deciles, presumably because of the precipitous decline of Southern California's aerospace sector in the aftermath of the Cold War. By contrast, high-tech occupations and industries accounted for the vast majority of the job growth in the Bay Area during the 1990s, especially in the upper deciles.

Consistent with the influence of high-technology jobs, job growth among highly educated workers has been far more substantial in the Bay Area than in the Los Angeles area, as Figures 1.33 and 1.34 show. It is also striking, though, that there was significant growth at the bottom of the labor market even among college-educated workers in the Los Angeles area.

18. Our definition of high-technology industries follows Wright and Dwyer (2002) and includes drugs; ordnance; office and accounting machines; computers and related equipment; radio, TV, and communication equipment; electrical machinery, equipment, and supplies; aircraft and parts; guided missiles, space vehicles, and parts; scientific and controlling instruments; medical, dental, and optical instruments and supplies; communications; radio and television broadcasting and cable; telephone communications; telegraph and miscellaneous communications services; professional and commercial equipment and supplies; electrical goods; computer and data processing services; as well as the following high-tech occupations: engineers; mathematical and computer scientists; natural scientists; health diagnosing occupations; health assessment and treating occupations; technicians and related support occupations; computer equipment operators; and communications equipment operators.

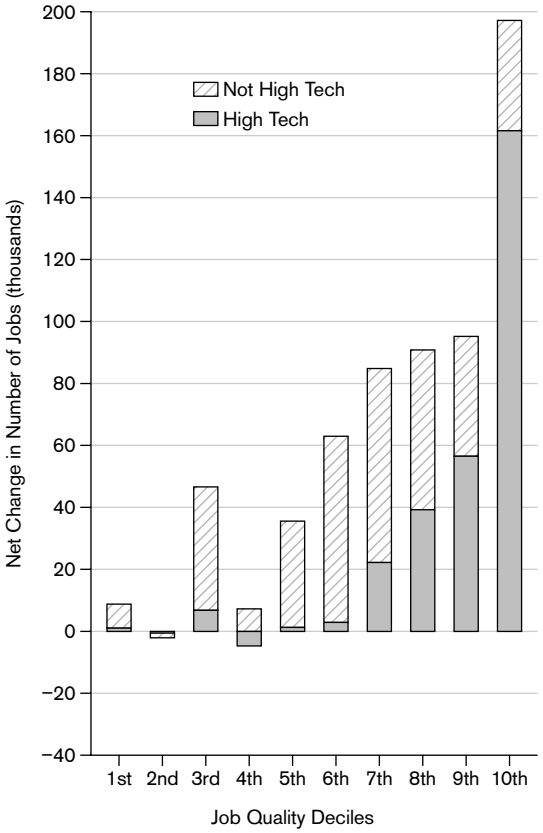

FIGURE 1.31 Bay Area Job Growth by Job Quality Decile, Full-Time Workers Stacked by Whether Job Is in High-Tech Sector, 1992–2000.

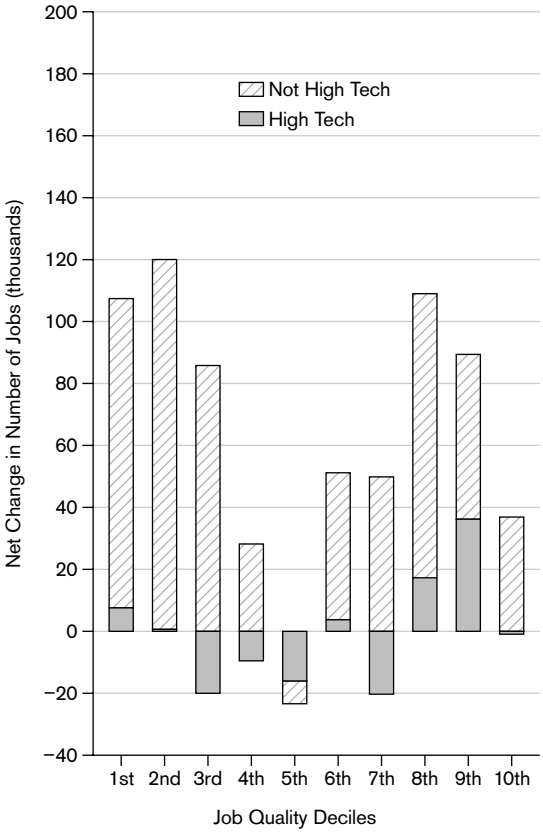

FIGURE 1.32 L.A. Area Job Growth by Job Quality Decile, Full-Time Workers Stacked by Whether Job Is in High-Tech Sector, 1992–2000.

That the pattern of job growth in the Bay Area is a recent development and largely a product of the region's concentrated high-tech growth is further confirmed by data from the 1980s. Figure 1.35 shows that during the expansion of 1983–90,[19] job growth in the San Francisco area was far more polarized than in the 1990s (compare Figures 1.35 and 1.31), but the high-tech sector was already producing large numbers of high-quality jobs. The L.A. area, as Figure 1.36 shows, had more low-end growth in the 1980s than did the Bay Area (and much less growth in high-tech jobs), but otherwise the job-growth distributions in the two regions were much more similar in the 1980s expansion than in that of the 1990s. Indeed, the north-south contrast almost entirely disappears if we exclude the high-tech sector from the analysis of the 1980s data.

The disproportionate magnitude of job growth toward the upper end of the distribution in the Bay Area in the 1990s was an important phenomenon in its own

19. The 1980s economic expansion actually started in 1982, but we use 1983 as the beginning year in this analysis because there was a change in the CPS occupation and industry coding classifications between 1982 and 1983.

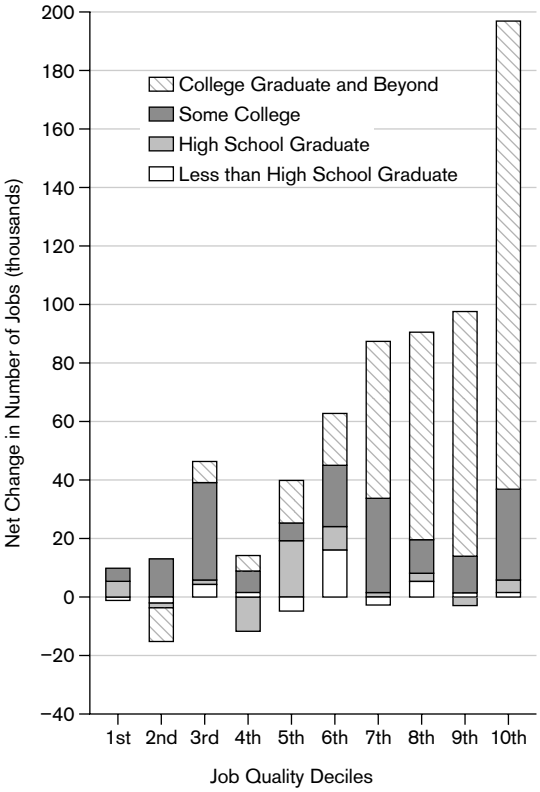

FIGURE 1.33 Bay Area Job Growth by Job Quality Decile, Full-Time Workers Stacked by Education, 1992–2000.

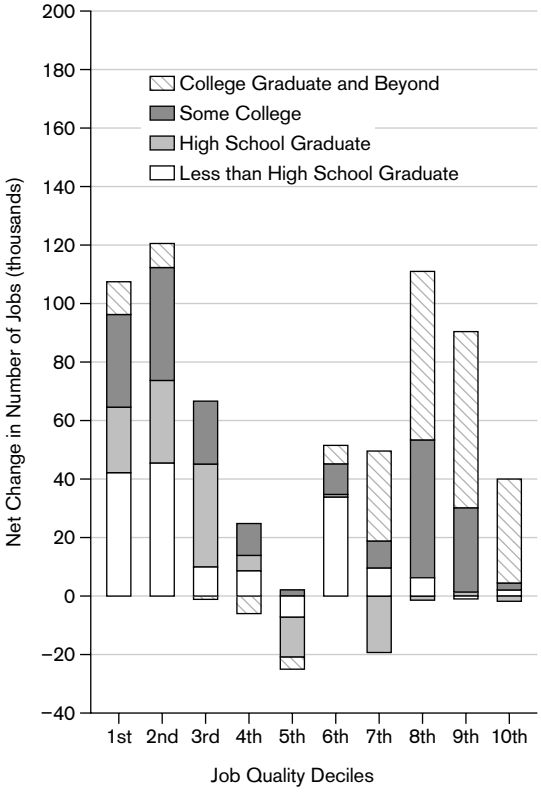

FIGURE 1.34 L.A. Area Job Growth by Job Quality Decile, Full-Time Workers Stacked by Education, 1992–2000.

right and one that has had positive effects on the labor market there. On one level, the pattern is hardly surprising; after all, as everyone "knows," the iconic industry of the new economy—the high-tech computer sector—is highly concentrated in the San Francisco–San Jose region. And yet, the fact that the pattern of job growth in the rest of California—and especially in Los Angeles, the nation's second largest metropolis—was so different suggests that the core occupations and industries of the new economy may be geographically bounded and dependent on a more ethnically diverse and less salutary political-economic configuration that prevails elsewhere in the state. Thus, even if the Bay Area's job-growth patterns appear to confirm the claims of new-economy boosters, those patterns are in no way representative of the larger state or national picture. Our analysis suggests precisely the opposite: that the San Francisco–San Jose metropolitan area is a highly unusual labor market.

The distinctive patterns of job growth in these two cities have important links to the contrasting racial and ethnic composition of their populations and to their distinctive configurations of immigration (and out-migration). A comparison of Figures

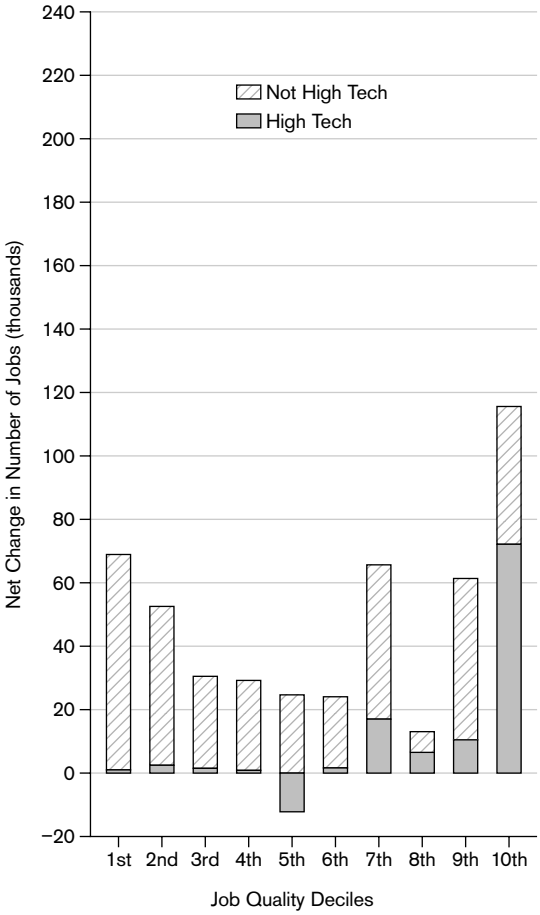

FIGURE 1.35 Bay Area Job Growth by Job Quality Decile, Full-Time Workers Stacked by Whether Job Is in High-Tech Sector, 1983–1990.

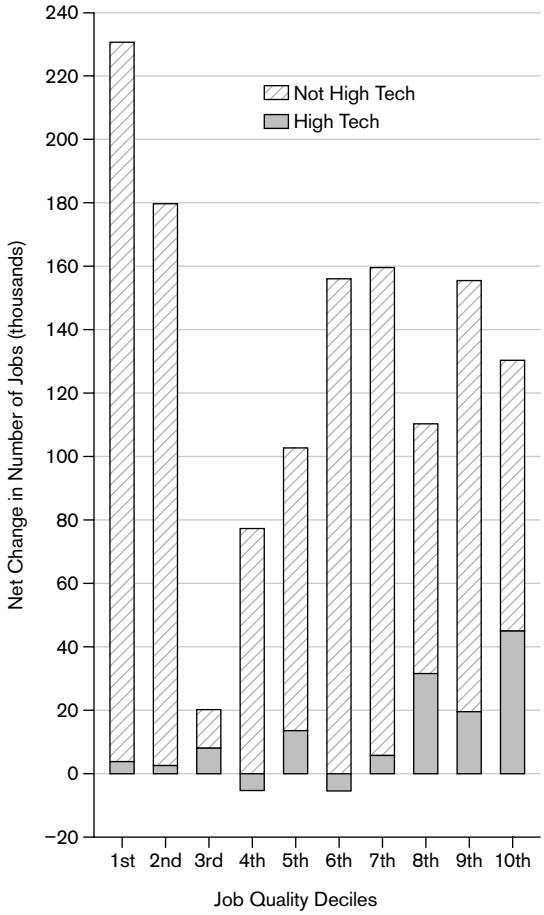

FIGURE 1.36 L.A. Area Job Growth by Job Quality Decile, Full-Time Workers Stacked by Whether Job Is in High-Tech Sector, 1983–1990.

1.37 and 1.38 reveals sharp contrasts in the racial composition of job growth between the two metropolitan areas, especially for Anglos. Anglos in the L.A. area experienced net job losses in almost every job-quality decile during the 1990s expansion (with modest growth only in the bottom and the ninth deciles), in part reflecting the net out-migration of Anglos during the early part of the decade. In the Bay Area, by contrast, Anglos witnessed net job growth over the decade, with nearly all of it concentrated in the top four deciles. Another, equally striking contrast here is that job growth among Latinos was far more extensive in the L.A. area than in northern California, across the job-quality spectrum. In both cases job growth among Latinos was concentrated in the lower deciles, but the volume of that growth was far greater in the Southland than in the Bay Area.

Immigrants, especially Latino immigrants, make up a larger proportion of the

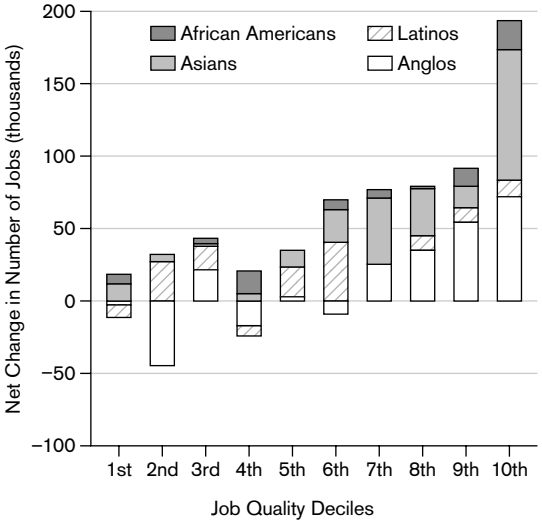

FIGURE 1.37 Bay Area Job Growth by Job Quality Decile, Full-Time Workers Stacked by Race, 1992–2000.

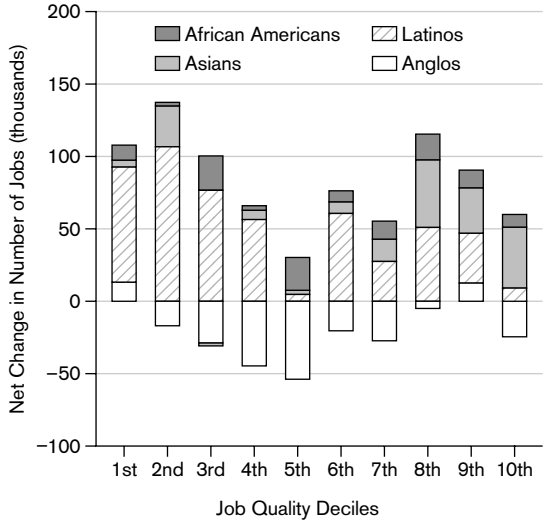

FIGURE 1.38 L.A. Area Job Growth by Job Quality Decile, Full-Time Workers Stacked by Race, 1992–2000.

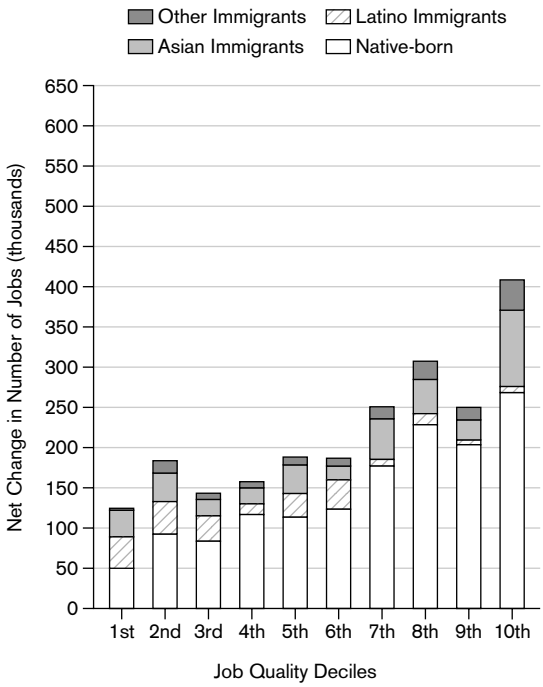

FIGURE 1.39 Bay Area Distribution of Workers across Job Quality Deciles, Full-Time Workers Stacked by Immigrant Status, 2000.

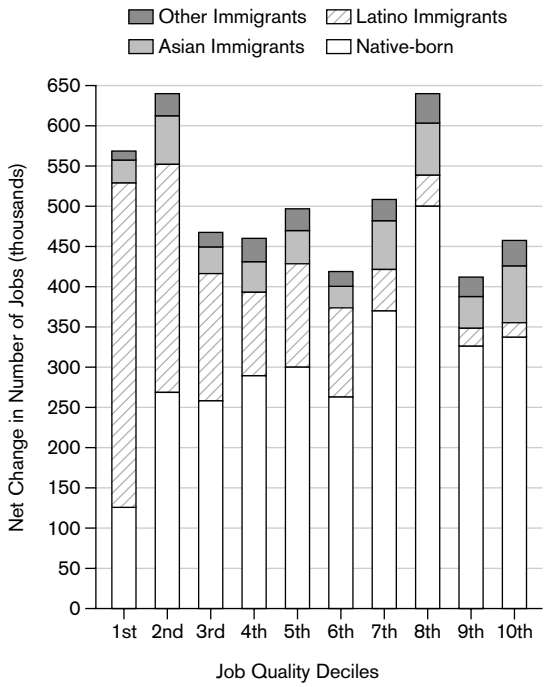

FIGURE 1.40 L.A. Area Distribution of Workers across Job Quality Deciles, Full-Time Workers Stacked by Immigrant Status, 2000.

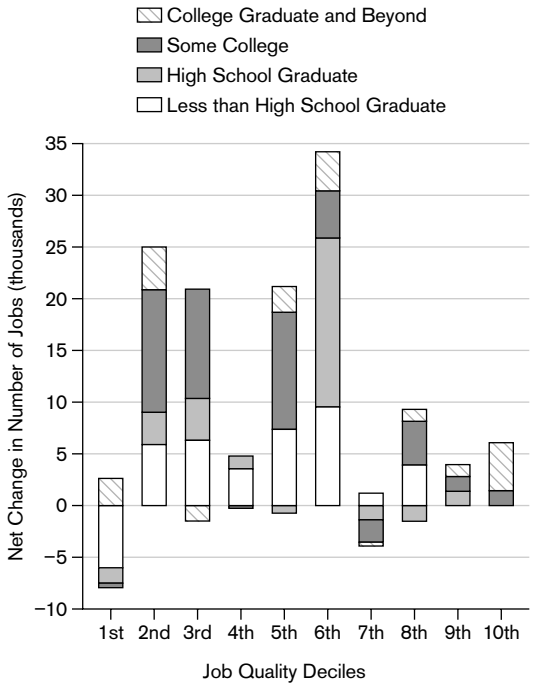

FIGURE 1.41 Bay Area Job Growth by Job Quality Decile, Full-Time Latino Immigrant Workers Stacked by Education, 1996–2000.

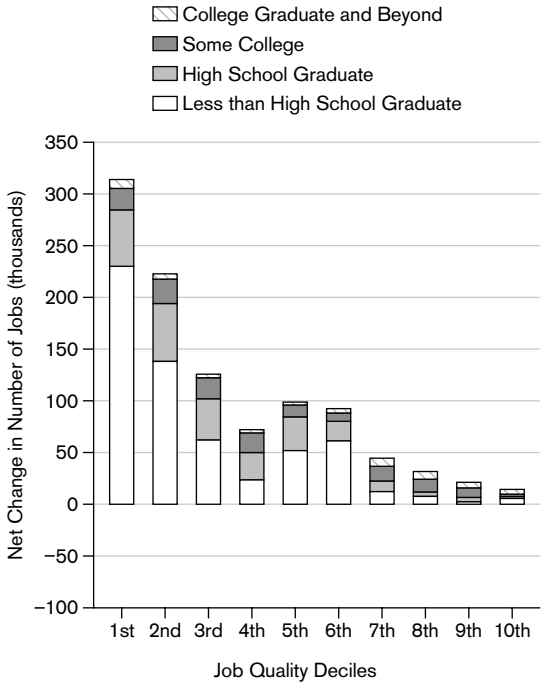

FIGURE 1.42 L.A. Area Job Growth by Job Quality Decile, Full-Time Latino Immigrant Workers Stacked by Education, 1996–2000.

labor force in Los Angeles than in northern California, as Figures 1.39 and 1.40 show. Over the 1990s, job growth among foreign-born Latinos was disproportionately concentrated in the lower deciles in both metropolitan areas, but their numbers were much larger in Los Angeles. Immigration has been a major contributor to growth in the labor force throughout California, but in the San Francisco–San Jose area, Asians form a larger share of the total growth than they do in the L.A. area, where Latinos predominate.

Some commentators argue that the large influx of immigrants with limited education has been an important factor shaping the new inequality in California generally, and in southern California in particular (see Reed 1999; Daly, Reed, and Royer 2001). But it is also the case that immigration flows are highly responsive to labor demand. Thus, less educated immigrants may be clustered in Los Angeles because that is where low-wage, low-skill jobs are most plentiful, rather than the other way around. Similarly, their more educated counterparts may be drawn to the very different labor market in northern California's major metropolitan center, even though the high overall educational level of the labor force there sets limits on opportunity (see Ellis 2001: 137).

This view is consistent with the data in Figures 1.41 through 1.44, which show the composition of job growth in the two cities during the late 1990s for Latino

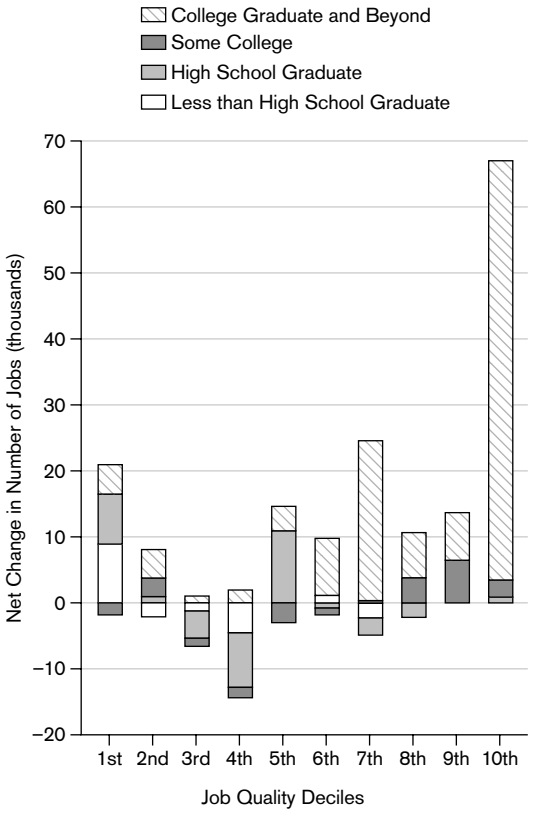

FIGURE 1.43 Bay Area Job Growth by Job Quality Decile, Full-Time Asian Immigrant Workers Stacked by Education, 1992–2000.

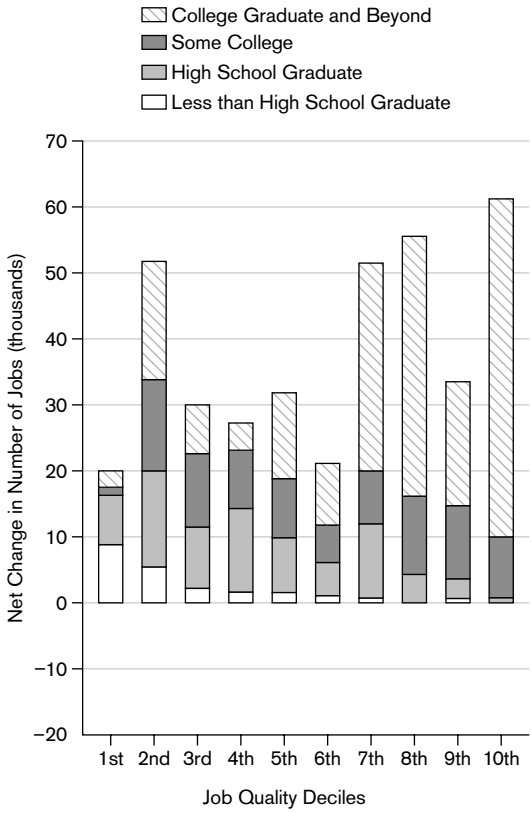

FIGURE 1.44 L.A. Area Job Growth by Job Quality Decile, Full-Time Asian Immigrant Workers Stacked by Education, 1996–2000.

and Asian immigrants by educational level.[20] Among college-educated Asian immigrants in the Bay Area, there was substantial growth in high-quality jobs (Figure 1.43), while in Los Angeles growth in low-quality jobs was the dominant tendency among less-educated Latino immigrants (Figure 1.42). The relationship between education and job growth is more complicated, however, for Latino immigrants in the Bay Area and for both Asian and Latino immigrants in the Los Angeles area. Job growth among Latino immigrants in the Bay Area was disproportionately concentrated in the bottom half of the job-quality spectrum over the nineties, even among the highly educated (Figure 1.41). This suggests that obstacles other than a lack of education remain for Latino immigrant workers, even in the state's least polarized major labor market. In Los Angeles, too, substantial job

20. Unfortunately, the CPS did not collect data on nativity until 1994, and the sample sizes are too small at the metropolitan area level to be useful for nativity-focused analysis for 1994 and 1995. Thus, these figures present data for 1996–2000 only.

growth occurred among college-educated immigrants (both Latino and Asian) in the lower deciles, although the bulk of job growth within this population (and especially among Asians) was in the upper deciles. The extreme polarization of job growth in the L.A. area may set limits on job opportunities, even for some highly educated workers.[21]

CONCLUSION

Our analysis shows that job growth in California during the 1990s was highly polarized, with large numbers of high-quality jobs *and* low-quality jobs being generated, but with relatively little growth in the middle range. This polarization was even more extreme in California than in the United States as a whole during the 1990s—in part because of the polarization *within* the state between the exceptional case of San Francisco–San Jose, the state's key node of high-technology, "new economy" growth, and the rest of the state. The contrast was especially sharp between the San Francisco Bay Area and the state's largest metropolis, Los Angeles, where low-quality jobs grew on a massive scale.

These late-twentieth century developments suggest the likely shape of the twenty-first century economy, given that the focus of our analysis is on newly generated jobs. The polarization evident in the 1990s expansion also stands out sharply as a new historical development: the pattern of job growth in California (and in the United States) during the 1990s contrasts dramatically with that during the 190s, as we have shown.

Whereas in the past jobs were highly polarized along gender lines, by the 1990s polarization among women had emerged alongside the longstanding pattern of gender segregation. Although the job-growth patterns of the 1990s exhibit substantial intragroup polarization for some racial and ethnic groups as well, workforce divisions by racial, ethnic, and nativity groups remain extremely salient, in some instances irrespective of educational levels. Polarization, in short, exists within as well as among groups marked by gender, race, ethnicity, and nativity.

The implications of these emerging patterns of job polarization raise serious concerns about the structure of opportunity for future generations of Californians. Historically, in the United States generally and California in particular, a labor market with abundant middle-range jobs offered the possibility to disadvantaged groups, and especially immigrants, of ascending the ladder from low-wage jobs

21. Our finding that highly educated people appear in the bottom deciles may also reflect the fact that "jobs," as defined by our occupation-by-industry matrix, are internally heterogeneous in regard to earnings. Each job contains individuals with a variety of earnings, so that even a job whose median earnings place it in one of the bottom deciles may include some individuals with high earnings (and possibly, high educational attainment as well).

into the middle class and beyond. Although that advancement was never as easy a task as popular mythologies about the "American dream" proclaimed, in the late twentieth century it became increasingly difficult, simply because the new economy generated relatively few middle-range jobs. If this polarization and the decline in "middle class" jobs are not reversed, California's working people, and especially the massive numbers of new immigrants and their children, may well find that economic opportunities are far more elusive for them than they were for previous generations.

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APPENDIX. Selected Characteristics of the Six Largest Jobs in Each Job Quality Decile, California, 1992–2000

Job-Quality Decile[a]	*Median Hourly Earnings, 1992–2000*	*The Six Jobs with the Largest Number of Full-Time Workers*[b]		*Number of Job Holders*		*% Share of Jobs in Decile*	*% Share of Employment in Decile*		*Number of Jobs in Decile*
		Occupation	*Industry*	*1992*	*2000*	*1992*	*1992*	*2000*	*2000*
Lowest Decile	$ 6.58	Food services	Retail trade	256,728	278,923	26.46	10.13	10.87	32
	6.50	Farm workers	Agriculture	225,455	319,040	23.24			
	7.15	Machine operators/tenders	Manufacturing, nondurable goods	211,345	248,424	21.79			
	5.96	Private household services	Private household services	60,548	90,035	6.24			
	7.00	Personal services	Social services	31,799	50,864	3.28			
	7.00	Machine operators/tenders	Personal services	26,601	29,203	2.70			
2nd Decile	$ 8.45	Retail sales workers	Retail trade	292,992	385,622	27.17	11.27	11.59	51
	9.33	Machine operators/tenders	Manufacturing, durable goods	134,453	138,116	12.47			
	8.37	Health services	Other medical services[c]	65,170	76,939	6.04			
	7.51	Cleaning/building services	Business services	62,440	66,237	5.79			
	8.26	Protective services	Business services	43,014	44,652	3.99			
	8.72	Freight/stock handlers	Retail trade	39,267	57,903	3.64			
3rd Decile	$ 9.66	Fabricators, assemblers, inspectors, samplers	Manufacturing, durable goods	156,317	153,107	18.59	8.78	8.94	58
	9.91	Clerical & other administrative support	Retail trade	72,516	75,960	8.62			
	10.80	Clerical & other	Manufacturing, nondurable goods	56,338	62,792	6.70			
	11.25	Clerical & other administrative support	Wholesale trade	51,992	57,232	6.18			
	10.92	Clerical & other administrative support	Other medical services[c]	50,705	57,319	6.03			
	10.73	Construction laborer	Construction	46,678	96,783	5.55			

4th Decile	$12.27	Clerical & other administrative support	Finance, insurance, & real estate	177,558	163,859	18.89	9.82	8.31	50
	12.27	Clerical & other administrative support	Manufacturing, durable goods	86,687	72,911	9.22			
	12.00	Mechanics/repairers	Automotive & repair services	66,341	77,451	7.06			
	12.40	Clerical & other administrative support	Transportation	45,430	85,566	4.83			
	12.40	Precision production	Retail trade	44,986	40,214	4.79			
	12.73	Secretaries, typists, & stenographers	Finance, insurance, & real estate	43,062	30,834	4.58			
5th Decile	$13.17	Precision production	Manufacturing, durable goods	194,944	197,907	19.37	10.52	9.16	33
	12.92	Sales supervisors/proprietors	Retail trade	189,222	222,932	18.80			
	13.72	Motor vehicle operators	Transportation	138,961	155,660	13.80			
	13.72	Other executives, administrators, & managers[d]	Retail trade	102,753	105,020	10.21			
	13.41	Precision production	Manufacturing, nondurable goods	68,339	60,187	6.79			
	13.23	Health technicians	Other medical services[c]	43,678	70,058	4.34			
6th Decile	$15.85	Construction trades	Construction	256,495	395,383	28.02	9.56	9.28	61
	14.00	Clerical & other administrative support	Public administration	76,833	78,635	8.40			
	15.00	Secretaries, typists, & stenographers	Other professional services[e]	56,592	33,925	6.18			
	14.41	Clerical & other administrative support	Communications/public utilities	49,971	43,029	5.46			
	16.10	Health technicians	Hospital services	43,234	51,094	4.72			
	15.10	Mechanics/repairers	Retail trade	42,547	54,482	4.65			

APPENDIX *(continued)*

Job-Quality Decile[a]	*Median Hourly Earnings, 1992–2000*	*The Six Jobs with the Largest Number of Full-Time Workers*[b]		*Number of Job Holders*		*% Share of Jobs in Decile*	*% Share of Employment in Decile*		*Number of Jobs in Decile*
		Occupation	*Industry*	*1992*	*2000*	*1992*	*1992*	*2000*	*2000*
7th Decile	$17.87	Sales reps, finance/business	Finance, insurance, & real estate	128,756	121,123	13.23	10.17	10.02	44
	17.43	Management related	Finance, insurance, & real estate	100,247	118,001	10.30			
	17.50	Sales reps, commodities	Wholesale trade	94,226	111,878	9.68			
	16.46	Mail/message distributors	Transportation	65,839	78,758	6.77			
	17.44	Other executive, administrators, & managers[d]	Other medical services[c]	55,428	63,920	5.70			
	16.88	Engineering & science technicians	Manufacturing, durable goods	47,463	45,427	4.88			
8th Decile	$20.62	Teachers except college & university	Educational services	253,170	374,614	22.36	11.83	12.29	56
	20.41	Other executives, administrators, & managers[d]	Finance, insurance, & real estate	108,175	148,053	9.56			
	20.38	Management related	Public administration	65,903	59,802	5.82			
	19.36	Management related	Manufacturing, durable goods	58,212	57,476	5.14			
	18.31	Sales supervisors/proprietors	Wholesale trade	50,339	72,708	4.45			
	20.32	Other executives, administrators, & managers[d]	Wholesale trade	46,358	30,902	4.09			

9th Decile	$21.00	Protective services	Public administration	139,664	131,501	18.21			
	22.53	Other executives, administrators, & managers[d]	Manufacturing, nondurable goods	73,985	87,165	9.64			
	23.00	Other executives, administrators, & managers[d]	Business services	61,080	152,642	7.96			
	22.90	Public administration	Public administration	60,379	68,681	7.87	8.01	8.72	43
	22.82	Other executives, administrators, & managers[d]	Construction	48,695	60,636	6.35			
	21.04	Other executives, administrators, & managers[d]	Transportation	42,069	55,969	5.48			
Highest Decile	$26.73	Other executives, administrators, & managers[d]	Manufacturing, durable goods	152,787	197,548	16.10			
	27.68	Engineers	Manufacturing, durable goods	127,915	122,545	13.48			
	23.83	Health treating/assessment	Hospital services	105,401	115,171	11.12	9.91	10.83	51
	23.95	Other executives, administrators, & managers[d]	Educational services	68,990	92,167	7.27			
	24.55	Teachers: college & university	Educational services	46,785	56,570	4.93			
	27.33	Engineers	Other professional services[e]	41,810	47,154	4.41			

SOURCE: U.S. Current Population Survey.

[a] Job quality is defined by median hourly earnings among full-time workers in each job. Each decile represents roughly one-tenth of all full-time California workers in 1992. (See the "Methods and Data" section in text for more details.)

[b] Within each decile, these were the six jobs with the largest number of full-time workers in 1992.

[c] "Other medical services" are those other than "hospital services."

[d] "Other executive, administrators, and managers" are those other than "administrators and officials, public administration," "supervisors and proprietors, sales occupations," and "supervisors—administrative support."

[e] "Other professional services" are other than those in all the other service industries: "business," "entertainment and recreation." "hospital," "other medical," "educational," "social," "public administration," and "finance, insurance, and real estate."