The Importance of Accounting for Job Quality

Charting U.S. Economic Performance with Alternative Labor Market Indicators

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These authors argue that traditional measures of employment and unemployment are not adequate. In the traditional data, a low-paying job counts as much as a high-paying one. The authors create two new indicators to determine how well Americans are doing. They show that a strikingly low percentage of American workers have what the authors define as adequate jobs, although the rate has improved since 1979. Serious job-quality deterioration has occurred, however, for those, especially men, who have at least a high school diploma but no more than two years of college.

No single government statistic has a weightier impact on public policy, the stock market and even the public mood than the monthly jobs number. For just about everyone from Joe Sixpack to the Federal Reserve Chairman, the employment figures released on the first Friday of every month are a short-hand way to measure the economy’s strength.

—Wall Street Journal (April 23, 2007)\(^1\)

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“This economy is powerful, productive and prosperous,” George Bush boasted recently, and by many yardsticks he is right. Growth is fast, unemployment is low and profits are fat. . . . Yet many people feel unhappy about the American model—not least in the United States. Only one in four Americans believes the economy is in good shape. While firms’ profits have soared, wages for the typical worker have barely budged. The middle class—admittedly a vague term in America—feels squeezed. A college degree is no longer a passport to ever-higher pay.

—The Economist (June 17, 2006)²

The U.S. economy is widely recognized as the world standard for job creation.³ At the time of this writing, unemployment has dropped to 4.4 percent. This is considerably below the rate reached at equivalent points in the two previous recoveries: 5.6 percent in 1995 (1995.2–1996.1) and 6.2 percent in 1987 (Figure 1). The average employment rate for 2006 was 63.3 percent, about the same as in 1995 (62.8 percent) but well above 1987 (61.5 percent) (Figure 2). Looking back over the last four decades, Figures 1 and 2 show that only the Clinton boom of 1996–2000 produced superior performance by these two standard indicators. As the quotation from the Wall Street Journal perfectly illustrates, the usual practice in both media and professional circles has been to rely on the government’s unemployment and employment numbers in assessing labor market performance.⁴

Both are “quantity” indicators, designed to measure the numerical adequacy of job opportunities. The unemployment rate counts the number of those who are working-age, not employed, and actively looking for work as a share of the labor force (the employed and the unemployed). The employment rate measures the share of the working-age population employed for pay for at least an hour a week. Both are useful indicators of labor market performance, especially if used together (for example, the unemployment rate may “improve” if workers’ discouragement over their job prospects causes them to drop out of the labor market, but this will tend to produce a decline in the total employment rate).

But neither the official unemployment rate nor the official employment rate distinguishes between jobs of different quality. A job paying
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Figure 1. BLS Unemployment Rate by Quarter, 1979:1 to 2006:4 (age 16+)

Figure 2. BLS Employment Rate by Quarter, 1979:1 to 2006:4 (age 16+)
the minimum wage counts equally in computing these rates as a job paying a six-figure annual salary. Nor do the official unemployment and employment rates distinguish between those who work part-time voluntarily and those who work part-time only because they cannot find full-time work. The basic premise of our Alternative Labor Market Indicator project is that labor market performance should reflect the adequacy of earnings as well as the adequacy of job opportunities. Thus, our assumption is that the performance of a labor market would be judged superior if it produced equivalent unemployment and employment rates with lower wage inequality, a lower incidence of low-wage jobs, and a lower involuntary part-time rate.

In this paper we introduce three new quality-adjusted labor market indicators that are similar in construction to the official Bureau of Labor Statistics’ unemployment and employment rates. Since the living standards of the vast majority of workers are determined almost exclusively through labor earnings, the most obvious and important indicators of job quality are hourly wages and hours of work (the next section explains our rationale for not also explicitly accounting for various measures of benefits, working conditions, and worker rights). Our measure of wage adequacy is similar to the Organization for Economic Cooperation and Development’s (OECD’s) measure of low earnings: two-thirds of the median hourly wage for full-time workers (the OECD measure uses weekly earnings). Our measure of the adequacy of working hours is the standard involuntary part-time employment rate.

With these measures of job quality, we develop three Labor Market Indicators. The first is the Underemployment Rate (UER): the share of the labor force unemployed, working involuntarily part-time, or paid very low wages. The second is the Adequate Employment Rate (AER): the share of the working-age population employed at wages above the low-wage threshold and not working involuntarily part-time. These measures are directly comparable to the standard unemployment rate (UR) and employment rate (ER), except that we cover only wage and salary workers (we exclude the self-employed). We also present results for the Low-Wage Share of Employment (LWS): the share of employed
wage and salary workers earning below the low-wage threshold.

After a brief overview of wage inequality and low pay in the United States, which motivates the development of alternative quality-adjusted indicators, the second section describes the construction of these measures. The third section then presents the trends for our three alternative indicators for the entire workforce over 1979–2006. The general stability of the incidence of low wages (LWS) over this period produces AER and UER trends that tend to mirror the standard UR and ER indicators—both show notable improvement over the last three business-cycle recoveries. But the fourth section shows that, as measured by our alternative indicators, labor market outcomes for young, moderately educated workers have worsened dramatically over this period, especially in recent years and especially for men.

**U.S. Exceptionalism: Low Wages and High Inequality**

The U.S. economy is renowned not only for job creation but also for high earnings inequality, characterized not just by very high earnings at the top but by very low earnings at the bottom. According to OECD figures, male earnings inequality as measured by the ratio of the ninetieth percentile worker to the tenth (the 90/10 ratio) was just over 3.5 in 1980 and rose fairly steadily to about 4.7 in 1995, where it remained for the rest of the decade. Female inequality has also shown a strong upward trend. In contrast, continental Europe and the Nordic countries show 90/10 ratios that were flat over this period in just the 2–3 range. France is the exception—also stable but in the 3.3–3.4 range (Howell and Huebler 2005, figures 2.3 and 2.4).

Wage inequality *within* both the top half of the earnings distribution (measured by the 90/50 ratio) and the bottom half (the 50/10 ratio) increased sharply in the 1980s, but only inequality at the top continued to rise dramatically in the 1990s (Autor et al. 2006, figure 1). Using IRS data, Piketty and Saez (2006) show that this growth was driven almost entirely by the increasing concentration of income at the very top of the distribution (shown by the explosion of income share of the top 1 percent and, even more strikingly, the top 0.1 percent).
These increases were far greater than in any other developed country, though both the UK and Canada show notable increases (Piketty and Saez 2006, figures 3a and 3b).

While the very top of the income ladder has pulled away from the rest, most workers are likely to gauge their relative well-being less by reference to how the top 1 percent is faring than by how well they are doing over time and by how their pay compares with that of other workers in their part of the wage distribution. Unfortunately, for nearly all workers, real wages have been stagnant for decades, and the incidence of low wages (measured against the median) has risen. Levy and Temin (2007, figure 9) show that even for male prime-age workers with moderate to fairly high educational attainment (high school degree and college degree holders, respectively), real earnings have been essentially flat since the mid-1970s. And over this period, the OECD’s measure of the incidence of low wages (those paid less than two-thirds of the median weekly earnings for full-time workers) rose to about 25 percent of all U.S. employees. This compares to just 10–15 percent for Australia, Germany, and the Netherlands and about 7 percent for Belgium (Howell 2005, figure 4).

**Three Alternative Labor Market Indicators**

The official unemployment and employment rates are designed by distinguishing between two parts of a given population: The unemployment rate starts with the labor force and distinguishes the employed from those without a job but actively looking for work; the employment rate sets the employed against the entire working-age population.

Our goal has been to incorporate two simple measures of job quality using the same approach. We distinguish “low” wages from the full wage distribution and “involuntary” part-time workers from all other employed workers. Of course, benefits and various nonpecuniary factors (e.g., working conditions and on-the-job rights and voice) are also critically important dimensions of job quality. But there can be little doubt that, notwithstanding the textbook theory of compensating
differentials, very low hourly wages and involuntary part-time work are associated with lower benefits, worse working conditions, and more limited worker rights/voice. On this view, it seemed preferable to keep the indicators as simple as possible by measuring job quality with hourly wages and involuntary part-time work. This would also facilitate future work on international comparisons.

This approach led to the development of three alternative labor market indicators. These are measured with respect to employment, the labor force, and the working-age population. The low-wage share of employment (LWS) is measured by taking those paid less than two-thirds of the median hourly wage for full-time wage and salary workers as a share of total wage and salary employment. The second is the underemployment rate (UER): unemployed, low-paid (by the above definition), and involuntary part-time workers as a share of the labor force. The third is the adequate employment rate (AER): those employed at wages above the low-wage threshold and not working involuntarily part-time as a share of the working-age civilian population.

Many alternative “low-wage” thresholds could be argued to be equally reasonable. We use a relative measure—two-thirds of the median hourly wage for all full-time workers—rather than a quasi-absolute one, such as the wage that would support a particular number of household members at a particular budget level. There are three main reasons. First, the household budget threshold is ultimately relative as well, since its determination depends on decisions about what is an “adequate” budget for a household of a particular size (say, a basic food budget multiplied by three), which in turn reflect prevailing social norms and a particular economic and social context. Second, our concern is to produce indicators for assessing labor market performance, not the adequacy of household income. For this purpose, it is a job’s wages and hours that matter. In addition, adequacy of household income requires adjusting for household size and composition, an inherently difficult and controversial project. And third, a relative measure facilitates cross-country comparisons. In particular, the two-thirds of the median full-time wage is similar to that used by international research.
organizations like the OECD. The international norm is to identify the “poverty wage” as half the median wage.

Figure 3 shows median and mean hourly wages for full-time wage and salary workers from 1979 to 2006 (in 2006 dollars). The median rose slowly from $14.09 in 1979 to $15.28 in 1997, increased steadily to $16.78 over the next five years (the Clinton boom), and has fallen slightly since (to $16.48 in 2006).

The mean hourly wage appears as the trend at the top of Figure 3. It began at a little more than $2 higher than the median in 1979 (14 percent higher), rose to $18.32 (20 percent higher) and still faster to $20.30 in 2002 (21 percent higher), before falling back to $19.25 in 2006 (17 percent higher). The growing gap between the mean and the median through 2002 reflects the rising share of income going to the top of the earnings distribution. This trend has continued even more dramatically since the early 2000s (see the introduction), but it is increasingly concentrated in the top 1 percent (and 0.1 percent), which the adjustments for the top coding of the Current Population
Survey (CPS) data fail to capture (on the top coding in these data, see Schmitt 2003).

The trend shown at the bottom of Figure 3 is our low-wage threshold—two-thirds of the median full-time hourly wage. This increased very gradually from $9.79 in 1979 to $10.18 in 1997, rose more rapidly to $11.19 in 2002, and has since dropped back to $10.99.\textsuperscript{6}

**Post-1979 Trends in the Alternative LMIs**

The official unemployment and employment rates shown in Figures 1 and 2 present a strikingly positive portrait of U.S. labor market performance over the last two-and-a-half decades. The long-run improvement in these standard measures is clearly evident in the trends and is confirmed by the rates shown at the five-year mark in each business cycle.\textsuperscript{7}

Figure 4 shows that our key measure of changes in job quality—the trend in the low-wage share of wage and salary employment—also shows improvement over the three business cycles, although not nearly as strongly as the two conventional quantity measures. The LWS fell 1.6 percentage points over these two decades, from 31.1 percent in 1987 to 29.5 percent in 2006. Less impressively, this improvement put the LWS exactly where it was in 1979. It seems that a stylized fact of the U.S. labor market is that, by the widely accepted two-thirds of the full-time median measure, 30 percent of U.S. workers are paid low wages.

Since the LWS is by far the largest component of our two alternative indicators, its stability means that the trends in the UER and AER are driven by their quantitative components—the unemployment rate and employment rate, respectively. Figure 5 shows that the 1980–82 recessions pushed the UER up from 35 percent in 1979 to over 42 percent in 1983. It then declined over each of the three business-cycle midpoints, from 36.9 percent in 1987 to 33.8 percent in 2006. Even at the height of the Clinton boom, about one-third of the U.S. labor force was underemployed. Although it is much less a constant than the low-wage share of employment, we can say that a second stylized
fact since the late 1970s is that at least one-third of the U.S. labor force is underemployed. Figure 6 shows that the AER was 40.4 percent in both 1979 and 1987, rose to 41.3 percent in 1995, and improved further to 42.8 percent in 2006. This also suggests a third stylized fact: just over two-fifths of the U.S. working age population is employed in “adequate” wage and salary jobs.

**Labor Market Outcomes for Young, Moderately Educated Workers**

While these underemployment and adequate employment rates are among the worst in the developed world (Howell 2005), the trends just documented appear quite impressive. The picture changes, however, when we turn to young, less educated workers. These we define as twenty- to thirty-four-year-olds with at least a high school degree and no more than fourteen years of schooling (two years of college). This is a particularly important population against which to judge labor market performance for at least two reasons: First, the economist’s
Figure 5. The SCEPA Underemployment Rate, 1979–2006 (age 16 +, seasonally adjusted with 3-quarter moving average)

Figure 6. The SCEPA Adequate Employment Rate, 1979–2006 (age 16 +, seasonally adjusted with 3-quarter moving average)
favorite solution to nearly all labor market problems is education and skills—the human capital strategy will be more effective the greater the incentive to invest in schooling by completing the high school degree and adding some college education. And second, the labor market conditions that young adults face may be a harbinger of the future for the entire workforce. In contrast, many older workers are protected against the downward wage effects and increased insecurity of the newly competitive labor market via institutions and social norms established earlier in the postwar period.

We begin with the low wage share of employment. Figure 7 shows that the rising (worsening) trend in the LWS followed the same pattern for male and female workers, but there was also a substantial convergence in the 1980s as the male incidence of low wages increased more rapidly. Thus, from 1979 to 1987, the young-male LWS rose from 18.1 percent to 28.7 percent, while the young-female rate rose only modestly, from 43.5 percent to 46.6 percent. Convergence continued over the next twenty years: the male LWS increased 8.9 percentage points to 37.6 percent in 2006; the female UER increased 5.8 percentage points to 52.4 percent.

Our underemployment and adequate employment indicators reflect these trends. Figure 8 shows a huge increase in underemployment for young male workers between 1979 and 1987: from 24.6 percent to 35.3 percent. It then continued to rise substantially over the next two decades: to 39.1 percent in 1995 and again to 43 percent in 2006. Underemployment rose much more gradually for female workers. From 48.8 percent in 1979 it rose fairly steadily to 56.3 percent in 2006.

Similarly, Figure 9 reports collapsing adequate employment rates for young, moderately educated men and gradually declining AERs for similarly defined women. In 1979, over 69 percent of these men were adequately employed. By 2006, less than half (48.8 percent) were adequately employed. Just over one-third of young, moderately educated females were adequately employed over most of this period, but that proportion has fallen to 31–32 percent since the last recession. The young, moderately educated female AER was just 31.2 percent in 2006.
Figure 7. The SCEPA Low-Wage Share of Wage and Salary Employment for Young Workers with Moderate Educational Attainment, 1979–2006 (age 20–34 with at least a high school degree and no more than 14 years of schooling)

Figure 8. The SCEPA Underemployment Rate for Young Workers with Moderate Educational Attainment, 1979–2006 (age 20–34 with at least a high school degree but no more than 14 years of schooling)
In sum, Figures 7, 8, and 9 show quite different results for young, moderately educated male and female workers: worse levels of performance for women but more rapidly declining performance for men. Since the late 1970s, young, moderately educated female workers show much worse levels of performance on our three alternative indicators than their male counterparts do, and these rates have worsened steadily from 1979 to 2006: The LWS rose from 42 to 52 percent; the UER rose from 49 to 56 percent; and the AER fell from 34 to 31 percent. But these changes were even worse for men: the LWS rose from 18 to almost 38 percent; the UER rose from just below 25 percent to 43 percent; and the AER plummeted from almost 70 percent to 49 percent.

A rising incidence of low-wage jobs explains the worsening UER and AER indicators for these young, moderately educated workers. What has happened to their real wages, and are particular demographic groups driving these results? Figure 10 contrasts the median real wage trend for young, moderately educated male workers with the median real wage for all full-time workers (age sixteen and up). The figure shows a “switch” in the early 1990s: Whereas the median for these

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**Figure 9. The SCEPA Adequate Employment Rate for Young Workers with the Lowest Educational Attainment, 1979–2006** (ages 16–34 with less than a high school degree)
Figure 10. Real Wages for Young Male Workers with Moderate Education Levels Compared to the Median Wage for All Full-Time Workers

Figure 11. Real Wages for Young Workers with Low Levels of Education Compared to the Economy-Wide Low Wage Threshold
Since female wages are much lower, Figure 11 shows the young, moderately educated female real wage set against our low-wage threshold—two-thirds of the median for all full-time workers. The same widening gap appears over the two-and-a-half decades. In 1979, the gap was only a few cents; by 2006 it had widened to over $2 ($11 to less than $9).

Figure 12 directly shows the dollar gap between the overall median wage for full-time workers and the median male and female wages for young, moderately educated workers. From $1.94 above the overall median in 1979, the wages for young, moderately educated males fell to $1.31 less than the overall median in 2006. For these young female workers, the gap grew from –$2.67 to –$3.81.
Conclusion

The call for job applications seemed routine; certainly nobody at corporate headquarters gave it much thought. A new candy store that would be opening in Times Square needed workers. Starting pay was $10.75 an hour. But by midmorning yesterday, a huge, swelling, discontented crowd of job seekers was milling around... The crowd put a human face on jobless statistics at a time when the City’s unemployment rate, 4.5 percent in September (2006), was the lowest since 1988. Several thousand people—mostly young, black and Hispanic—had shown up to apply for fewer than 200 positions, only 65 of them full-time jobs.

—New York Times (November 4, 2006)

On Wednesday, (Circuit City Stores) dismissed 3,400 people, or about 8 percent of its workforce, not because they were doing a bad job and not because the company was eliminating their positions. Instead, executives said the workers were being paid too much and that the company would replace them with new employees who would earn less. It was the second such layoff at Circuit City in the last five years, and it offered an unusually clear window on the ruthlessness of corporate efficiency... They generally earned $10 to $20 an hour, making them typical of the broad middle of the American workforce.

—New York Times (April 4, 2007)

Although the official statistics indicate near-full employment, a near-riot takes place in America’s richest city when sixty-five full-time jobs are advertised at $10.75 an hour—less than our low-wage threshold ($10.99) and only about $1.50 more than the wage necessary for an adult working full-time full-year to keep herself and two children above the national poverty line. The Circuit City firings illustrate the hollowing of the middle of the wage distribution, a process documented for the nation as a whole for the 1990s by Autor et al. (2006). This is consistent with our finding that young workers (20–34) with at least a high school degree but not more than two years of college show a dramatically increased incidence of low-wage employment between 1979 and 2006, with particularly large increases for men since 2000. Competitive forces have eroded the quality of many “middle-class” jobs, and not just in the industrial heartland.

For an economy, like ours, that increasingly produces poverty-wage jobs, good employment performance is no longer adequately measured by the standard unemployment, employment, and labor force par-
participation rates. This paper reports trends for three alternative labor market indicators that account for job quality by taking into account workers paid very low wages and working involuntarily part time. If alternative measures of this sort were regularly produced by the Bureau of Labor Statistics and publicized by the mass media, we would have much better tools with which to judge our real economic performance, and we might pay more attention to the disturbing growth of poorly paid jobs among young workers and to the significance of the astonishing growth in overall earnings inequality.

Notes
3. It should be recognized, however, that U.S. unemployment performance has been exceptional only during the 1990s—the United States is located in the middle of the pack of developed countries both before the early 1990s and since 2001 (see the OECD Employment Outlook, Statistical Appendix 2006, table A; see also Howell 2005, chap. 1).
4. Another closely related measure is the labor force participation rate—the employed and unemployed as a share of the working-age population. The Bureau of Labor Statistics also publishes involuntary part-time and discouraged worker rates.
5. Earlier versions of these indicators are described in Howell (2005), and in Policy Notes 1 and 2, Schwartz Center for Economic Policy Analysis (www.news-chool.edu/cepa/).
6. Unlike the official unemployment and employment rates, our LMIs are calculated for wage and salary workers only. The data used to compute the SCEPA indicators are from the Center for Economic and Policy Research’s CPS ORG Uniform Data File. The data and full details are available at www.ceprDATA.org.

For Further Reading