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Beyond the Unemployment Rate:
Towards a Summary Measure of Employment and Earnings Inadequacy*

David R. Howell
(howell@newschool.edu)

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For the vast majority who rely on employment for their income, the most feared labor market outcome is unemployment, particularly when jobs are scarce and social protection benefits (such as unemployment insurance) are low. Indeed, it would be hard to find a better indicator of labor market dysfunction than high rates of unemployment – valuable resources are wasted and families and communities suffer. Yet, a reliable indicator of U.S. unemployment is of remarkably recent vintage. In an effort to make the measure more rigorous and meaningful, President Kennedy established a commission (the Gordon Committee) in the early 1960s; its recommendations were implemented by the Bureau of Labor Statistics later in that decade (Levitan and Taggart, 1973). Referring to the unemployment rate, Kennedy explained that "These statistics are of vital importance as measures of the economic health and well-being of our country" (ibid. 2). Although used by economists primarily as an indicator of changes in aggregate demand over the business cycle, much of the popular (and political) interest in the unemployment rate stems from the consequences of inadequate employment opportunities for the well-being of workers, their families, and their communities.

The Gordon Committee's re-definition has guided the efforts by the BLS to develop standardized unemployment measure that could be used for international comparisons as early as the late 1960s, and these in turn influenced similar efforts of leading international organizations – primarily the Organization for Economic Cooperation and Development (OECD) and the International Labor Organization (ILO) (Sorrentino, 2000). But with its new rigor came a narrowness that limits its usefulness as a measure of labor market performance and the ability of the labor market to produce economic well-being through employment. Since the unemployed are defined as those without even an hour of employment a week who are both available and actively looking for work, a labor market could produce "full employment" with

large numbers of adult workers able to find only part-time work at poverty-level wages (a possibility not as extreme as it might seem, as the examples of many developing countries show[1]).

Recognizing this limitation of the official unemployment rate, statistical agencies in many countries have developed alternative indicators, including broader measures of underutilization, which take into account those who can only find part-time work ("involuntary part-time" workers) and those who have dropped out of the labor force because of poor job opportunities ("discouraged" workers). The U.S. Bureau of Labor Statistics, for example, currently publishes six "alternative measures of unemployment and other forms of labor resource underutilization," ranging from the U-1, which shows "persons unemployed 15 weeks or longer" as a share of the labor force, to the U-3 (the official unemployment rate), to the U-6, the broadest published measure of underutilization, defined as "total unemployed persons, plus all 'marginally attached' workers, plus all persons employed part time for economic reasons" as a share of the labor force plus the marginally attached (Bregger and Haugen, 1995, p. 23).[2]

Although these and similar unemployment and underutilization indicators have been available for several decades, attention has remained focused almost exclusively on the official unemployment rate. There are good reasons for this. First, with the implementation of the Gordon Committee's recommendations, the unemployment rate is a relatively simple, clearly defined measure. Second, the alternative measures add little to the unemployment rate for measurement of *changes* in economic capacity, since they have tended to move very closely with it over the business cycle. Third, while broader, these underutilization measures are evidently grossly inadequate as measures of labor market performance and well-being as long as they fail to capture differences in the quality of jobs. In market economies, even at "full

employment," it can be argued that, for similarly qualified workers, a labor market that offers only jobs that pay far below socially acceptable wages performs less well than one in which few such low-wage jobs exist. One might think of collapses in pay for the less-skilled that last for extended periods of time in a single country (the 1930s or 1980s-early 90s in the U.S.), or differences in the ability of the hourly pay of, say, agricultural laborers, to provide a socially acceptable standard of living in the U.S. (poor) and northern Europe (better).

This paper proposes an "employment and earnings inadequacy" (EEI) rate as a measure of labor market performance by adding the incidence of low pay to the conventional measures of the *quantity* of work available to the workforce (as measured by standard unemployment and underutilization measures). There have been earlier efforts to do the same, most notably by Levitan and Taggart (1973), but these have tended to take a "household needs" approach. Levitan and Taggart, for example, limited the low paid part of their measure to "family heads" in low income families. In addition to the difficulty of developing a widely accepted understanding of what a "family head" means, or more generally which workers should be relegated to "secondary" status, and how to make this meaningful for comparisons over time as social norms change about how families share income internally, it is even more difficult to develop such a category in a meaningful way for international comparisons. Some countries choose to provide social security through the state or other institutions, rather than through the family. The "household needs" approach would require not just a plausible cross-country definition of "secondary workers," but would also have to adjust for international differences in social protection benefits. Indeed, given the extent of universal social benefits in, say, the Scandinavian countries, by U.S. standards most Scandinavian workers might be seen as part of one big, national family and would then qualify as secondary earners!

The approach taken here is distinctive in that it focuses on the availability and adequacy of jobs independently of household composition, household income, or, for that matter, the way income is shared in households. Like the standard unemployment measure, which counts the unemployed irrespective of the employment status of other household members, this paper includes all workers who fail to reach a given low pay threshold.[3]

Section 1 presents a brief discussion of the limits of the unemployment rate as a measure of labor market performance and worker economic well-being. Section 2 then outlines the nature of standard measures of underutilization published by the BLS. Section 3 considers issues of the measurement of low pay, and the remaining sections illustrate how a measure of "employment and earnings inadequacy" (EEI) can be developed, one that combines unemployment, underutilization and the incidence of very low pay into a single indicator for the U.S. and other selected OECD member countries. It should be emphasized that the indicators presented here are meant to be illustrative only – largely because of the apparent inadequacy of the discouraged worker numbers and the rough estimates of low paid workers, the EEI rate should be viewed rough approximations, particularly for the cross-country comparisons. Better data are needed, and the paper concludes with some recommendations for future efforts in this area.

1. Labor Market Performance, Well-being, and the Unemployment Rate

If efficiency is understood as the effective use of all available resources, involuntary part-time employment must reflect sub-optimal labor market performance. And only if wages are presumed to reflect marginal productivity across the occupational structure – a strong claim, to say the least – can very low pay be squared with good labor market performance. Writing in

1937, Joan Robinson highlighted the inefficiency of marginal, low productivity work. She wrote that in the absence of reasonably generous and long-term unemployment benefits, “a decline in effective demand which reduces the amount of employment offered in the general run of industries will not lead to ‘unemployment’ in the sense of complete idleness, but will rather drive workers into a number of occupations – selling match-boxes in he Strand, cutting brushwood in the jungles, digging potatoes on allotments – which are still open to them. A decline in one sort of employment leads to an increase in another sort…” (quoted by Eatwell, 1995, p. 5). The point is that two labor markets with identical official unemployment rates should not be considered equally well-performing if, with similarly skilled workers, one offers far greater opportunities for full-time “living-wage” jobs. Robinson used the term “disguised unemployment” to describe the proliferation of low productivity, low-paid jobs for a workforce fully capable of working effectively in higher productivity jobs.

Robinson was writing in the context of the Great Depression. The same point can be made for the current period in countries that have experienced an expansion of poverty level jobs even as their economies have been booming – the U.S., say, in the 1980’s and much of the 1990’s. While increasing supply (e.g., rising numbers of low reservation wage immigrant workers) or declining demand (e.g., due to trade competition) may require short-run wage adjustments in a well-functioning labor market, long term declines in real earnings that lead to shifts in the pattern of investments towards less technologically advanced, more labor-intensive methods of production than would have taken place otherwise, may indicate a labor market that puts an economy on a “low-road” growth path.

On the other hand, pricing workers out of jobs is not particularly functional either. It is widely believed that the European welfare state institutions and policies have made labor

markets increasingly rigid, or at least increasingly incapable of responding well to economic shocks. This, in turn, undermines the ability of the market to effectively match workers to jobs. Reflecting the conventional wisdom on both sides of the Atlantic, Gary Becker (1998) writes that "...rigid labor markets and high social security taxes on employed workers explain Europe s excessive unemployment." The OECD Jobs Study (1994b, p.30) explains that the root cause of the decline in the well-being of the least skilled is that "low-wage jobs were, by and large, disallowed by society, whether through state-imposed or union-negotiated wage floors and employment protection."

Yet, a closer look at the data for OECD member countries challenges this simple view (see Howell, 2002; Baker, Glyn, Howell and Schmidt, 2002). Nor do the exceptionally low U.S. unemployment levels of the late 1990s necessarily indicate full, efficient utilization of labor resources. Even as unemployment was falling and the power of labor market institutions (unions and the minimum wage) were eroding, a larger share of the 'employable' poor could not find work in 1998 (5.3%) than in 1979 (4.4%) (Mishel, Bernstein and Schmitt, 2001: Table 5.17). Richard Freeman has shown that low-wage male workers (below the 20th wage decile), who also happened to be those experiencing the greatest wage collapse, worked far fewer hours in 1980 and 1990 than in 1970, which Freeman interprets as reflecting declining demand for the less-skilled (Freeman, 1995, table 2).[4] Furthermore, while the numbers of those who were involuntarily working part-time for economic reasons ("couldn't find a full-time job") declined in the late 1990s, reflecting the strong economy, this measure of labor market slack still counted 3.2 million workers in 2000[5], a year in which unemployment hit the exceptionally low level of 3.9%.

Unemployment certainly must figure in any measure of worker well-being, but so must low wages. Using business cycle peaks as the reference, the unemployment rate showed an impressive decline over the last two decades, from 5.8% in 1979 to 5.3% in 1989 to 4.2% in 1999 (Mishel, et.al., 2001, table 3.1). Yet, over this same period, the real earnings for less-educated workers collapsed and earnings inequality exploded, requiring more household members to hold more jobs and work more hours to maintain a constant standard of living. Real annual hourly wages for production and nonsupervisory workers fell at an average rate of .2% per year from 1979 through 1999, and weekly wages fell even faster, at .4% per year (Ibid., Table 2.4). Workers at the 10th percentile took home 9.3% less in 1999 than in 1979, and those with just a high school degree show an average wage decline of about 15% over this twenty year period, from $15.65 to $13.34 (Ibid., table 2.6; table 2.19). As a result, the share of all full-time, full-year workers with poverty-level earnings rose from 14.4% in 1979 to 17.5% in 1998 (ibid., Figure 5G). By these measures, one could argue that, at least through 1998 in the U.S., as the economy took off and unemployment fell, the well-being of hourly wage workers *declined*!

Another way to illustrate the inadequacy of the standard unemployment rate as a measure of both performance and well-being is to contrast the rates across countries. Take, for example, the U.S., Mexico and Spain. Even as the Mexican economy collapsed in the 1980s and unprecedented numbers of workers crossed the border in search of work in the U.S., the Mexican unemployment rate ranged from just 2.6 to 4.4%, far lower than the 5.3 to 7.5% range for the United States.[6] According to Fleck and Sorrentino (1994: Table 6), under U.S. concepts, the Mexican rate would have been about 50-70 percent higher, but as they point out, this would still leave it at a relatively low level – and *below* U.S. rates. The explanation goes to the heart of the inadequacy of the unemployment rate as an indicator of performance and well-being:

"Mexico's low unemployment rates mask a large number of persons in unstable, marginal jobs. Thus, the rates reflect the need for persons to subsist through any work at all, rather than a situation of full employment…. Part-time work, marginal self-employment, and nonremunerated work in family businesses are frequently the only options for many workers in Mexico" (1994: pp. 3-4). In a more recent paper, Martin (2000, p. 4) concurs that Mexican and U.S. unemployment rates cannot meaningfully be compared, even when measured similarly, because "many people who are counted as employed in Mexico find only unproductive and marginal employment in Mexico's large informal sector."

In some countries, however, the marginal and informal work that characterizes so much of Mexican employment is not understood as *real* employment, and workers in these peripheral employment situations often consider themselves unemployed. This may help to account for Spain's extraordinarily high unemployment rate, which has ranged from 16 to over 22 percent in recent years, levels not seen in the U.S. since the Great Depression. The Mexican and Spanish cases show that the official unemployment rate, even when comparably defined, can vary widely across countries, reflecting differences in levels of economic development, industry mix, social norms, and in the safety nets provided by family structures, labor market institutions and government programs. Even though it is now accepted that the unemployment rate is measured in a fairly comparable manner across the major OECD countries (Sorrentino, 1999), differences in social norms and labor market institutions result in substantial differences in the meaning of unemployment for workers and their families, and consequently in what qualifies as an acceptable level of unemployment across countries.[7]

2. From Unemployment to Under-Utilization Rates

The official unemployment rate attempts to measure only those who 1) do not have a job (have not worked for pay for at least an hour in the previous week); 2) claim that they would like one and would take it if offered; and 3) have looked in a fairly serious way for work in the previous four weeks. It does not capture those who can only find part-time work or who are discouraged and have given up looking. To measure these additional dimensions of under-utilization, the U.S. Bureau of Labor Statistics developed a U-7 set of unemployment and underutilization rates, which was replaced by a U-6 set of indicators in 1994. The annual unemployment and total U-7/U-6 underutilization rates are shown in Table 1 and Figure 1.

The shift from the U1-U-7 to the U1-U-6 indicators in 1994 reflects both the opportunities for improvement provided by changes in the CPS questionnaire and the decision to try to better measure underutilization. As two BLS researchers put it, “Rather than implying a range of unemployment definitions, these indicators focus on different types of joblessness or incorporate different measures of labor resource underutilization” (Bregger and Haugen, 1995, p. 23).

The U-7 was originally measured on a full-time equivalency basis, with the unemployed looking for part-time jobs and involuntary part-time given a weight of .5. As a result, the U-7 was defined as the unemployed looking for full-time work plus half of those looking for part-time work, plus half of those working involuntarily part-time, plus discouraged workers, divided by the labor force minus half of all part-time workers plus discouraged workers. Not surprisingly, this was found to be confusing to the popular audience, and with the shift to the U-1/U-6 measures, the Bureau eliminated the .5 weighting, turning the measure into a simple count of all those unemployed or under-utilized.

With the changes in the Current Population Survey in 1994, questions were added that made it possible to provide a tighter definition of involuntary part-time and discouraged workers. The involuntary part-time component was also made tighter, with those qualifying only if they explicitly stated that they wanted and were currently available for full-time work. This greater precision in the questionnaire has had the effect of reducing the involuntary part-time count by about 20 percent (ibid.). Prior to 1994, discouraged workers were identified as those "persons out of the labor force who indicated a desire for work and a job-market-related reason for not currently looking for work…. In the revised CPS, discouraged workers were redefined as persons who indicate explicitly in the survey that they want and are available for a job, *have looked for work in the past year* (emphasis added), and have given a job-market-related reason for not currently looking for work" (Bregger and Haugen, 1995, p. 26). This change cut the number of workers classified as discouraged in half (Ibid.). On the other hand, the U-6 measure includes not just the discouraged but the total workforce "marginally attached" to the labor market, which adds those who would like a job and are available but cannot work for such non-labor market related reasons as childcare or transportation problems.

As Table 1 shows, the ratio of the U-7 to the unemployment rate, presented in the last column, was quite stable from 1983 to 1993, ranging from 1.44 to 1.53 – which appears almost perfectly flat in Figure 1. In contrast, the more recent most comprehensive underutilization measure, the U-6, is substantially larger than the U-7, so with the redefinition, the ratio of total underutilization to unemployment jumps from 1.48 to 1.79 between 1993 and 1994. This higher ratio reflects the inclusion of all involuntary part-time workers in the numerator, rather than just half (with half subtracted from the denominator). In addition, it reflects the fact that while

"discouraged workers" are more narrowly defined, the U-6 includes the much broader category of "marginally attached" workers.

As Figure 1 clearly shows, the U-6 to unemployment ratio declines steadily from 1.82 in 1997 to 1.61 in 2002, a downward trend that maintains itself even as the unemployment rate rose from 4% in 2000 to 6.1% in March of 2002. During the latest economic downturn, those categorizing themselves as marginally attached or involuntary part-time grew at a slower pace than the unemployed, a pattern not evident in the last recession (in the 1990-92, the U-7 to unemployment ratio remained flat as unemployment increased from 5.5 to 7.5%).

3. Measuring Low Pay

Calculating the incidence of low pay requires a choice between using absolute and relative thresholds. The U.S. has traditionally relied upon an absolute measure of poverty, which is based on a formula developed in the 1950s that was tied to the cost of a minimally adequate food budget for families of different sizes. This approach has the advantage of setting a standard for the resources necessary for a family to feed, house and clothe itself that is fixed over time. But it also raises some tough questions about what exactly this level and mix of resources ought to be. For example, how should the relative needs of food, transportation, housing, and energy change over time, for which families and in which areas? And should taxes and in-kind benefits (say, food stamps) be included in the formula?[8] The issues become even more difficult for comparisons across countries characterized by different levels of benefits tied to employment, differences in universal benefits provided by the State, and differences in social norms and family structures. With the magnitude of the variations in these dimensions of economic and social life across countries, figuring out an absolute standard of poverty-level income would evidently be a Herculean task.

A much simpler and arguably more meaningful alternative is to define inadequate access to resources in relative terms, as a reflection of how much resource inequality is socially acceptable at a given date in a particular context. In this approach, what is fixed is not some minimal quantity of food (e.g., the Department of Agriculture's "Economy Food Plan," the foundation of the U.S. poverty threshold) and other necessaries, updated over time to reflect inflation, but the ability to maintain a decent life relative to some social standard, a standard that automatically expands with economic development. For example, the OECD (1995) uses two-thirds of the median weekly earnings as their threshold for low pay. Such a relative standard avoids the difficulties of the absolute measure, although even such a seemingly simple measure is difficult to construct for cross-country comparisons. For this reason, the OECD publishes a low pay incidence indicator only for full-time workers.

In addition to its advantage in simplicity, a relative measure better incorporates the social dimensions of inequality. The importance of this has been emphasized by Amartya Sen (1999, p. 4), who writes that "Economic poverty robs people of the freedom to satisfy hunger, or to achieve sufficient nutrition, or to obtain remedies for treatable illnesses, or the opportunity to be adequately clothed or sheltered, or to enjoy clean water or sanitary facilities." Critically, what qualifies as "sufficient" and "adequate" depends on the social context, and relatively low income can produce poverty – capability deprivation – in rich as well as poor regions:

> Relative deprivation in terms of incomes can yield absolute deprivation in terms of capabilities. Being relatively poor in a rich country can be a great capability handicap, even when one's absolute income is high in terms of world standards. In a generally opulent country, more income is needed to buy enough commodities to achieve the same social functioning… For example, the difficulties that some groups of people experience in 'taking part in the life of the community' can be crucial for any study of 'social exclusion' (ibid., p.89).

Table 2 reports absolute and relative poverty-level income thresholds for the U.S. for the 1979-2001 period. I first calculate alternative "low-earnings thresholds" for fulltime workers (relative measures) and then compare these to the official U.S. government poverty thresholds for 2- and 4-person families (absolute measures).

Since the concern here is with the *ability* of the labor market to provide adequate levels of income, given the hours workers can work (which is partially captured by the underutilization component of involuntary part-time), the earnings measure used here is the hourly wage.[9] The first row of table 2 shows that the median hourly wage (in each year's dollars for full-time workers ages 16-64) rose from $5.57 in 1979 to $13.51 in 2001. The second row presents the first low earnings threshold, calculated on an annual basis for a full-time worker, assuming that "low pay" is an hourly wage less than 2/3 the median and full-time work is 2080 hours (40 hours a week, 52 weeks per year). This low earnings threshold for full-time workers rose from $7,731 in 1979 to $18,751 in 2001. Row 3 presents a stricter threshold for low pay, defined as one-half the median wage. Using this criterion, the annual low earnings threshold was $5,795 in 1979 and rose to $14,085 in 2001.

Rows 3 and 4 of Table 2 present the official poverty thresholds for 2- and 4-person families (for those with a head of household under age 65). A comparison with rows 1 and 2 shows that by even quite strict relative income measures, the official U.S. poverty line is extremely low. The 2-person poverty line ranges from $4,878 to $11,859 over this period, which is 10-20% below the ½ median wage threshold for full-time workers and 30-40% below the 2/3 median wage threshold. On the other hand, a full-time worker paid for 52 weeks would earn just about exactly the same amount as the 4-person poverty line. It

should be noted, however, that these are extremely crude comparisons, intended only for "ballpark" comparisons. The low pay thresholds assume a pre-tax earnings distribution, and the government poverty lines do not take into account in-kind benefits, which if counted, would boost the total incomes of some of those who otherwise are officially counted as "poor."

The bottom panel of Table 2 presents the number of workers that earned below the low and extreme low pay thresholds, separately for all workers and for all adult workers (at least 25 years of age). In 2001, over 32 million U.S. workers were paid an hourly wage below the low pay threshold, 35% more than in 1979; about 20 million of these were adults, a 56% increase from 1979, and an 18% increase from 1989. But it should also be noted that rows 6-7 show that the number of low wage workers stabilized in the mid-late 1990s. and even declined slightly by 2001. Rows 8 and 9 show the corresponding figures for those with extremely low wages (50% of the median), about 13.4 million workers in 2001, of whom almost half (7.3 million) were adults. The striking finding in this panel is the sharp increase shown in the last column (162-171 percent), most of which took place in the 1980s. The performance of the 1990's was even more impressive for these extremely low paid workers, as their numbers declined from 16.6 million in 1994 to 15.4 million in 1997, to 13.4 million in 2001.

These changes in the numbers of low pay workers are presented in Figure 2, which highlights the sharp increases for all four measures from 1979 to 1994. The most striking change was for all workers (16+) earning less than half the median hourly wage between 1979 and 1989. Given the change shown for these extreme low pay earners who were adults is smaller, it was clearly young workers that accounted for a disproportionate part

of the increase in this decade. Whereas all extremely low paid adult workers (25+) increased by 4.5 million, extremely low paid youth workers, limited to those between 16 and 24 years of age, increased by nearly the same number, 4.4 million (calculated from Table 2).

Figure 2 also highlights the difference in the changes in the number of low pay and extreme low pay workers over these decades. All four measures show sharp increases through 1994, but while low pay workers continue to increase through 2000, the numbers of extreme low pay workers show clear declines after 1994, particularly when young workers (16-24) are included. This shift in trend almost certainly explained by the combined impacts of minimum wage increases and the booming economy, which appears to have had the greatest positive impact on workers at the very bottom of the wage distribution. So the rising numbers of low pay workers (the top two lines) probably reflects in part a shift upward for some who had been earning less than 2/3 of the median wage (the extremely low paid group). The number of low paid (2/3 median) workers, shown by the top two lines in the Figure, show declines only between 2000 and 2001, and this probably reflects the effects of the recession, as low wage workers, particularly the youngest, lost their jobs.

This assessment is consistent with the incidence figures shown in Figure 3. The share of extremely low paid workers rose sharply between 1979 and 1989, a decade in which the minimum wage collapsed in real terms by about 26 percent (Bernstein and Chapman, 2002, p. 1). Between 1994 and 2000, as the economy strengthened and the minimum wage increases of the early 1990s took effect, the incidence of extreme low pay fell somewhat more rapidly than the incidence of the less stringent (2/3 median) low pay

measure. With the 2001 recession, the share of low pay workers fell sharply, suggesting a strong shift into unemployment or out of the labor force entirely.

Finally, it is worth comparing these low pay measures with the OECD's low pay indicator (for details, see OECD, 1996). Column 1 of Table 3 reports the OECD's incidence of low pay for selected years from 1979 to 2000. These figures are calculated only for full-time workers, and measure the share of all these workers whose weekly earnings were below two-thirds of the national median. This column shows that by this measure, low pay incidence rose from 21.9 percent in 1979 to 25.1 percent in 1994 and declined only very slightly to 24.7 percent in 2000. Based on median hourly earnings, my incidence of low pay for full-time workers, shown in column 2, is noticeably smaller, but the trend is the same, rising from 17.2% to 21.2% in 1994 and dropping modestly to 19.9% in 2000. Probably due in large part to a shift from low paid employment to unemployment by some workers in the 2001 recession, the figures show a sharp drop from 2000 to 2001 (19.9 to 18.1 percent).

The remaining columns in Table 3 report alternative measures of low pay incidence, all showing the same pattern of increases through the mid 1990s and declines afterward, with a substantial drop between 2000 and 2001. Using two-thirds of median earnings (weekly in the OECD figures, hourly in the CPS-ORG data) as the criterion, these figures indicate that in the last two decades of the 20th century, between one-sixth to one-quarter of all U.S. workers were "low paid," with the variation reflecting employment status (full-time vs all workers), age (with or without young workers), and labor demand (the business cycle).

4. Employment Inadequacy in the U.S.

Our employment and earnings inadequacy (EEI) rate simply adds the low paid to the unemployed and underutilized. To revisit the rationale, we need an indicator that measures how well the labor market is performing in terms of both the *availability* of jobs for those able to work and desiring employment, and the *adequacy* of those jobs to generate socially acceptable levels of economic well-being. As we saw above, while the U.S. and Mexican unemployment rates might be similar, relative labor market performance and well-being are surely quite different. Much of the difference is a result of what has been termed "disguised unemployment" – the employment of workers in low productivity, low wage jobs in an economy in which similarly capable workers are employed in higher productivity, higher wage jobs. It should again be noted that this indicator is meant to measure the employment and earnings adequacy of the mix of jobs available in a given labor market for any worker of working age, irrespective of household in which that worker resides or their standing in the household (the notion that some are "breadwinners" and others are "secondary workers"). Nor does it aim to take into account differences in other supply-side characteristics, like individual or household wealth, or the likelihood of a substantial inheritance. In this sense, the EEI rate is a demand-side measure, designed to make possible comparisons of the employment availability and earnings adequacy of jobs for individuals over time and across countries, and as such, it is entirely different from its main predecessor - the need-based Levitan-Taggart (1973) measure.

Table 4 presents the 1989 unemployment rate (U), underutilization rate (UU) and employment and earnings inadequacy rate (EEI), and the data from which they are derived. The figures in rows 1-10 of Table 4 were calculated from the CPS-ORG extracts, while the numbers of discouraged workers (row 11) were provided by the Bureau of Labor Statistics (but were unavailable for 25+ workers). The first column presents the data for those 16 years of age and

older. The second column excludes young workers, covering only those at least 25 years old. The unemployment rate was 5.3% for the entire workforce and 4% for adult workers. The underutilization rate, which includes the involuntary part-time and discouraged workers, was almost twice as large: 9.9% for those at least 16 and 7.5% for those 25 and over.

The distinguishing feature of Table 4 is the calculation of the EEI rate. In addition to the unemployed, the involuntary part-timers, and discouraged workers, this rate includes all full-time and voluntary part-time[10] *low-wage* workers. In 1989, CPS data indicate that there were about 16.8 million full-time low-wage workers (those earning less than 2/3 of the median hourly wage) and another 8.8 million voluntary part-time low-wage workers. Including these low wage workers with the unemployed and underutilized produces a 1989 EEI rate of 30.5%. Low wage workers are disproportionately young, and if we limit the low-wage population to those at least 25 years of age, the EEI rate drops by more than 6 points, to 24.2 percent. It would be only slightly higher if discouraged workers were included (these were not available separately for those 25+).

Table 5 shows the change in these unemployment, underutilization, and employment/earnings inadequacy rates from 1979 to 2001 for all workers (16 and over). The second row shows that this was a period of rapid employment growth – at about 99 million in 1979, total employment passed 135 million in 2000. The low wage employed also grew substantially, from almost 24 million to 34.7 million. As employment expanded, the unemployment rate (row 10) declined from 5.8% to 5.3% between 1979 and 1989 and then rose sharply to 6.1% in 1994, but the UU rate was nearly identical in these three years (1979, 1989 and 1994) at about 10%. The difference between the trends for these two measures appears to be the presence of large number of involuntary part-time workers in the late 1980s, which kept the

URR high despite declining unemployment. But between 1994 and 2001, the unemployment and underutilization trends are similar: the UR drops from 6.1% in 1994 to 4.0% in 2000 and then jumps to 4.8% in 2001; the URR falls from 10% to 6.5% and then rises to 7.6% over the same years. As Figure 1 illustrates (using official BLS figures), these two measures tend to track each other closely over time.

It is worth noting that the 2001 recession produced employment numbers that were essentially unchanged from 2000, but our calculations from the CPS show about 2.5 million fewer low wage workers (row 4), nearly all of whom appear to have been employed full-time (row 5). The unemployed grew by about 1 million (row 8). Since it is not likely that the recession facilitated a large scale shift of low paid workers into higher paid positions (above 2/3 of the median), and certainly not all the newly unemployed were low paid, and the official number of discouraged workers rose only slightly (rows 9a and 9b), we appear to have "lost" well over a million low wage full-time workers. If these numbers are right, these workers dropped out of the labor market but are not being counted as discouraged in the official numbers.

The last two rows show our estimates of changes in the employment and earnings inadequacy rate over this period. The difference between the Rows 13 and 14 reflect the measurement of discouraged workers, which was changed in the early 1990s. The EEI rate was nearly identical in 1979 and 1989 at about 31 percent. Despite the downward effect of using the more stringent measure ("searched for work in the last 12 months and is available for work"), row 13 shows an increase in the EEI rate to over 32 percent. It then declines steadily through 2001. The more liberal measure ("not in the labor force but currently want a job," which includes people who cannot work for such reasons as childcare and transportation) adds 2-3

percentage points to the EEI rate, but the same downward trend appears from 1994 to 2001. Perhaps the most notable result is the divergence between the movement of the unemployment rate and the EEI rate between 2000 and 2001, which reflects the disappearance of large numbers of full-time low paid workers mentioned above. While unemployment rises from 4 to 4.8%, the two EEI rates continue to decline by about ½ a percentage point (from 28.2 to 27.7%, and from 30.3 to 29.8%).

This underscores a key difference between the unemployment rate and the EEI rate. As a measure of both the availability and quality of jobs, the EEI rate may move differently over the business cycle. For instance, in an expansion characterized by strong growth in "bad" jobs, the unemployment rate can be expected to decline, but the EEI rate may rise. Alternatively, declining availability of low paid jobs in a downturn will raise the unemployment rate but lower the EEI rate, unless the workers who held these jobs are counted as discouraged. Our results for 2000-2001 suggest that our current measure of discouraged worker measure captures a very small portion of those who had held low paid jobs.

5. Cross-Country Comparisons

As the Mexico-Spain-U.S. comparison in Section 1 suggested, the unemployment rate is a poor indicator for cross-country comparisons of labor market performance and worker well-being. This section calculates the EEI rate for selected OECD member countries and compares them to the standard unemployment and underutilization rates.

While discouraged workers and involuntary part-timers increase the level of the employment inadequacy measure relative to the standard unemployment rate, it is the addition of low paid workers that makes the real difference, both in magnitude and for relative country

positions. Figure 4 provides some indication of the extent of the differences in low wage incidence across the most developed countries. Unfortunately, rates of low-paid employment have only been developed by the OECD for full-time workers, and time series for more than a few years are available only for the seven countries shown in the figure. Still, Figure 4 illustrates the main point: that the larger and more interventionist welfare states of northern Europe, such as Belgium, Germany and the Netherlands, have very low shares of low-paid full-time workers compared to the more laissez-faire U.S. and U.K. While the U.S. and U.K show rates in the 20-25% range in the 1990s, the Netherlands, Germany and Australia range from 12-14%. By itself at the bottom, Belgium's low pay rate was just 7-8 percent. Equally striking, Figure 4 also shows that low pay rates in the U.S. and U.K. rose in the 1980s and remained stable at the higher levels in the 1990s but were stable or falling in the European welfare states (although the Netherlands shows increases in 1995-97). Interestingly, Japan shows a strongly declining low pay incidence in the 1990s, and Australia's experience appears much like the European, perhaps the result of relatively strong minimum wage regulations.

Table 6 presents the EEI rates and the labor force statistics required to calculate unemployment, underutilization, and employment inadequacy rates for 14 OECD countries in the mid-1990s (the low wage figures are centered on 1995). These three rates are shown in columns 8-10. Based on the unemployment rate, the worst performing countries were Finland (15.6%), Italy (12%), and France (11.6%), while the best were Japan (3.1%), Austria (3.7%), and the U.S. (5.6%). The UU rate shows a similar pattern, although the position of the U.S. is less impressive: the UU rate for Japan (5.6%) and Austria (4.7%) is far superior to that of the U.S. (9.6%), and the Netherlands (10.1%) and Germany (10.6%) are only slightly higher. The pattern looks quite different with the EEI rate, which puts the U.S. (26.4%) amongst the poorest

three performers, with Finland (32.4%) and Canada (28.2%). Countries with the best performing labor markets according to the EEI rate were Japan (11.4%), Austria (14.2%) and Sweden (16%).

To facilitate cross-country comparisons, Figure 5 shows unemployment and EEI rates for 1995. The key result is that while the U.S. had the third lowest unemployment rate, it had the third highest EEI rate. This outcome is consistent with the conventional view that countries face a tradeoff between unemployment and earnings inequality – raising low skill worker wages compresses the earnings distribution and prices them out of jobs (Siebert, 1997; Bertola, Blau and Kahn, 2002). But this tradeoff view has been challenged (see for example, Howell and Huebler, 2003), and Figure 6 provides no support for it. This figure shows a scatter plot of low pay and unemployment rates for 14 OECD countries and uses the median of each measure to divide the plot into quadrants. If the tradeoff view is correct, we should see the points ranging from the upper left (high inequality, low unemployment) to the lower right (low inequality, high unemployment). The figure shows no evidence of a tradeoff. The U.S. appears in the top left quadrant, but three countries (the Netherlands, Sweden and Japan) show both low unemployment and a low incidence low pay. Indeed, the more laissez-faire UK and Canada had higher low pay and unemployment rates than the Netherlands and Sweden.

Figure 7 updates this comparison of low pay incidence to unemployment rates to 2002. Low pay rates are available only for the mid-1990s, but since these change quite slowly over time, it is reasonable to compare 1995 low pay incidence with 2002 unemployment rates. Again, the data show no evidence of a tradeoff. While the U.S. has by far the highest rate of low pay, it has, like Australia, the median unemployment rate – but Australia's low pay incidence was about half as high (7.8% compared to the U.S.'s 16.9% rate). This Figure indicates that a

wide range of low pay rates are clearly compatible with the same unemployment rate. For example, the U.K., New Zealand, Japan and Sweden all had unemployment rates around 5%, but the low pay rate ranged from 2.7% for Sweden to 11.6% for the United Kingdom.

Finally, Figure 8 contrasts the unemployment and the employment and earnings inadequacy rates for 1995. As the regression line shows, there is a strong positive correlation between them – countries with higher unemployment tend to have a higher EEI rate. The main outliers are Canada and the U.S., which have EEI rates that are "too high." Without the U.S., the trend line would be even steeper, showing a closer fit between unemployment and the EEI rate. It suggests that if the U.S. was like the average country, at 5.6% unemployment its EEI rate would have been more like 15% (rather than 26.4%). The U.S. is an outlier in the sense that its unemployment rate greatly understates employment and earnings adequacy, and consequently, poorly measures the ability of the labor market to provide workers with living wage earnings in the 1990s.[11]

Conclusion

Despite its ubiquitous use, the official unemployment rate is widely recognized to be a poor measure of economic well-being from employment and, more generally, of labor market performance, understood as the full and effective utilization of the workforce. Measures of underutilization that take into account involuntary part-time and discouraged workers with the unemployed have been tabulated for some time. But for purposes of assessing secular trends and cross-country comparisons of the ability of the labor market to provide a socially acceptable level of worker (and family) material well-being, we need a measure that incorporates the

payment of very low wages. This helps capture what Joan Robinson referred to in the early 1930s as "disguised unemployment."

This paper develops an employment and earnings inadequacy (EEI) rate for the U.S. and a number of other developed countries. The pioneers in this area were Levitan and Taggart (1973), who developed a similar measure, but theirs was designed to measure household need. They did this by taking into account only the low earnings of "heads of households" in families without other earners. There are several problems with this approach: it is that it is difficult to come up with a widely acceptable definition of the "secondary" workers who must be excluded; it is difficult to use such a measure for longer term changes, as social norms concerning household division of labor and the sharing of resources change; and it would be nearly impossible to use such a measure for cross-country comparisons, since the nature of the family and the division of labor within it is closely linked to local and national social protection institutions.[12] Since this paper is concerned with the development of a measure that can measure changes in the ability of the labor market to provide for socially acceptable levels of well-being over extended periods of time and can also indicate meaningful differences in this ability across countries, our EEI rate is measured for all workers[13], irrespective of standing in the household or in household income. Consistent with the OECD's definition of low pay, our EEI rate includes those paid less than 2/3 of the median wage for full-time workers with those unemployed, working involuntarily part-time, or discouraged.

For the U.S., this measure shows stability in the 1980s, an upward (worsening) trend from 1979 through 1994, and subsequent declines (improvement) during the late 1990s boom. But while unemployment jumped between 2000 and 2001, the EEI rate continued to decline, reflecting a large decline in jobs paying very low wages. Since this decline was far greater than

the increase in unemployed workers and those officially counted as discouraged, we seem to have "lost" many low wage workers. And this suggests that our measurement of discouraged workers vastly underestimates the total, at least in economic downturns.

Combined with the discouraged worker measurement problem, the fact that low wage jobs are counted in the numerator tends to make the EEI rate much less volatile than the unemployment rate. Because more low-wage workers may drop out of the labor force than are counted as newly unemployed or discouraged in a downturn, the numerator may fall, and the EEI rate may actually decline. On the other hand, as the economy expands and low wage jobs proliferate, the EEI rate may not show much improvement if the boom is mainly in "bad" jobs. The value of this measure is clearly not in showing cyclical trends in overall economic performance (as the unemployment rate is commonly used for), but as in indicator of longer term trends in the ability of the labor market to provide economic well-being from employment.

This measure also makes possible cross-country comparisons. Judged by the unemployment rate, the U.S. was among the best performers among developed countries in the mid 1990s, but it was among the worst using the EEI rate. If what matters is the ability of the labor market to produce living wage jobs for all those willing and able to hold them, these results underscore the need to look beyond the unemployment rate in judging the performance of national economies.

The EEI rate calculation in this paper should be seen as an extremely preliminary effort, merely illustrating the kind of measure that might be developed and used by statistical agencies. A first step would be to explore the link between changes in low wage employment and the count of discouraged workers, to develop a more plausible measure of discouragement. This should include a close look at changes in the classification of workers as disabled. And second,

we need much better information on low paid workers. What, for instance, is the minimal socially acceptable wage in different countries? And we desperately need a consistent time series of the incidence of low pay, however defined, for all workers (not just full-time) for all OECD countries. With improvements in these areas, the EEI rate could prove to be a useful indicator of the ability of alternative capitalist models – ranging from the organized welfare state model in northern Europe to the laissez-faire U.S. model - to generate economic well-being for workers and families through work, a goal embraced across the ideological spectrum.

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[1] See the discussion of Mexico below.

[2] Marginally attached workers are "all persons who want and are available for a job and have recently searched for work" (Bregger and Haugen, 1995, p. 24). Discouraged workers are the marginally attached who give a job-related reason for not looking for work.

[3] Although the paper often refers to "jobs", our calculations are made for workers, so it actually undercounts the number of low paid jobs to the extent that workers hold multiple jobs. For example, a worker's low-paid part-time job will not be counted if he/she also with a full-time "good" job. Similarly, in our low wage job counts, two "bad" jobs held by one worker will count only as one.

[4] But it should be noted that the entire decline in annual hours worked took place in the 1970s, a decade before the wage declines and inequality increases of the 1980s that Freeman refers to in this paper. This is not relevant for my purpose here, that low wage workers were working fewer hours at lower real wages in the boom of the late 1990s than in the late 1970s – with the obvious implications for labor market performance and worker well-being. It seems less obvious, however, that Freeman's statistics make the case that the wage collapse (which appears in the 80's) reflects a demand collapse (shown by an hours decline in the 70's but stability in the 80's).

[5] This is the number at work part-time for economic reasons, downloaded from the Bureau of Labor Statistics: Labor Force Statistics from the Current Population Survey (http://data.bls.gov/servlet).

[6] The Mexican figures come from Fleck and Sorrentino (1994, Table 5); the U.S. figures are from the U.S. Bureau of Labor Statistics.

[7] The case of Spain… Reference?

[8] See the Economic Policy Institute's Poverty and Family Budgets, "Frequently Asked Questions" (www.epinet.org/issueguides/poverty/povertyfaq).

[9] The hourly wage is constructed by EPI, which uses the hourly wage as reported by hourly workers in the CPS (and does not include overtime or tips) and for non-hourly

workers calculates the hourly wage by dividing usual weekly earnings by usual weekly hours. See David Webster, "Economic Policy Institute CPS ORG Labor Extracts," October 2000.

[10] This is defined as workers who state that they are part-time for non-economic reasons.

[11] One might respond by arguing that to the extent it reflect a high incidence of low pay, the high EEI rate simply reflects the relatively low skills of less-skilled American workers. But as Freeman and Schettkat (have shown, labor market institutions and not the skill distribution accounts for most of the difference in wage inequality between the U.S. and Europe.

[12] For example, the responsibility of the head of household for providing for family members is much greater in southern Europe (Spain and Italy) than in the Scandinavia countries, where the state plays a central role (Esping-Andersen, 1999).

[13] Due to data limitations, our cross-country comparisons of low paid workers were limited to those working full-time.

Table 1: BLS Measures of Unemployment and Under-Utilization*

for the United States, 1983-2002

	unempl	U-7	U-6	ratio
1983	9.6	13.9		1.45
1984	7.5	11.2		1.49
1985	7.2	10.6		1.47
1986	7	10.3		1.47
1987	6.2	9.3		1.50
1988	5.5	8.4		1.53
1989	5.3	7.9		1.49
1990	5.5	8.2		1.49
1991	6.7	10		1.49
1992	7.5	10.8		1.44
1993	6.9	10.2		1.48
1994	6.1		10.9	1.79
1995	5.6		10.1	1.80
1996	5.4		9.7	1.80
1997	4.9		8.9	1.82
1998	4.5		8	1.78
1999	4.2		7.4	1.76
2000	4		7	1.75
2001	4.8		8.2	1.71
2002 (Mar)	6.1		9.8	1.61

*see text for definitions of U-7 and U-6

Sources:

Unempl: 1983-91, Sorrentino (MLR, Aug 1995, table 1); 1992-2002:

1992-2002: BLS (http://data.bls.gov/servlet)

U-7: Sorrentino (MLR, Aug 1995, table 1)

U-6: BLS (http://data.bls.gov/servlet)

Table 2: Poverty Thresholds and Numbers of Low Wage Workers for the U.S., 1979-2001

thresholds ($)	1979	1989	1994	1997	2001	chg 79-01	chg 89-01
1. Median Hourly Wage*	$5.57	$9.00	$10.56	$11.53	$13.51	143%	50%
2. Full-time low earnings threshold 1**	$7,731	$12,940	$14,656	$16,002	$18,751	143%	50%
3. Full-time low earnings threshold 2** *	$5,795	$9,363	$10,986	$11,996	$14,085	143%	50%
4. Gov't poverty threshold, 2 persons	$4,878	$8,343	$9,976	$10,805	$11,859	143%	42%
5. Gov't poverty threshold, 4 persons	$7,412	$12,674	$15,141	$16,400	$18,267	146%	46%
Low wage workers (000)							
<2/3 median hourly wage							
6. Low wage workers, 16+	23,814	28,358	33,699	33,881	32,100	35%	13%
7. Adult low wage workers, 25+	12,822	16,963	20,996	21,167	20,012	56%	18%
<1/2 median hourly wage							
8. Low wage workers, 16+	4,935	13,838	16,607	15,351	13,389	171%	-3%
9. Adult low wage workers, 25+	2,801	7,276	8,948	8,312	7,336	162%	0%

Source: calculations by the author from CPS-ORG extracts provided by the Economic Policy Institute
* calculated for full-time workers ages 16-64.
**2/3 median wage x 2080 hours (40 hrs x 52 weeks)
***1/2 median wage x 2080 hours

Table 3: Alternative Measures of Low Pay
For the United States, 1979-2001 (%)

		CPS-ORG			
	OECD				
	1. F-T	2. F-T	3. F-T 25+	4. All	5. All, 25+
1979	21.9	17.2	12.7	24.1	16.8
1989	23.5	17.6	13.7	24.2	17.4
1994	25.1	21.2	17	27.4	20.2
1997	24.9	20.3	16.3	26.2	19.2
2000	24.7	19.9	16.3	25.7	19
2001		18.1	14.9	23.8	17.4

Col. 1: OECD's measure of the incidence of low pay - full-time workers only.

Low pay threshold defined as 2/3 of median weekly earnings for F-T workers

Source: personal communication from Paul Swaim, OECD-Paris.

Col. 2: the incidence of low pay for full-time workers (35+ hours).

Constructed from the EPI's CPS-ORG extracts for those 16 and over.

Low paid workers: those earning <2/3 of the median hourly wage for all full-time workers.

Col. 3: Incidence of low pay for F-T workers 25+ years of age (low paid F-T/total F-T)

Col. 4: Incidence of low pay for all workers

Col. 5: Incidence of low pay for all workers 25+ years of age

Source for columns 2-5: author’s calculations from EPI data file.

Table 4: Unemployment, Underutilization, and Employment and Earnings Inadequacy Rates for the U.S., 1989

levels (000)	**ages 16+**	**ages 25+**
1.labor force	123,870	101,724
2. employed	117,342	97,609
3. unemployed	6,528	4,115
4.employed low wage	28,358	16,693
5. employed F-T	95,351	83,083
6. employed F-T, low wage	16,825	11,405
7. employed P-T, involuntary	4,972	3,553
8. employed P-T, invol., low wage	2,720	1,635
9. employed P-T, voluntary	17,019	10,973
10. employed P-T, vol., low wage	8,810	3,923
11. Discouraged*	859	n.a.
Rates (%)		
Unemployment (U)*	5.3	4.0
Underutilization (UU)**	9.9	7.5
*Empl and Earnings Inadequacy (EEI)****	*30.5*	*24.2*

Source: author's calculations, CPS-ORG extracts from the Economic Policy Institute, except the discouraged worker figure, which was provided by Sharon Cohany of the BLS.

Notes:

*U= row3/row1

**UU= (3+7+11)/(1+11)

***EEI=(3+6+7+10+11)/(1+11)

Table 5: Unemployment, Underutilization, and Employment and Earnings Inadequacy Rates for the U.S., 1979-2001

Numbers (000)	**1979**	**1989**	**1994**	**1997**	**2000**	**2001**
1. labor force (16+)	104,963	123,870	131,060	136,297	140,863	141,774
2. employed	98,863	117,342	123,061	129,558	135,208	135,036
3. F-T employed[a]	81,040	95,351	96,244	102,156	108,316	107,720
4. low wage employed[b]	23,813	28,358	33,703	33,881	34,703	32,081
5. F-T employed, low wage	13,964	16,825	20,440	20,696	21,526	19,534
6. “voluntary” part-time, low wage[c]	8,210	8,810	8,850	9,070	9,210	9,160
7. involuntary part-time[d]	3,575	4,972	4,625	4,068	3,190	3,672
8. unemployed	6,100	6,528	7,998	6,739	5,655	6,738
9a. Discouraged1[e]	771	859	500	343	260	319
9b. Discouraged2[f]	771	859	6,218	4,941	4,377	4,567
Rates (%)						
10. Unemployment Rate	5.8	5.3	6.1	4.9	4.0	4.8
11. UU-1	9.9	9.9	10.0	8.2	6.5	7.6
12. UU-2			13.7	11.1	9.1	10.2
13. EEI-1	31.1	30.5	32.2	29.9	28.2	27.7
14. EEI-2			35.1	32.2	30.3	29.8

Notes:
Row 11. UU-1: (7+8+9a) / (1+9a)
Row 12: UU-2: (7+8+9b) / (1+9b)
Row 13: EEI-1: (5+6+7+8+9a) / (1+8a)
Row 14: EEI-2: (5+6+7+8+9b) / (1+9b)

[a] 35+ hours per week.
[b] less than 2/3 median full-time wage
[c] part-time for noneconomic reasons, paid less than 2/3 median f-t wage
[d] part-time for economic reasons
[e] *discouraged1*: for 1979 and 1989: old method (from Sharon Cohany, BLS);
For 1994-2001: "searched for work in last 12 months and available" (http://data.bls.gov)
[f] *discouraged workers2*: 1979 and 1989: same as above
For 1994-2001: "not in labor force, currently want a job" (http://data.bls.gov)

Source: author's calculations of the CPS-ORG, except data for discouraged workers (see above).

Table 6: Unemployment, Underutilization, and Employment and Earnings Inadequacy Rates for OECD Member Countries, 1995
(columns 1-7: thousands)

	1	2	3	4	5	6	7	8	9	10
	LF	Empl.	Unempl	Inv.P-T	Dis'd*	Low Paid**	Under-utiliz'd	U	UU	EEI***
Australia	9,050	8,276	774	526	112	707	1,412	***8.6%***	***15.4%***	***23.1%***
Austria	3,860	3,716	144	23	14	370	181	***3.7%***	***4.7%***	***14.2%***
Belgium	4,160	3,769	390	126	20	247	536	***9.4%***	***12.8%***	***18.7%***
Canada	14,926	13,507	1,419	795	49	1,956	2,263	***9.5%***	***15.1%***	***28.2%***
Finland	2,465	2,081	384	51	49	330	484	***15.6%***	***19.3%***	***32.4%***
France	25,361	22,431	2,930	982	42	1,950	3,954	***11.6%***	***15.6%***	***23.2%***
Germany	38,472	34,860	3,612	384	82	3,350	4,078	***9.4%***	***10.6%***	***19.3%***
Italy	22,733	20,009	2,724	313	201	1,675	3,238	***12.0%***	***14.1%***	***21.4%***
Japan	66,668	64,570	2,098	790	900	3,916	3,788	***3.1%***	***5.6%***	***11.4%***
Netherlands	6,527	6,063	464	128	77	414	669	***7.1%***	***10.1%***	***16.4%***
New Zealand	1,756	1,644	111	96	11	153	218	***6.3%***	***12.3%***	***21.0%***
Sweden	4,323	3,991	332	167	83	121	582	***7.7%***	***13.2%***	***16.0%***
UK	28,631	26,165	2,466	681	146	3,325	3,293	***8.6%***	***11.4%***	***23.0%***
US	132,311	124,903	7,408	4,473	854	22,415	12,735	***5.6%***	***9.6%***	***26.4%***

***Dis'd: discouraged workers**
****low paid: number of full-time workers earnings less than 2/3 median weekly earnings**
*****EIR: (3+4+5+6)/(1+5)**
Sources: columns 1-3, OECD Economic Outlook, no. 64, Dec. 1998
columns 4-6, personal communication from Paul Swaim, OECD-Paris

Figure 1: BLS Unemployment and Underemployment Rates for the U.S., 1983-2002

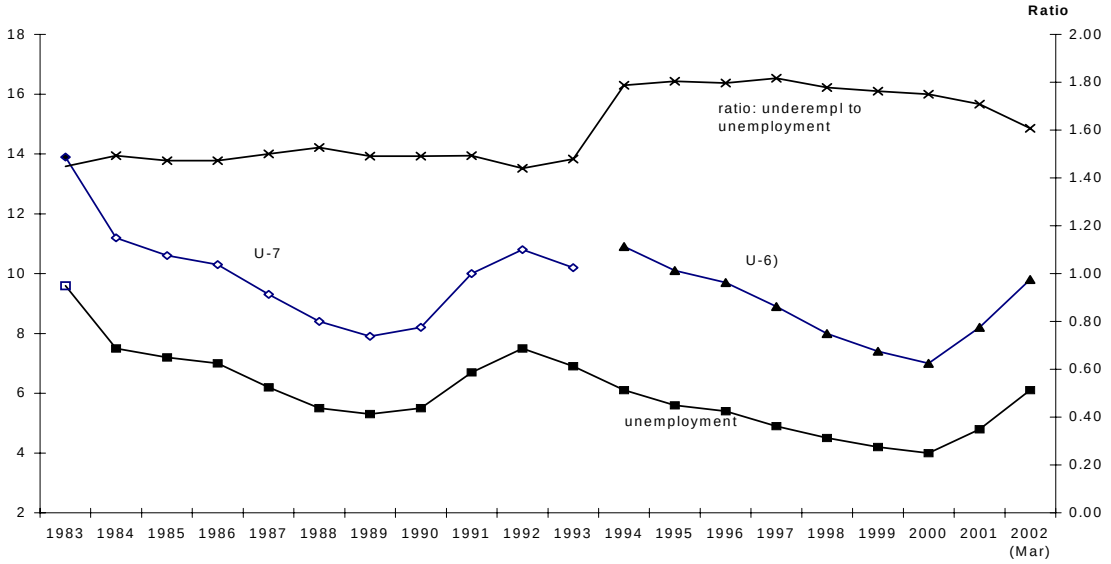


Figure 2: Numbers of Low Wage Workers in the U.S., 1979-2001

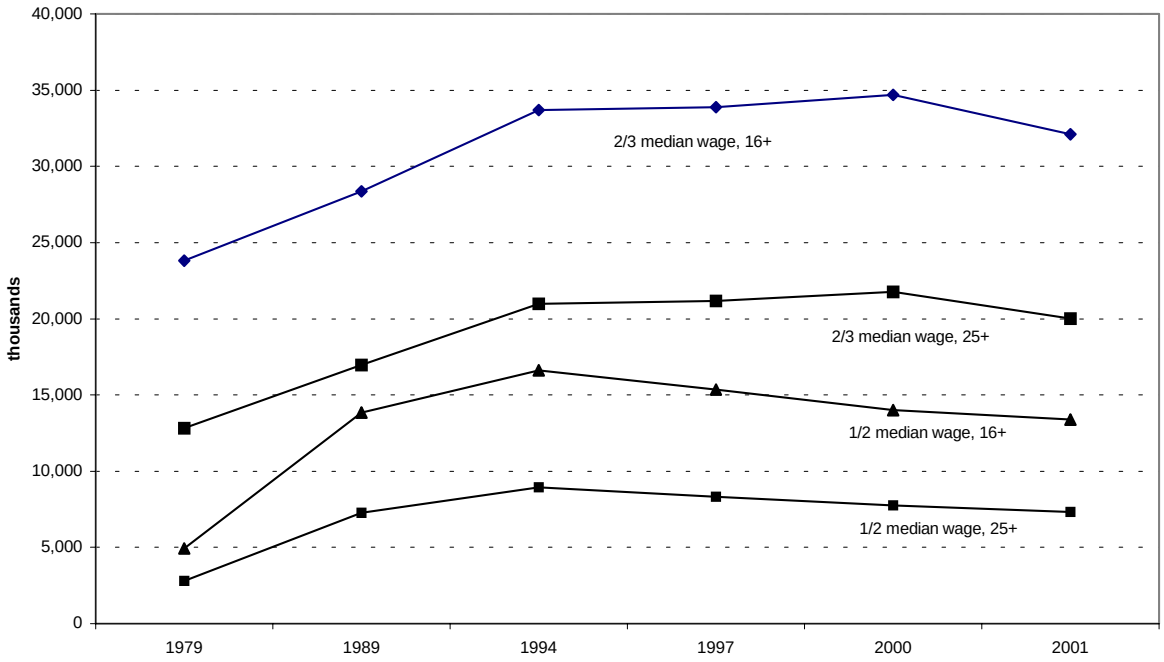


Figure 3: The Incidence of Low Wage Employment in the U.S., 1979-2001

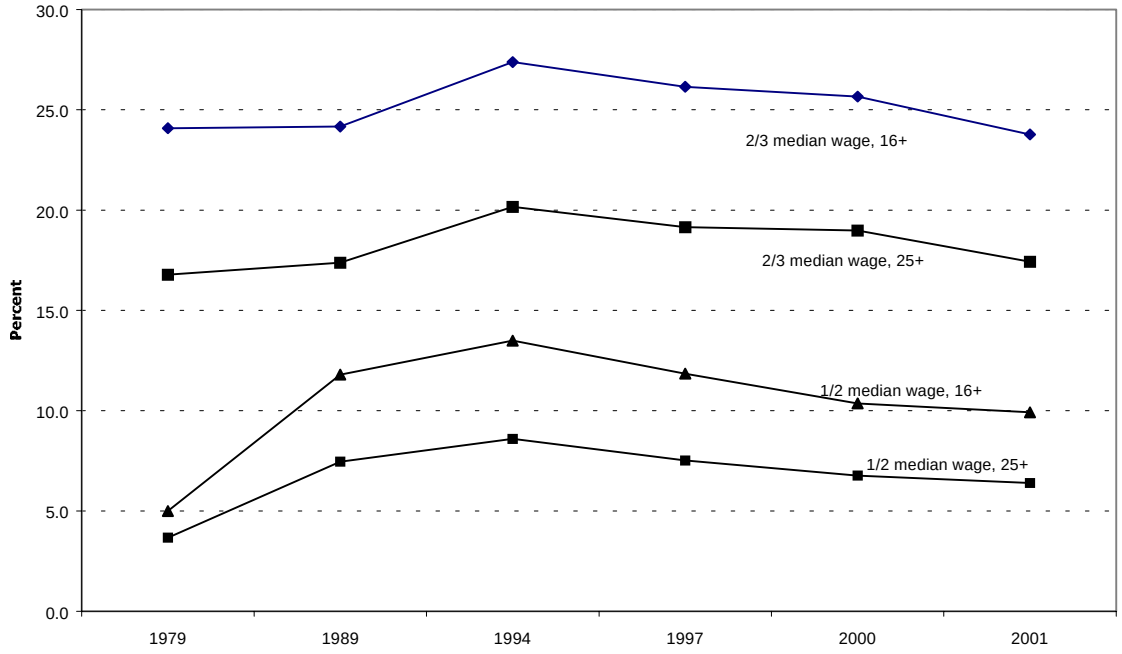


Figure 4: Low Pay Incidence for 7 OECD Member Countries, 1973-2000
(share of full-time workers paid less than 2/3 median weekly earnings)

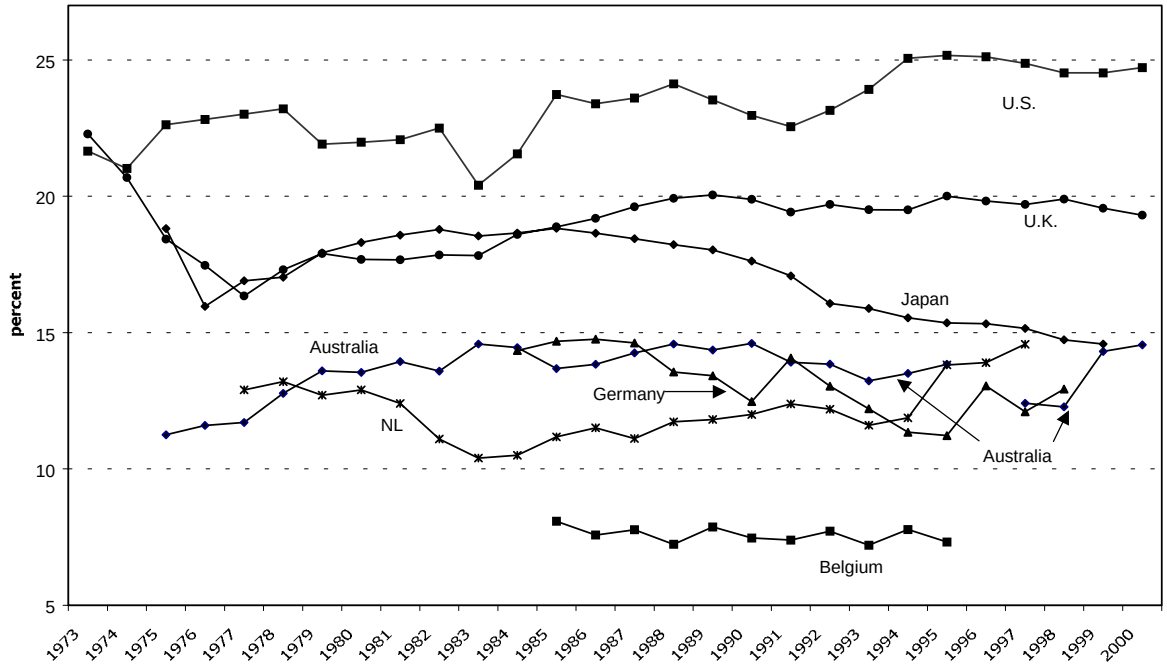


Figure 5: Unemployment and Employment and Earnings Inadequacy Rates for 14 OECD Member Countries, 1995

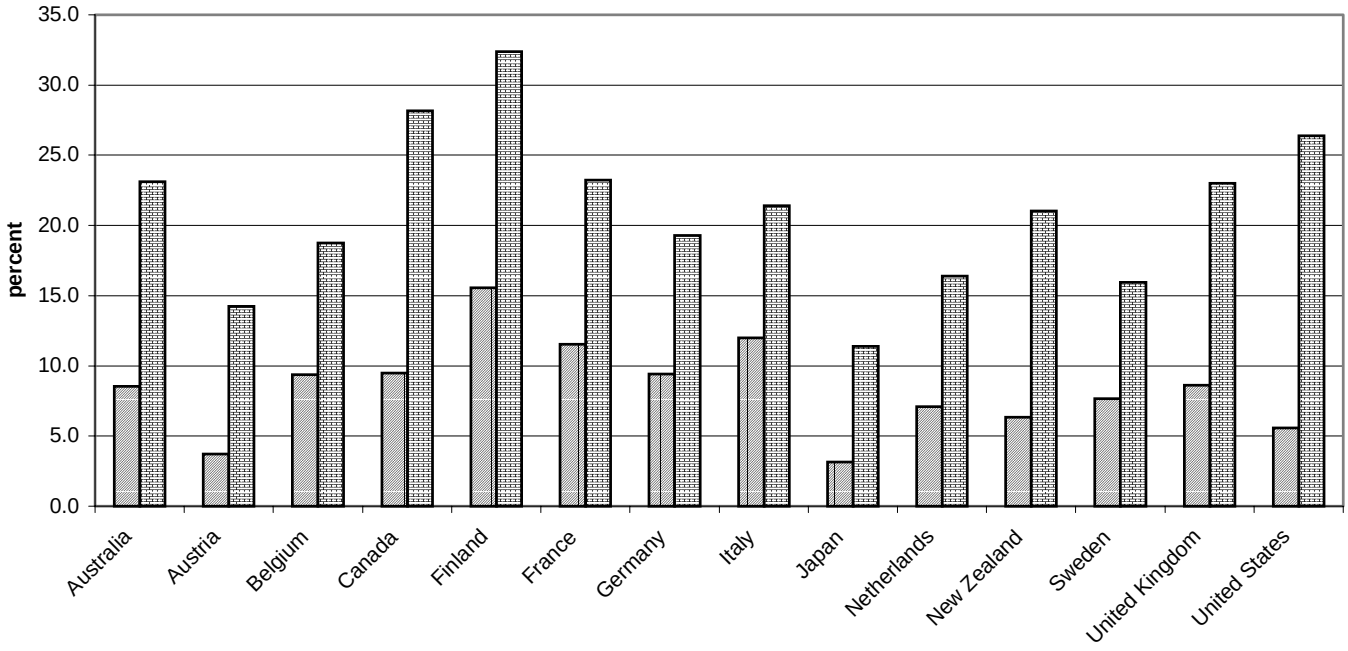
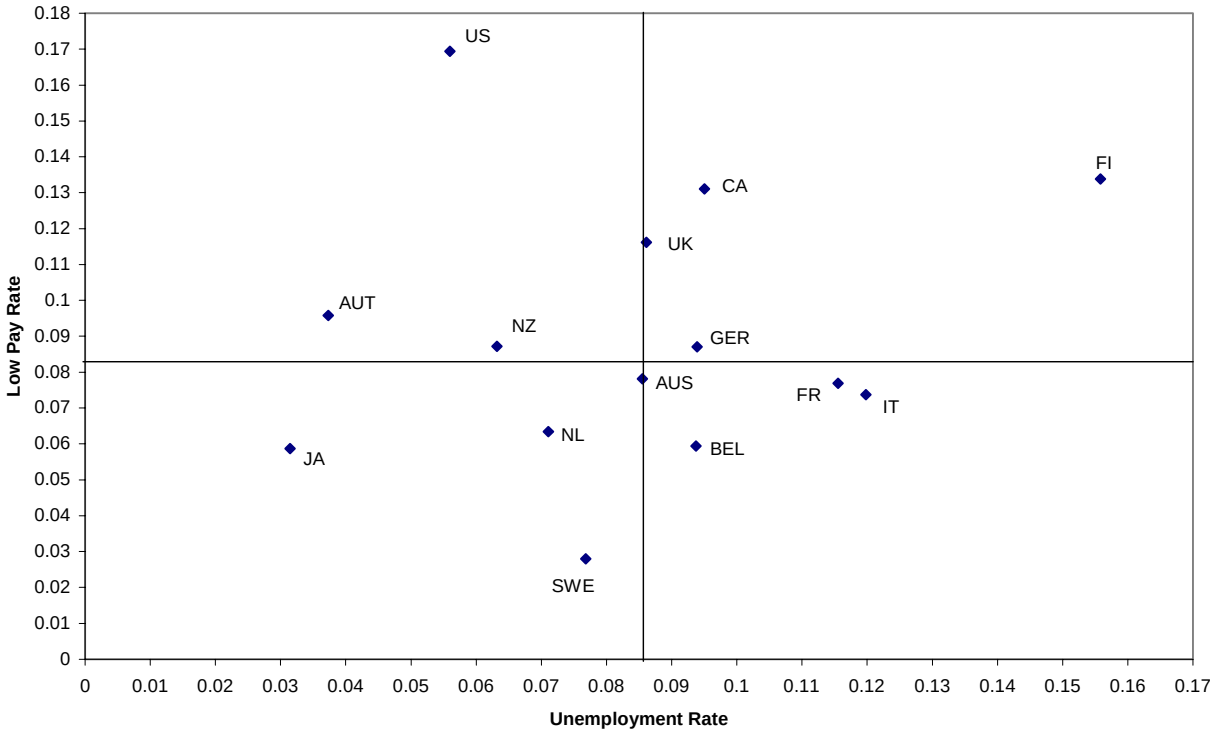
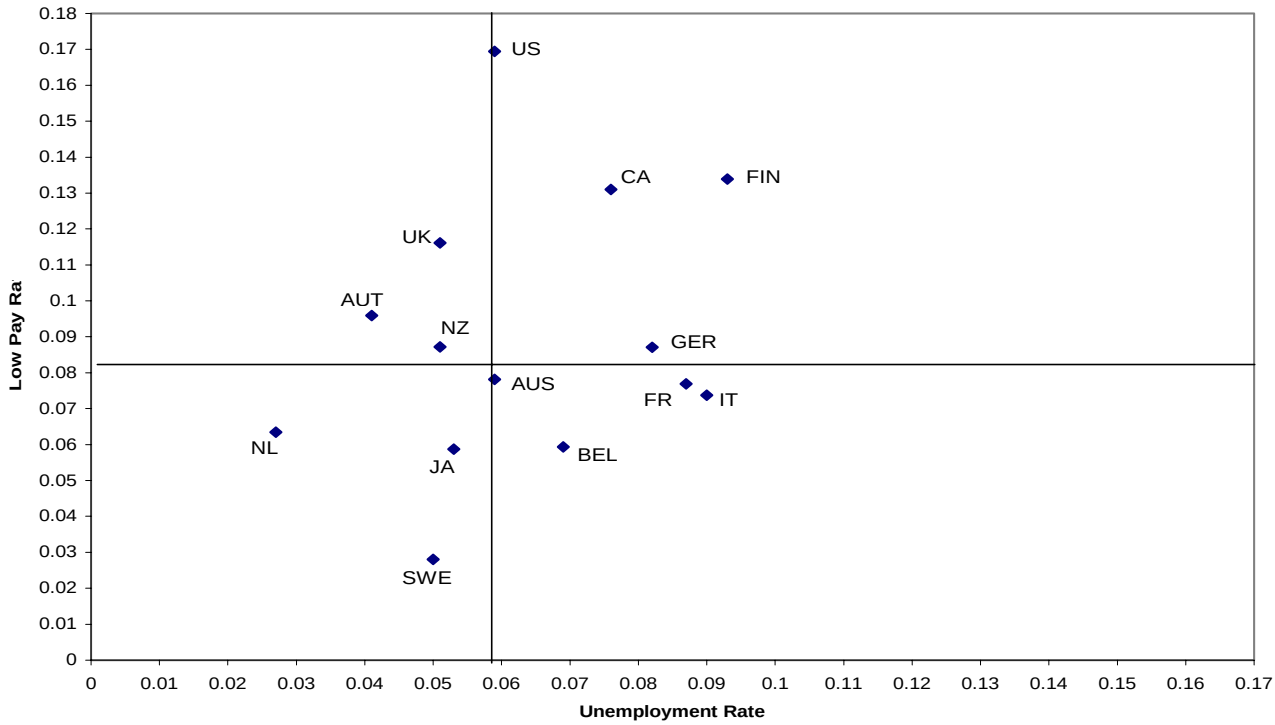


Figure 6: Unemployment and Low Pay Rates*, 1995



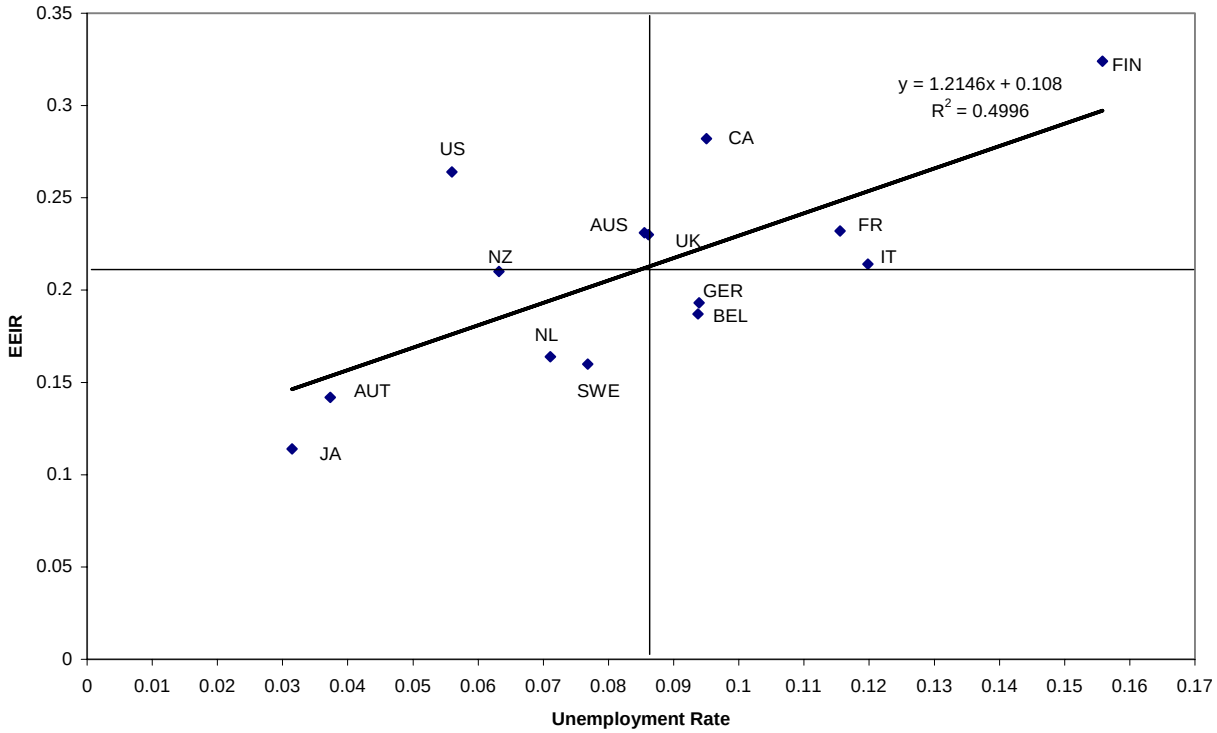
* The low pay rate is calculated as the share of low paid (<2/3 median) full-time workers in the labor force. The quadrants are defined by the median unemployment rate (8.6%) and the median low pay rate (8.2%).
Source: see Table 6.

Figure 7: Unemployment Rates (2002) and Low Pay Rates (1995)



Source: see Figure 6. Unemployment rates for 2002 are OECD standardized rates (www.oecd.org).

Figure 8: Unemployment and EEIR Rates, 1995



Source: Table 6.
Quadrants are defined by the median unemployment rate (8.6) and the median EEIR (21.2).