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0521794390 - Who's Not Working and Why: Employment, Cognitive Skills, Wages, and the Changing U.S. Labor Market

Frederic L. Pryor and David L Schaffer

Excerpt

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CHAPTER 1

The Changing Labor Market

The period from 1970 to 1996 represents a time of dramatic change in the U.S. labor market. The manufacturing sector has been shrinking and restructuring while the service sector has been growing. Jobs of all types have moved out of the inner cities and into the suburbs. Increased international trade and competition has helped some industries expand their domestic output while others have been forced to scale back, shut down, or move their facilities abroad. Well-educated employees with decades of experience have become as fearful about layoffs as younger less-educated workers. Legal and illegal immigration has continued at high levels, creating more competition for many entry-level jobs. The technology changes associated with the computer revolution have continued to modify the nature of many jobs. Women have become just as likely as men to get a university degree, and almost as likely to seek paid work. The financial rewards to the most successful workers in the labor market have grown dramatically, while those to most other workers have shrunk. The quality of public education, at least in many urban areas, has declined precipitously.

These phenomena have received wide attention in both the academic and popular press. Hardly a month goes by without a new book appearing – by an economist, a sociologist, a business executive, or a journalist – attempting to explain why these changes are occurring and what they mean for the future.¹ Our book follows in this tradition – but with a few key differences.

First of all, most previous work in these areas focuses on one or two poten-

1 Recent books include: Barlett and Steele, *America: Who Stole the Dream?* (1996); Danziger and Gottschalk, *America Unequal* (1995); Frank and Cook, *The Winner-Take-All Society* (1995); Holzer, *What Employers Want: Job Prospects for Less-Educated Workers* (1996); Levitan, Gallo, and Shapiro, *Working But Poor: America's Contradiction* (1993); Mishel, Bernstein, and Schmitt, *The State of Working America, 1996-1997* (1997); Perelman, *The Pathology of the U.S. Economy: The Costs of a Low-Wage System* (1996); Thurow, *The Future of Capitalism* (1996); Wilson, *When Work Disappears: The World of the New Urban Poor* (1996); Wolff, *Top Heavy: A Study of the Increasing Inequality of Wealth in America* (1995).

Recent collections of articles include: Bhagwati and Kosters, editors, *Trade and Wages: Leveling Wages Down?* (1994). Danziger and Gottschalk editors, *Uneven Tides: Rising Inequality in America* (1993); Farley, editor, *State of the Union: America in the 1990's*, Vol. 2, (1995); Ginzberg, editor, *The Changing U.S. Labor Market* (1994); Solmon and Levenson, editors, *Labor Markets, Employment Policy, and Job Creation* (1994).

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tial explanations and then tries to document their importance. For example, one study focuses on increased international trade while another deals with spatial mismatch between jobs and workers – the jobs are in the suburbs while many unemployed workers are in the cities. Or one explores the increasingly rapid pace of technological change while another focuses on the large number of recent immigrants. We set out to look at all of these potential causes simultaneously, and to use a careful analysis of economic data to determine the relative importance of each. However, along the way, we encountered some surprises. We found that many of these changes are related. We determined that the standard explanations cannot explain the magnitude of these changes. We discovered that several factors which have been ignored or dismissed by others may, in fact, be catalysts driving these changes.

How do we reach conclusions different from most others? Part of the answer lies in the data underlying our analysis. We use Current Population Survey (CPS) data from 1970 through 1996 which have been very carefully modified so that education, employment, and wages in individual detailed occupations (3-digit or 500-category) can be tracked for the entire period. These provide us a way of looking at the labor demand side of the market that is missing in most studies. We also use National Adult Literacy Survey (NALS) data from 1992, which enable us to look at the skill levels of individuals independent of their education or occupation.

Part of the explanation for our different results also lies in the conceptual framework that we develop. Our abundance of data on detailed occupations enables us to develop a concept, called “education intensiveness,” to classify each of these detailed occupations into four broad categories or “tiers.” This concept is very fruitful in helping us to identify some of the primary labor market mechanisms affecting this quarter century of changes in the labor market.

Finally, part of the explanation for our different results lies in the analytical approach we use. Rather than relying on a single method, such as a standard type of regression analysis, we look at the data in a variety of ways. Of course, we make extensive use of regression analysis, but we also use two relatively less familiar techniques – one to separate the changes in employment into aggregate versus structural changes (Chapter 4), and the other to decompose the changes in wage inequality into those between various categories and those within particular categories (Chapter 6).² We also examine much of the data at the individual detailed occupations level to see how the changes occurring may differ across jobs within the same broad tier.

2 Although these two analytical techniques are very different and are used for very different types of analysis, both are associated with the work of Henri Theil.

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An Outline of Our Story

We believe that the most important transformations of the labor market over the last quarter century can be most easily understood by focusing on four interrelated changes: (1) the rising joblessness of prime-age males, particularly among the less educated; (2) the increased number of university educated workers in “high-school” jobs; (3) the significant increase in wage inequality within and across well-defined demographic groups and occupations; and (4) the increasing average rate of economic return to an investment in a university education.

This book focuses on the implications of a surprising, but crucial fact for the labor market and the four trends just described: Jobs for less-educated workers have increased faster than the population with the corresponding educational credentials while, simultaneously, jobs for more-educated workers have increased slower than the more-educated population. Thus, contrary to arguments proposed in the popular press and technical literature, joblessness of less-educated workers is not linked to the disappearance of low-skilled jobs, a phenomenon often erroneously attributed to the impact of foreign trade or technical changes.

We carefully document these relative changes affecting low-skilled jobs and potential workers. As a result of such changes, low-skilled positions are increasingly filled by workers whose educational credentials exceed job requirements. In other words, over the last quarter-century there has been a considerable downward occupational mobility dramatically reducing the probability that workers with particular educational credentials obtain employment in occupations commensurate with their years of schooling; not surprisingly, they are accepting jobs requiring less education. In brief, university graduates are taking high-school jobs.

In the following chapters we show that such downward occupational mobility is facilitated by three key mechanisms. First, hourly wages within and across many occupations exhibit downward wage stickiness.³ A decrease in wages occurs when the labor supply increases for a particular occupation, but there is also some excess supply which does not disappear quickly. Second, the labor market is increasingly sorting workers by their cognitive skills. Using data from the National Adult Literacy Survey we can separate the inde-

3 Possible explanations for this wage stickiness include the impact of minimum wage laws, the impact of firms following efficiency wage policies to maintain high productivity and the prevalence of implicit contracts allowing labor demand to vary more easily along the quantity dimension than the wage dimension.

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pendent influences of education and cognitive skills to show that workers experiencing downward occupational mobility generally have lower cognitive skills than others with the same educational credentials. "Years of education" is an imperfect indicator or measure of cognitive skills, which are becoming more important as a determinant of employment. Third, growing numbers of educated women have been filling jobs previously held by men, particularly in those jobs requiring considerable education and skills.

The combination of wage stickiness and the various job displacement mechanisms underlying downward occupational mobility results in significant changes affecting the lower end of the occupational scale. Workers with some education have crowded into jobs requiring relatively few years of schooling at a faster rate than these jobs increase. As a result, wages in low-education occupations are falling. Moreover, the least-educated workers are leaving the labor force entirely, especially when the actual wages approach the legally mandated minimum wage.

Changes occurring at the other end of the occupational scale are more complex. Although there are more university graduates than university-level jobs, average wages in such jobs have risen. Averages, however, are deceptive. Our investigation concludes that technical change has affected the wage premium for high cognitive skills, since the demand for these skills has risen faster than the small group of university graduates possessing them. Thus, one subgroup of university graduates has received increasing wages over time, while university graduates with average or lower-than-average cognitive skills have experienced falling or stagnant real wages (even those not experiencing downward occupational mobility).

Employment trends have important implications on the distribution of wages, which are becoming increasingly unequal according to most measures. Many previous studies have shown that the greatest changes in wage inequality occur within broad occupational groups, rather than between them. We find similar trends for most narrowly-defined occupational groups, except for those requiring substantial education. The causes of increasing wage inequality differ, however, in the low- and high-end occupations.

Our study identifies three factors affecting the increase in wage inequality occurring within occupations requiring relatively little education. First, a modest decrease in the real minimum wage has resulted in many workers receiving lower real wages than ever before. Second, a large decrease in the rate of unionization over the last quarter-century has meant a decrease in organized labor support for wage equality. Finally, downward occupational mobility has resulted in a broader distribution of both education and cognitive abilities within the low-education occupations which, in turn, has generated a broader distribution of wages.

For jobs requiring a university education, we show that four mechanisms have resulted in greater wage inequalities: Wages in the health care and legal

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professions have dramatically outpaced those in others. Further, a substantial displacement of men by women working at lower wages has occurred, particularly in the middle-wage professions. In addition, the increasing wage inequality is enhanced by technological change that leads to an increase in the demand for workers with higher cognitive skills. Finally, a movement toward “winner-take-all” wage-setting has also occurred which has led to small groups within certain occupations obtaining extra-high wages.

Our explanation of these changes is quite different from that of others and is likely to be met with some skepticism. The co-authors have different political views and pursued no ideological agenda in carrying out this research. As previously noted, we were initially surprised at many of our findings. Our conclusions, however, are supported by the lengthy empirical analysis presented in this book. When we propose a theoretical explanation, we also provide the facts underlying the theory.

Dimensions and Long-Run Trends in Joblessness

The starting point for our analysis is joblessness among men and women. This lack of employment has economic consequences such as loss of production and income. Scholars in various disciplines have shown it also has significant social implications, especially for those formerly employed. These include a decline in physical and mental health, increased rates of suicide, higher admission rates to mental hospitals, more divorce, more child abuse, lowered self-esteem, more alcoholism and severe depression, greater helplessness and, quite likely, more crime.⁴ Different studies also indicate long-term unemployment among specific groups of workers exacerbates a decline in concentration and effort, not to mention loss of job skills.

We leave detailed exploration of these economic and social implications to others. Nevertheless, these social costs justify our attention in this book to joblessness and the importance of understanding its underlying causes. Our focus

4 Warr (1987, especially Chapter 11 and 12) and Mallinckrodt and Fretz (1988) have useful bibliographies showing the relationship of unemployment to the different social variables cited in the text. This literature on the social consequences of unemployment is vast and features both time-series and cross-sectional studies carried out on both a macro-level (for instance Brenner's (1973) study of aggregate trends and admissions to mental hospitals), and a micro-level. Although unemployment is often tied to crime, macroeconomic relationships are difficult to interpret, particularly because isolating such effects requires complicated simultaneous equation models. Nevertheless, most studies show the expected positive relation between unemployment and crime. The literature is reviewed by Chiricos (1987) and Freeman (1994). Microeconomic evidence is even more likely to show a positive and significant positive relation between high unemployment and low wages on the one hand and criminal behavior on the other (Freeman, 1996-b). Nevertheless, some contrary evidence is also available (Kim *et al.* 1989).

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is not on the lack of employment arising from cyclical or other short-term causes (which are relatively well understood), but on the factors underlying long-term, structural joblessness, where general understanding is less developed.

Dimensions of Long-Run Joblessness

The first task in approaching the problem of joblessness is to define the group of individuals to be observed, and the measure of joblessness for that group. Since we explore long-run changes, we focus our attention on prime working-age men and women. These are men and women ages 25 through 49 who have completed all of their formal education, acquired some work experience, and have not yet begun the transition toward retirement.⁵ By looking only at prime working-age men and women, we avoid confusing the core problems of joblessness with two types of special problems associated with age. Young persons who have completed secondary school or university may have special difficulties securing employment commensurate with their education. Older workers in their fifties and sixties may experience health-related employment problems. Moreover, due to the availability of pensions, Supplemental Social Insurance, and other sources of income, many older workers have voluntarily chosen early retirement.

The second task is to choose a measure of long-run joblessness for prime working-age men and women. During previous decades, those addressing problems of joblessness have focused most of their attention on unemployment, rather than withdrawal from the labor force. Unemployment is defined as those without employment who are "actively looking for work," and the conventional belief is that most unemployment is involuntary.⁶ In contrast, non-participation in the labor force is generally considered voluntary. However, for men in their prime working years, non-participation in the labor force is more likely to be involuntary; most men in their prime working-ages would

5 Most economists define prime working ages as beginning somewhere between ages 20 and 30, and ending somewhere between ages 50 and 55. We choose to look at persons age 25 through age 49, although our calculations suggest that the choice of beginning and ending ages does not affect our results in any substantive way.

6 The Current Population Survey (CPS) defines people as employed if, for a given month's period, they work for any length of time for monetary payment, or if they are engaged at least 15 hours a week in unpaid work in a business or farm owned by a member of their immediate family. Cohany, *et al.* (1994) provide a fuller definition. People are considered unemployed if they have no employment but have actively looked for work in the past four weeks, or have been laid off and have evidence that they will be recalled. For prime-age workers the new labor force survey methods introduced in 1994 raised the unemployment rate about 0.3 percent; and the participation rate in the labor force, about 0.1 percent.

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choose to work for pay if able to find an acceptable job. For this reason, economists designate prime working-age men who are neither employed nor actively looking for work as “discouraged workers”. Given this, we believe the best measure of long-run male joblessness – the excess supply of labor among men compared to the available jobs- is the fraction of prime working-age men who are not employed. This includes all meeting the conventional definition of unemployed, as well as those not in the labor force.

For women, the choice of definitions for long-run joblessness is less obvious. Certainly many prime working-age married women are “voluntarily” out of the labor force to raise young children and to take responsibility for household tasks. However, recent data suggest many of these women would join the workforce – and send their children to daycare – if the “right” job became available. In order for such women to join the labor force, a job must have the flexibility needed to accommodate parenting responsibilities. This additional requirement makes it less likely that married women will find the right job, and so they are more likely to be out of the labor force than their husbands. Whether this is a “voluntary” or “involuntary” is a difficult question that we cannot answer here. The changes in the workforce behavior of married women have been so dramatic over the last quarter-century – especially the group that formerly chose not to work for pay outside the home – that we definitely want to include them in our analysis. Thus, we apply the same definition of long-run joblessness to both men and women.

Over the last third of a century the nature of long-run joblessness among those in the prime working-ages has changed dramatically. In the mid-1960s, the number of unemployed prime-aged men exceeded those who had withdrawn from the labor force. By the 1990s, however, those who have withdrawn from the labor force – many are designated as “discouraged workers” – considerably outnumber those classified as unemployed.⁷ Among prime-age

In response to objections raised against the “standard definition” of unemployment, the Bureau of Labor Statistics calculates several alternative measures. A narrow definition of unemployment considers only the long-term unemployed, those workers who have been unemployed 15 weeks or more. By way of contrast, an expanded definition (formerly called series U-7) includes as unemployed those seeking full-time jobs one-half of those seeking part-time jobs and one-half of those employed part-time for “economic reasons” (the worker wanted a full-time job) plus all “discouraged workers” (those declaring they want work, but have not actively looked for work in the past month). Bregger and Haugen (1995) discuss the various definitions of unemployment and how they changed as a result of the 1994 revisions to the CPS questionnaire.

Since this study focuses primarily on total joblessness, we do not need to worry about the line separating the unemployed from those who have completely withdrawn from the labor force.

⁷ In Appendix 1.2 we provide relevant data by education, race/ethnicity, and year for both unemployment and those who have completely withdrawn from the labor force. Subsequent to the calculation made for Charts 1.1 and 1.2, the percentage of jobless men and women fell respectively about 1.3 and 2.1 percentage points between March 1995 and March 1999. Although the jobless rate among prime-age, high-school dropouts was considerably more than the average, the jobless rates in 1999 for these two groups were respectively 22.8 and 48.6 percent, so that the problem still remained serious.

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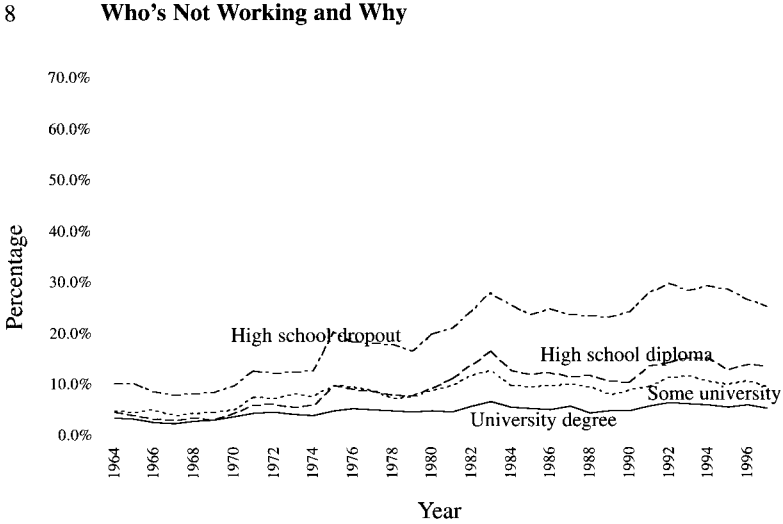


Chart 1.1: Percentage of males in prime working-ages without employment

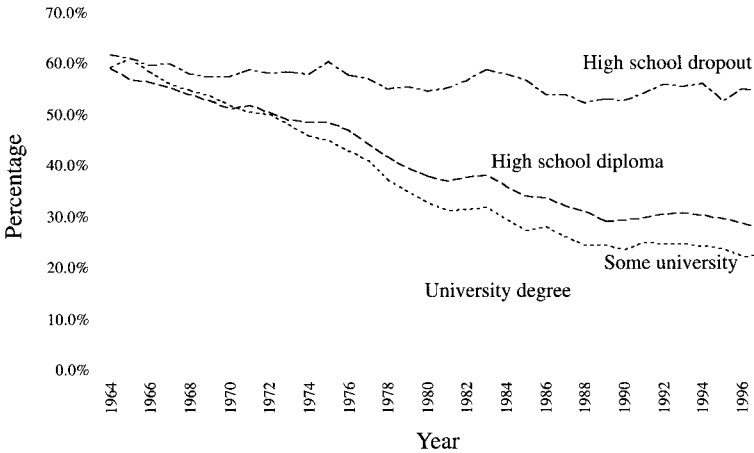


Chart 1.2: Percentage of females in prime working-ages without employment

women the percentage of those without formal employment outside the home has always been greater than those unemployed, since many stayed home to fulfill home-making or child-rearing responsibilities. Nevertheless, the difference in number between the unemployed and those out of the labor force has dramatically narrowed over the last 30 years.

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This shift in the composition of joblessness has many important economic implications. At the macroeconomic level, it suggests that the “natural rate of unemployment” has changed. This might occur because employers can draw upon a much larger pool of jobless workers at a given level of unemployment. At the microeconomic level, it directs our attention to the possibility that the problem of joblessness might be considerably more severe among certain subgroups than traditional indicators of unemployment suggest. For example in the mid-1900s roughly one-fourth of the white male prime-age workers without a high school diploma had no job; among black male prime-age workers with a similar education, the percentage was roughly one-half.

Joblessness Over the Last Three Decades: A Few Descriptive Statistics

How severe is the problem of joblessness? Charts 1.1 and 1.2 allow us to see how it has evolved over the last third of a century by illustrating the separate jobless rates for men and women, differentiated by their level of formal education. These calculations are based on samples of 60,000 to 120,000 people from the data files of the March Current Population Survey (CPS) of the various years.⁸ These labor force data refer to the status of the respondents during the week before the interview. We define the jobless (or non-employment) rate as the total number of jobless divided by the total population in the relevant age/education category.

For both men and women, the rates of joblessness are inversely related to level of educational achievement. Thus university graduates have the lowest rate of joblessness, and high school dropouts have the highest. Over time the trends were less favorable for the less-educated than for the more-educated, although the pattern was different for men and women. More specifically, the rates of joblessness for men increased faster for the less-educated men than those with more education. For women, the rates of non-employment fell more slowly for those less-educated than for more-educated women.

Trends and differences between non-employment rates are more dramatic when we separate the educational groups by race. For men with less than a high school degree, the situation appears especially worrisome. For instance, between 1971 and 1995 the jobless rate of white men increased

8 In Appendix 1.1 we present a brief description of the Current Population Survey (CPS) and in Appendix 1.2 we provide a more detailed break down of the data presented in Charts 1.1 and 1.2. Although the CPS is the standard source of many key labor force statistics used by the government and private researchers, the data are not completely standardized over the period under investigation. At appropriate places in this study we discuss how we achieve (or do not achieve) comparability for particular statistics.

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13.6 percentage points (from 11.9 percent to 25.5 percent); for black men, the jobless rate increased 30.7 percentage points (from 17.0 percent to 47.6 percent). For white men with just a high school diploma, the non-employment rate increased 6.1 percentage points; for black men, 8.7 percentage points. (See appendix tables A1.1 and A1.2.)

Although women as a whole experienced decreasing jobless rates, similar differences occurred when race is considered. Between 1971 and 1995 the jobless rate of white women with less than a high school diploma decreased 9.3 percentage points (from 60.5 percent to 51.2 percent); for black women in the same education group, the jobless rate increased 5.6 percentage points (from 52.0 percent to 57.6 percent). For white women with just a high school diploma, the jobless rate decreased 25.2 percentage points; for black women, it increased 0.4 percentage points.

At the other end of the educational spectrum, the non-employment rates for both white and black men with a university degree rose only slightly between 1971 and 1995. For women university graduates, the situation again depended on race. The jobless rate of white women decreased 25.5 percentage points, while for black women the rate decreased only 4.2 percentage points. It must be added that by 1995, the employment rate of black women was still higher than the rate of white women. Thus, employment rates for white educated women were catching up to those of black women.

At this point it is useful to note some similarities and differences among unemployment rates which have received more public attention. The unemployment rate is much more volatile than the rate of joblessness. The two rates are, however, similar in that both are higher for the less-educated than for the educated, and are also higher for blacks than for whites. Nevertheless, unemployment trends for men and women are roughly similar, in contrast to rates of joblessness.

But the greatest difference between unemployment and total joblessness lies in their respective long-run trends. In the late-1990s we might wonder whether it is worthwhile worrying about unemployment in the United States since the rates have been at a 30-year low. Moreover, in contrast to the European continent, the unemployment situation in the United States looks even better.⁹ By focusing attention on total joblessness, however, we can identify some serious problems, particularly among less-educated males.

9 In the decade of the 1960s, for instance, the unemployment rate in the United States was more than 1.7 times as high as in the industrialized European members of the O.E.C.D. In the decade from 1984 through 1993, however, the U.S. had an unemployment rate roughly two-thirds of these other nations. If we compare not just the European members but all members of the O.E.C.D. (the 19 European members plus Australia, Canada, Japan, and New Zealand) to the U.S., the U.S. unemployment rate was 1.9 times higher in the 1960s and about five-