

— Chapter 1 —

Introduction: The Labor-Market Performance of the United States in an International Context

THE CONTRAST BETWEEN the labor-market performance of the United States and that of most other advanced economies over the 1980s and 1990s has been striking. In 1973, the unemployment rate standardized to a common OECD definition was 4.8 percent in the United States but 3.2 percent or below in Australia, Austria, Belgium, France, Japan, the Netherlands, Norway, Spain, Sweden, the United Kingdom, and West Germany. The unweighted average unemployment rate among these countries was 2.1 percent, an astonishingly low figure by today's standards.¹ American economic observers pondered the explanation for the persistently higher U.S. unemployment levels. This concern was well captured in the title of an influential paper about the U.S. experience that appeared at this time, "Why Is the Unemployment Rate So High at Full Employment?" (Hall 1970). High turnover rates among U.S. workers accompanied by spells of unemployment were seen as an important part of the story (Flanagan 1973).

Since the early 1970s, after two oil crises, vastly increased globalization, and rapid technological change, the unemployment position of the United States and the other Western countries has dramatically reversed. By 1999, the U.S. unemployment rate had fallen to 4.2 percent and was as low as 3.9 percent as of October 2000.² In contrast, beginning in the 1970s, unemployment rose sharply in virtually every other Western country. By 1999, it aver-

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aged 8.7 percent in the European Union, such levels having prevailed for nearly twenty years (OECD 2000). Unemployment rates were particularly high in Finland (10.3 percent), France (11.3 percent), Italy (11.4 percent), and Spain (15.9 percent).

By the 1980s and 1990s, it was European observers who were searching for explanations for persistently high unemployment rates. Increasing labor-market flexibility—freeing up the forces of supply and demand to determine pay and employment and diminishing the role of union contracts or government regulations—was seen by some as the key to lowering European unemployment (OECD 1994b). Interestingly, this reasoning implies that the high worker mobility in the United States that had been a concern in the earlier period could now be viewed as one component of the more flexible U.S. labor-market package that, taken as a whole, was associated with lower unemployment rates. Others, however, questioned whether greater flexibility would, in fact, achieve lower unemployment and pointed instead to low levels of demand for labor as the culprit behind Europe's higher unemployment (Glyn and Salverda 2000).

There is, however, another side to this comparison. While the United States has fared well in recent years in creating jobs and maintaining low unemployment, its wage levels have deteriorated relative to those overseas, and wage inequality, always higher in the United States than in other advanced countries, has risen more sharply than it has elsewhere. In 1979 to 1981, median weekly earnings of male full-time workers in the United States were \$609 (in 1998 U.S. dollars), while, across six major OECD countries for which comparable data are available (Australia, Austria, Canada, Sweden, the United Kingdom, and West Germany), men earned only \$419.³ By 1994 to 1998, U.S. men's earnings had fallen to \$576 in real terms (a 5.5 percent decline), while men's earnings in the other countries rose to \$514 (a 22.6 percent increase). Similar trends prevailed among women. However, in contrast to men, U.S. women experienced rising, rather than stagnating, real earnings, and women in the other countries did not gain on U.S. women as rapidly: women's wages rose from \$381 in 1979 to 1981 to \$439 in 1994 to 1998 in the United States (a 15.3 percent increase), compared to an increase from \$292 to \$384 in the other countries (a 31.6 percent rise).

At the same time as the real wages of the median worker in the United States deteriorated relative to those of the median worker in other Western nations, Americans at the bottom fared even worse, both absolutely and relatively. U.S. men at the 10th percentile saw a decline in their real wages of 16.3 percent between 1979 to 1981 and 1994 to 1998, while workers at the 10th percentile in the six OECD countries listed earlier saw an increase of 18.7 percent. Among women, real wages at the 10th percentile fell by 2.8 percent in the United States but increased by 28.2 percent in the other countries. In 1979 to 1981, workers at the 10th percentile in the United States outearned comparable workers in these other countries by 20.0 percent (men) to 27.7 percent (women), but, by the mid-1990s, their foreign counterparts outearned U.S. workers by 3.3 percent (women) to 18.3 percent (men).

Thus, while the U.S. economy may have been an impressive job-creation machine since the 1970s, real wages in the United States have not kept pace with those in other countries, and workers at the bottom have fared particularly poorly. If unemployment was a signature problem for much of Europe in the latter part of the twentieth century, low and declining real and relative wages for those at the bottom of the wage hierarchy were America's.⁴

FLEXIBILITY AND LABOR-MARKET INSTITUTIONS: THE UNIFIED THEORY

The U.S. labor market has long been much less subject to institutional intervention by unions or the government than have the labor markets of other Western countries, and some have pointed to these differences as key to understanding the differences in unemployment, wage levels, and wage inequality that we have just documented (see, for example, Siebert 1997). While some controversy surrounds the effort to link the institutional differences to differences in labor-market outcomes, the broad outlines of these differences are clear.

First, collective bargaining plays a much smaller role in determining workers' wages in the United States than it does elsewhere. In the 1990s, fewer than 20 percent of U.S. workers were

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covered by collective-bargaining agreements, while coverage averaged about 70 percent among other OECD countries (OECD 1997). In countries such as Australia, Austria, Belgium, Finland, France, Germany, Italy, the Netherlands, and Sweden, where collective-bargaining coverage is 80 percent or more, there is very nearly complete coverage of the workforce by union contracts. Moreover, whereas, in the United States, collective bargaining usually takes place at the single-firm level, collective bargaining in many of these other countries takes place at the industry or even the economy level. And legislated minimum-wage levels are also higher relative to average wages in these other countries than they are in the United States (OECD 1998b).

Second, unemployment-insurance (UI) benefits are much more generous in other countries than in the United States, and, while UI benefits usually run out after six months in the United States, unemployed workers can collect for much longer periods in other countries. In several countries, including Australia, Belgium, Germany, New Zealand, and Switzerland, individuals can collect UI benefits indefinitely. Other mandated benefits, including vacation and sick leave, disability leave, and family leave, also tend to be more generous in other countries than in the United States, and the payroll-tax rates used to pay for these benefits are correspondingly higher elsewhere as well (Nickell and Layard 1999).

Third, it is much more expensive and administratively cumbersome for firms to lay off or discharge workers in other countries than in the United States. And firms in other countries also face many more restrictions on the use of temporary workers (OECD 1999).

Finally, the government accounts for a much larger share of total employment in other OECD countries than in the United States. Moreover, while the public-sector share of employment has been falling steadily in the United States since the 1970s, the opposite is true in most other OECD countries (Gregory and Borland 1999, 3575).

As noted earlier, some have pointed to these major differences in the degree of intervention in the labor market as an important cause of the relatively high unemployment in other Western nations compared to that in the United States. However, one must

remember that, in the 1960s and early 1970s, with largely the same differences in labor-market institutions between the United States and other Western nations, it was the United States that was the high-unemployment country. Thus, it cannot be true that interventionist institutions produce high unemployment all the time. However, consideration of the vast differences between the United States and other Western countries in wage-setting and other labor-market institutions has suggested a plausible interpretation of the relationship between these institutions and the unemployment disparities that have prevailed since the early 1970s. This view essentially posits an interaction between labor-market institutions and “shocks” to (strains on) the labor market.

Since the early 1970s, there have been a variety of shocks to which labor markets in all countries have been exposed, including the slowdown in productivity growth dating from the early 1970s, the oil-price increases of the 1970s and early 1980s, the fall in the relative demand for unskilled labor since 1980, and disinflation in the 1980s and 1990s (Layard, Nickell, and Jackman 1991; Freeman and Katz 1995; Blanchard and Wolfers 2000; Ball 1997, 1999). It has been hypothesized that the flexible U.S. labor market was able to accommodate these shocks by letting absolute and relative real-wage levels adjust, allowing its unemployment rate to stay low. In contrast, in most other OECD countries, labor-market institutions kept overall real wages rising and prevented unskilled workers' relative wages from falling as fast as they did in the less-restricted U.S. market (in some cases preventing any fall in low-skilled workers' relative pay), thus producing sharp increases in unemployment in these countries (Blanchard and Wolfers 2000; Freeman 1994).

This view has been termed the *unified theory* (Blank 1997), in recognition of the fact that the EU experience of rising unemployment, rising real wages, and comparatively stable relative-wage levels and the U.S. experience of falling unemployment, falling to steady real wages, and rapidly rising wage inequality are two sides of the same coin. The United States permitted real and relative wages to adjust, while, in other Western nations, employment took the brunt of the shocks. To illustrate the argument, consider the effect of productivity trends. From the 1960s to the 1990s, annual growth in total factor productivity in the OECD fell from 5 to

6 percent to 1 to 2 percent (Blanchard and Wolfers 2000). Total-factor-productivity growth is the growth in output per worker beyond that which can be explained by changes in the amounts of labor and capital used. It is, thus, a measure of technological progress. In the relatively flexible U.S. labor market, real wages were allowed to grow more slowly and even to decline, which eventually permitted unemployment to fall. In contrast, according to the unified theory, unions and other labor-market institutions kept real wages growing at their customary pace in other OECD nations, which led to higher unemployment.

We devote a considerable portion of this book to determining whether the weight of the evidence supports the unified theory. If the unified theory is true, it suggests that neither a policy of relative laissez-faire nor one of aggressive intervention in the labor market can produce both high employment and rising real wages in the face of the kind of economic forces that have been experienced over the last twenty to thirty years. We should also point out that, even if the unified theory is valid, differing views on the desirability of institutional interventions in the labor market are logically possible. On the one hand, as discussed in chapter 4, some institutions may enhance economic efficiency by solving problems of market failure in addition to raising wage levels or compressing the distribution of wages. In this case, even if institutions produce unemployment in some circumstances, it is possible that this cost is outweighed by the economic benefits of institutional intervention. On the other hand, as also mentioned in chapter 4, some institutions may have adverse economic effects other than any effect on unemployment. These possible negative effects include adverse incentives and a reduction in the degree to which prices are allowed to serve as a signal for efficiently allocating resources. In this instance, possible adverse employment effects of institutional intervention add to other negative economic effects of institutional intervention.

THE SCOPE OF THE STUDY

The purpose of this book is to evaluate alternative explanations for the divergence between the labor-market performance of the United States and that of the rest of the OECD. In the interest of

manageability, we have placed certain limits on the types of institutions examined and the contexts in which those institutions are studied. We focus primarily on the effect of direct attempts to change market outcomes with respect to pay setting and firms' utilization of labor. These institutions and laws directly regulate what workers and firms are permitted to do in setting wages and allocating labor. In addition, there are a number of policies designed to ameliorate the outcomes produced by unrestricted markets that indirectly affect worker-firm interactions. Such policies may also have important effects on wages and employment. Thus, we consider several of them as well.

Examples of direct intervention in the wage-setting process include collective-bargaining agreements as well as policy interventions regulating wage determination. Government policies include rulings extending the terms of collective-bargaining contracts to workers not initially covered by those agreements, antidiscrimination policy as it relates to pay, minimum-wage laws, and the behavior of the government as an employer. In addition to regulating wages, governments in each of the countries that we examine have placed some limits on the right of firms to fire workers. For example, most European countries require severance pay and advanced notice in the event of layoffs. Antidiscrimination policy also affects firms' employment decisions, both directly and indirectly. Policies having a more indirect effect on labor utilization and wage determination include payroll taxes, UI, industrial subsidies, and active labor-market policies, including public-employment and training programs, and we review important evidence on these as well. However, we do not examine in detail every intervention that could conceivably affect wages or employment. So, for example, we do not discuss in detail the effect of international differences in income-tax systems, policies toward imports, occupational safety and health, or regulations governing firm entry or rate of return. This decision reflects considerations of space as well as a paucity of internationally comparable data on the effect of such policies.

Comparing outcomes across culturally similar countries provides a very attractive research design for evaluating the effect of institutions. For this reason, we limit the countries considered here primarily to the roughly twenty Western industrialized OECD member nations.

Not only does this limitation keep our review manageable, but it also permits us to utilize the similarity in education levels, technology, living standards, and cultures among these countries as de facto controls in examining the effects of institutions. It should be noted that we frequently use the term *European* in referring to institutional arrangements or outcomes that are highly characteristic of that region, although some OECD countries outside Europe, notably Australia and New Zealand, share the major features of this model.

While our focus on the OECD nations provides an attractive degree of comparability across countries along a number of important dimensions, significant noncomparabilities remain, some of which reflect labor-market institutions themselves. For example, it is likely that many people who would be classified as out of the labor force in the United States would be classified as long-term unemployed in Europe because they would be receiving long-term unemployment benefits there that are not available in the United States. Using standardized unemployment definitions does not completely solve this problem since comparably situated individuals may respond to the same questions differently in Europe than they would in the United States. The situation is further complicated by the fact that eligibility for long-duration benefits may be expected to drive up the true incidence of long-term unemployment in Europe compared to that in the United States, all else equal. While correctly classifying the long-term employed and other similar issues of data comparability is a matter of serious concern, we do not believe that such issues unduly affect our examination of the effect of institutions in this study. This is because the “differences-in-differences” approach employed by many, although certainly not all, of the studies that we consider nets out the effect of such factors, by comparing within-country changes over time rather than levels.

In addition, precisely because of the importance of institutions and cultural factors in influencing measured unemployment rates, even within countries, we tend to prefer studies that focus on employment-to-population ratios. With some exceptions, the results of studies using the latter concept are generally consistent with those focusing on the unemployment rate. Nonetheless, the way in which institutions and other factors affect labor-market con-

cepts like unemployment or disability, as another example, would make for an interesting research question, one that we hope will receive greater attention now that international comparisons are becoming more prevalent.

THE PLAN OF THE BOOK AND OUR MAJOR FINDINGS

We begin in chapter 2 with an overview of economic performance across the OECD from the 1970s to the 1990s, followed in chapter 3 by an examination of international differences in labor-market institutions. Our review of the data on unemployment, employment, real-wage levels, wage inequality, and the gender pay gap in chapter 2 leads to the following conclusions about these patterns.

By the late 1990s, the United States had a considerably higher incidence of employment than did other Western nations across a number of dimensions:

- Unemployment was considerably lower in the United States. Not only had the U.S. aggregate-unemployment rate fallen to about half that of other advanced countries, but the incidence of long-term unemployment was also far lower in the United States than elsewhere.
- Employment-to-population ratios were higher in the United States. This was the case for both men and women, with especially large differences between the United States and other countries for women. Similarly, employment-to-population ratios within age groups were higher in the United States, and the differences between the United States and other countries were especially pronounced for the young and the elderly. Moreover, employment-to-population ratios of the young relative to those of prime age have deteriorated much less in the United States than elsewhere.
- A major exception to the pattern of more-favorable employment in the United States was that, within education groups, U.S. employment-to-population ratios were fairly similar to those in other Western countries. And, while unemployment rates were lower within education groups in the United States than in other

Western countries, the *differences* in unemployment rates between education groups were similar, and changes in relative-unemployment rates by education group from the 1970s to the 1990s were about the same in the United States as elsewhere.

- Work hours tended to be longer in the United States. OECD data suggest that annual work hours per employed person were higher in the United States than in other countries, and the U.S. advantage rose considerably between 1979 and 1999. Moreover, while, in all countries, women were more likely than men to work part-time, this gap in the incidence of part-time work was much smaller in the United States than elsewhere.
- The incidence of temporary employment tends to be lower in the United States than in many of the other OECD countries. This means that a higher share of employed workers in the United States hold “regular” jobs.

Our review of the wage data suggests that wage inequality tends to be significantly higher in the United States than in other Western nations, and this disparity has increased in recent years. Real wage growth has also lagged in the United States compared to other OECD countries:

- Between 1979 and 1998, the real wages of both men and women rose substantially in other Western nations. In the United States, in contrast, men’s real wages declined, and, while women’s rose, that increase was smaller than the increase in women’s real wages in other OECD countries.
- Although, on average, labor productivity grew more rapidly in other OECD countries than in the United States from the late 1970s through the late 1990s, this growth was not sufficient to offset the effect of larger real-wage increases on unit labor costs in those other countries. As a result, from 1977 to 1999, unit labor costs rose more rapidly in most other Western nations than in the United States.
- Wage inequality has long been higher in the United States than elsewhere and rose more sharply for both men and women over the 1980s and 1990s in the United States than elsewhere. On average, wage inequality rose only modestly in other Western countries during this period. The real wages of U.S. men and

women at the bottom of the wage distribution fell relative to those of their foreign counterparts.

- In 1979, the gender pay gap was substantially higher in the United States than the average gender pay gap in the other OECD countries, but it decreased more rapidly in the United States than elsewhere over the 1980s and 1990s. By 1998, the U.S. gender pay gap was about the same as the average for the other OECD countries. The more rapidly declining gender pay gap in the United States is an important exception to the pattern of more rapidly rising wage differentials in the United States than elsewhere over this period. Nonetheless, the U.S. gender pay gap remained higher than that in half the other countries, often considerably so.

Overall, these findings suggest a pattern of relatively flexible wages and better employment outcomes in the United States. Some of our results for subgroups are consistent with the unified theory, for example, the better employment outcomes for U.S. youths, who are less affected by wage floors than are younger workers in other countries. And the larger incidence of temporary employment in other OECD countries may reflect an effort to introduce some flexibility into their more rigid systems. But other results are less consistent. For example, relative employment by education group behaved similarly in the United States and other OECD countries, even though wage differentials by education increased more in the United States. Of course, more-definitive research results can be obtained only when we use micro data that allow us to control for differences in the composition of workers in these subgroups, as we do in later chapters.

Our comparison in chapter 3 of the labor-market institutions in the United States and those in other OECD countries documents the following important differences:

- Workers in the United States are considerably less likely to have their wages determined by collective bargaining than are workers elsewhere in the OECD. And this disparity increased over the 1980s and 1990s. Not only do union members constitute a much smaller fraction of workers in the United States (16 percent) than in other countries (41 percent on average), but con-

trasts between the United States and other countries in the extent of collective-bargaining coverage are even more extreme: about half of nonunion members in other countries, but only about 2 percent of such workers in the United States, are covered by collective-bargaining agreements. Moreover, collective bargaining is much more highly coordinated and centralized in other Western countries than in the United States, and, although centralization and coordination have been falling both in the United States and in many other countries, this disparity remains.

- Statutory minimum wages pose less of a constraint on the U.S. labor market than is the case elsewhere.
- While in 1975 a larger fraction of workers were employed by the government in the United States than in the other OECD countries, by 1995 the reverse held. This reflects a declining incidence of public employment in the United States compared to a rising incidence elsewhere.
- Employment-protection regulations are much more stringent in other OECD countries than in the United States, although many of these other countries endeavored to loosen such restrictions during the 1980s and 1990s.
- Government expenditures on active labor-market policy per unemployed worker are much lower in relation to GDP per worker in the United States than in all the other OECD countries.
- UI-benefit systems are much less generous in the United States than elsewhere, with respect to both the level and the duration of benefits. Further, UI systems in several other countries became more generous in the 1970s and 1980s, while the UI system in the United States remained fairly stable.
- Pension systems generally provide more incentives for early retirement in other countries than in the United States.
- Vacation and parental-leave entitlements are much less generous in the United States than elsewhere, as are benefit entitlements for sickness and disability.
- Payroll-tax rates and the level of industrial subsidies for failing firms are considerably lower in the United States than elsewhere.

Our review of these institutional differences strongly suggests that the U.S. labor market is, indeed, much closer to a *laissez-faire*

model than are labor markets elsewhere in the OECD. Of course, whether these institutional differences actually cause the major differences in labor-market outcomes documented in chapter 2 is an empirical question. The mere juxtaposition of data on outcomes and institutions is not sufficient to provide fully convincing evidence on the importance of institutions. To start with, we must be clear on the anticipated effect of institutional intervention on these outcomes from a theoretical perspective. We must also probe empirical evidence in greater detail, making full use of micro data on individuals, which allow us to adjust for international differences in the composition of the population that may also affect employment and wage outcomes, as well as of sophisticated statistical analyses of these data. This is important because there are other factors besides institutions—such as macroeconomic shocks—that can influence wage and employment outcomes, and it is essential to account for their effects before reaching conclusions about the effect of institutions. Moreover, the employment problems created by these other factors may then cause a country to alter the character of its institutions. For example, high unemployment may lead some countries to increase the generosity of their UI systems, as appears to have occurred in Switzerland (Sheldon 1997). In this case, the greater generosity of the UI system is a response to a country's employment problems rather than the cause of them, although it may, in turn, contribute to the persistence of these problems.

In chapter 4, we present the economic analyses that provide a theoretical framework for studying the effect of institutions on labor markets. We first discuss the role that institutions can play in creating desirable or undesirable wage, productivity, and employment outcomes. Under some circumstances, institutional intervention may correct market failures and, thus, produce superior economic outcomes. And, while there are circumstances under which institutional interventions will contribute to overall unemployment or exacerbate relative-employment problems for particular groups, economic theory does not unambiguously predict that wage interventions, employment protection, mandated benefits, or high taxes will produce such employment problems. Thus, empirical evidence is especially crucial in determining what the effect of these labor-market institutions has actually been. We then address the difficult issues of research design that can potentially allow us

to separate out cause and effect and to account for other influences on labor-market outcomes besides institutional interventions. With this framework in hand, we turn in subsequent chapters to an evaluation of the available evidence on the effect of institutions on labor-market performance.

In chapter 5, we focus on the macroeconomic evidence on the effect of labor-market institutions on unemployment, paying particular attention to the remarkable reversal in the position of the United States from a high-unemployment to a low-unemployment country since the early 1970s.

Early research on the effect of centralized wage-setting institutions on unemployment reached somewhat mixed conclusions. Some early studies found an inverted U-shaped relationship between centralization and unemployment for the 1970s and 1980s: low unemployment was observed for countries with very decentralized and very centralized wage-setting institutions, with high unemployment in countries with moderate degrees of centralization. This was believed to be due to opposing effects of centralization on the aggressiveness of unions in pushing for higher wages. On the one hand, larger units have more bargaining power since there is less room for competition from other workers in the labor market. On the other hand, unions in larger units are more likely to take into account the effect of their bargains on other workers since the price and tax effects of the union's pay policies are likely to be felt by union members themselves. Thus, decentralized units are expected to result in wage restraint since the union has little power, but highly centralized units are also expected to result in wage restraint, on net. In contrast, other researchers examining these issues found a monotonic negative relation between the centralization of wage setting and unemployment. However, all these conclusions were found to be fragile with respect to the classification of countries according to the degree to which wage setting is centralized and to the time period examined (Flanagan 1999). Moreover, this research did not, by and large, control for other influences, both institutional and macroeconomic, on a country's unemployment rate.

More recent work has advanced our understanding of the causes of international differences in unemployment. First, Stephen Nickell and Richard Layard (Nickell 1997, 1998; Nickell and

Layard 1999) have examined the determinants of average unemployment in the 1980s and 1990s. They find a strong association between labor-market institutions such as collective bargaining, decentralized wage setting, generous UI, high labor taxes, and the like, and high unemployment. Our calculations based on their estimates imply that lower U.S. unemployment is explained by the lower labor taxes, less-generous UI system, and low level of unionization in the United States, with decentralized union wage setting in the United States having a somewhat offsetting effect.

Second, Olivier Blanchard and Justin Wolfers (2000) studied unemployment over the period 1960 to 1996 and found evidence consistent with the idea that macroeconomic shocks interact with labor-market institutions to affect unemployment. In a recent paper coauthored with Giuseppe Bertola (Bertola, Blau, and Kahn 2002), we estimated a model drawing on Blanchard and Wolfers's work in order to account for the reversal between 1970 to 1975 and 1995 to 1996 in the U.S. unemployment position, compared to that of other Western countries. We found that macroeconomic shocks, demographic trends in which the youth-population share fell more quickly in the United States than elsewhere, and institutional changes such as a more slowly rising UI replacement ratio since 1970 in the United States did contribute to the observed decline in the U.S. unemployment rate relative to that in other Western nations. And, while these macroeconomic, demographic, and institutional shocks could by themselves account for only a modest portion (30 percent) of this fall, the model accounted for fully 63 percent of the decrease in the U.S. relative unemployment rate when we allowed for interactions between macroeconomic and demographic shocks and institutions. These shocks were found to have a much larger effect in raising unemployment in other countries than in the United States. This is consistent with a large role for the more flexible labor-market institutions in the United States, which we believe permitted real wages rather than employment to bear the burden of adjustment.

While the findings reported in chapter 5 are remarkably consistent with the unified theory, the concerns about research design that we discussed earlier are applicable to these studies. For example, many of the explanatory variables themselves can be af-

ected by unemployment: higher unemployment may lead to changes in monetary policy and might affect productivity growth through changes in workforce composition or incentives to innovate. Moreover, the generosity of UI benefits and even the decisions of individual workers to become union members may be affected by the extent of unemployment. These considerations suggest that the regressions discussed in chapter 5 may suffer from endogeneity biases and that, therefore, so may our estimates of the importance of shocks and institutions in explaining U.S. unemployment performance.

In addition to these potential problems of endogeneity, the macroeconomic research designs discussed in chapter 5 do not directly test the mechanisms that are, in principle, behind the unified theory. First, the theory holds that some labor-market institutions affect absolute and relative wages and keep them rigid in the face of economic forces that would otherwise change absolute and relative pay levels. Second, the unified theory posits that these rigid wages lead to unemployment as firms move along their labor-demand curves. There is nothing in the macroeconomic evidence examined in chapter 5 that demonstrates these links in the causal chain directly, even if the data do provide some plausible evidence consistent with the unified theory. In chapters 6 and 7, therefore, we examine microeconomic evidence that sheds light on the specific mechanisms that macroeconomic observers believe underlie the effect on aggregate unemployment.

We begin chapter 6 by asking whether the higher level of U.S. wage inequality is, indeed, caused by higher labor-market prices—that is, higher returns to skills and higher wage differentials associated with more-favorable locations (that is, industries and occupations) in the labor market—as the U.S. labor market’s noninterventionist institutions would suggest. The only way in which to answer this question convincingly is to use micro data that allow us to account for population heterogeneity. We find that, although the United States does have a more diverse population with respect to educational attainment and cognitive skills, these differences explain only a portion of the higher wage inequality in the United States. We infer that the United States does, indeed, have higher labor-market prices than other countries do. These higher prices of skill could be due in part to the greater

abundance of relatively less skilled workers in the United States. However, we present extensive evidence that collective bargaining and minimum-wage laws lead to wage compression and thus also help explain the higher level of wage inequality in the United States. Collective bargaining has stronger effects on the overall labor market than minimum wages do. Thus, while market-oriented factors (that is, population heterogeneity and the relative supply of less-skilled workers) are important, there is still a strong, independent effect of wage-setting institutions on the wage structure as well.

Our examination of the effect of institutions on employment yielded less clear-cut results than did our examination of wage structure. In many studies, union- or minimum-wage-induced wage compression was seen to lower the relative employment of the less skilled. In other studies, such effects were not evident. Where negative relative-employment effects of unions are found, there is some evidence that these effects are concentrated on the young. Moreover, in chapter 2, we show that youths had lower relative employment in 1999 and more adverse changes in their relative employment over the period 1979 to 1999 in the European Union than in the United States. Increasingly, in the high-unemployment European economy of the 1980s and 1990s, the young were outside the protected labor markets that provide high wages and benefit levels. Integrating youths into work is a major challenge facing these countries in the coming years (Blanchflower and Freeman 2000). Conversely, wage inequality has grown in the United States over the 1980s and the 1990s both absolutely and relatively and is higher there than anywhere else in the industrialized world. Young workers have been particularly adversely affected by these trends. Raising the living standards of the less skilled in the United States, without causing major damage to the job-generation process, is one of our major challenges.

Chapter 7 continues our examination of the labor-market effects of institutions by examining their effects on the gender pay gap. Until the 1990s, the United States had a higher gender pay gap than did most other Western countries. But, throughout the 1980s and 1990s, the qualifications of women relative to those of men appeared to be at least as favorable, and generally more favorable, in the United States as they were elsewhere. Specifi-

cally, women in the United States have higher labor-force-participation rates, are more likely to work full-time, and are segregated to a lesser degree into what are traditionally considered female occupations than are women in most other Western countries. Yet, somewhat paradoxically, the gender pay gap has, until recently, been higher in the United States than elsewhere. And, even by the mid-1990s, the U.S. gender pay gap was only about the same as the average of other Western countries.

In chapter 7, we present a variety of evidence indicating that the major factor raising the gender pay gap in the United States relative to that in other countries (or preventing the United States from having a lower gender pay gap) is the far higher degree of overall wage inequality there. In many other advanced countries, where wages are more compressed, women's wages are swept up by centrally negotiated wage floors. We also examine research on some specific interventions on behalf of women, including anti-discrimination laws and mandated changes designed to raise the pay in women's occupations to the level of that in men's occupations having a similar value to the employer ("comparable worth"). We find that, while these interventions can lower the gender pay gap, in several instances (but not all) they also reduced the growth of women's employment.

Finally, in chapter 8, we discuss the policy implications of our study and suggest some future research directions. In the area of policy, we are concerned with finding policies that can lead to sustained high employment levels while at the same time improving the living standards of the less skilled. As the unified theory suggests, there are no easy answers. Many of the policies that have been pursued by other Western nations do raise the wages of people who have jobs, but quite possibly at the cost of employment problems for affected groups as well as higher aggregate unemployment rates. Contrasted with these are policies such as the earned-income tax credit in the United States that can raise living standards among those at the bottom of the income distribution without threatening employment levels. But these programs can be very expensive. Society will pay a price whatever the path chosen, but we can have some influence on what that price will be.