

## From Public Assistance to Work

To address our first research question—how to assess the labor-market impact of the influx of public assistance recipients into the labor force—we begin by looking at economic theory. In a static or no-growth setting, neoclassical economic theory posits that wages will fall and employment will increase in response to an increase in labor supply that is, a shift out of the labor supply curve (fig. 1a). Some would say that, at the new equilibrium, workers are now worse off. Even though the new workers now have jobs, those workers ( $E_{0w1}$  in fig. 1a) who were already employed are working at a lower wage. In addition, some workers who were previously employed now drop out of the labor market because the new wage is below their reservation wage ( $E_0-E_{0w1}$  in fig. 1a).<sup>3</sup> They are displaced by the new workers who are willing to work at the lower wage. In the short run, however, wages may not adjust. Nominal wages are “downwardly sticky.” Consequently, unemployment may result because the quantity of labor demanded at the prevailing wage is less than the number of workers willing to work at that wage (fig. 1b). Over time, real wages adjust down and firms will hire more workers, bringing the labor market to a new equilibrium.<sup>4</sup>

Economists have used various approaches in applying the labor supply and demand model for estimating the impact of public assistance recipients moving into the labor market. These approaches reflect differences in modeling employment, unemployment, displacement, and wage effects.<sup>5</sup> Most applications used static analysis and assumed the economy is in a stationary state. Here we discuss how these alternative approaches alter estimates of labor market adjustments.

The literature on estimating the effects of a labor supply shift can be categorized by whether or not those in the labor force adjust their labor supply to changes in wages: That is, is the elasticity of the labor supply zero (fig. 1c)—perfectly inelastic—or is it positive sloping upward?<sup>6</sup> With a zero labor supply elasticity, there is no displacement in that existing workers continue to be employed, albeit at a lower wage, and new job seekers obtain employment (fig. 1d). As the labor supply elasticity increases, displacement increases and the wage adjustment is reduced: That is, the wage rate does not have to decline as much to reach the new equilibrium (fig. 1e,  $w_0$  to  $w_{\text{inelastic}}$  versus  $w_0$  to  $w_{\text{inelastic}}$  for a given shift in labor supply). The range of estimates used for low-skill labor supply elasticities is 0, perfectly inelastic, to 0.4, very inelastic (Katz, 1998; Bartik, 2000). With these inelastic labor supply estimates, the reduction in labor supply by displacement is minor.

The magnitude of the wage and employment impacts depends not only on the labor supply elasticity but on the labor demand elasticity as well. If the labor demand elasticity is zero—perfectly inelastic—then firms will not alter employment in response to a change in wages, and consequently, an increase in labor supply will occur as a wage decline only (fig. 1f). The more elastic the labor demand is, the less wages have to adjust for firms to hire the new labor (fig. 1g,  $w_0$  to  $w_{\text{inelastic}}$  versus  $w_0$  to  $w_{\text{inelastic}}$ ). The demand response has implications for the labor market outcome in that a more elastic labor demand reduces the wage adjustment necessary for a new labor market equilibrium.

<sup>3</sup>The reservation wage is the minimum wage an individual will accept. At a prevailing wage below the reservation wage, the individual would become or stay unemployed or drop out of the labor force. An individual’s reservation wage is for a point in time and may change over time, such as after a long duration of unemployment. The reservation wage is influenced by a variety of factors, such as unemployment benefits, welfare benefits, the individual’s wealth, and the value to the individual of nonmarket work, such as education or child-rearing (Ehrenberg and Smith, 1994).

<sup>4</sup>In observed labor markets, we rarely see wages adjust downward in the obvious way that we see on a supply and demand graph. Consequently, wages are “downwardly sticky”—we observe wages going up but not down. Reservation wages are part of the explanation of this stickiness and of the existence of unemployment. Also, there are time lags—labor markets have less perfect information than most other markets, so adjustment is sometimes slow. In addition, union contracts and other employer-employee agreements can postpone adjustments. However, additional factors influence wages. Wages, and more accurately, compensation (wages/salaries plus benefits) can indeed adjust downward. Over time, downward wage adjustments frequently take the form of real adjustments, not nominal. So, the nominal wage could stay the same while inflation erodes the real value. Also, employers frequently adjust benefits while keeping the wage/salary level constant. Benefits such as health insurance, retirement benefits, and vacation days may be added or subtracted, changing total compensation while earnings remain constant.

<sup>5</sup>Displacement can take several forms. First, lower wages from an increase in labor supply are an incentive for current employees and job seekers to work less or exit the labor force. This form of displacement is a rational labor supply decision by existing workers and job seekers. Second, welfare recipients entering the labor force compete with existing job seekers, resulting in some nonwelfare recipients remaining unemployed.

<sup>6</sup>Elasticity is defined as a percentage change in employment for a given percentage change in the wage. Elasticity measures how sensitive employment is to a change in the wage.

Estimates used in studies of low-skill labor for labor demand elasticity range from -0.1 to -0.6, with a central value of -0.3 (Hamermesh, 1993; Katz, 1998; Bartik, 2000). Most studies assume zero labor supply elasticities and a -0.3 labor demand elasticity, resulting in a longrun outcome of no displacement and a decrease in wages of 7 percent to 14 percent (about 65 cents per hour). Using a -0.5 labor demand elasticity, Bartik (2000) found that, with a zero labor supply elasticity, wages for less-educated women fall by 3.4 percent for the high school equivalent labor skill group, and by 14.5 percent for the high school dropout labor skill group. With a labor supply elasticity of 0.4, the decline in wages of women without a high school diploma is reduced from 14.5 percent to 9 percent, and some existing workers are displaced. The displacement rate is 0.42—that is, for every additional worker added to labor supply and employment, 0.42 worker of the initial labor supply is no longer employed.

The typical labor market model is specified in context of a nonexpanding or stationary economy with fixed capital stocks and production capacity. However, an increase in labor supply and resulting reduction in the wage may make it cost-effective for firms to expand capacity and/or alter their technology, which increases the demand for labor (fig. 1h). This condition occurs when the greater use of labor per unit of fixed capital increases the return to capital, and the higher return to capital stimulates investment, expanding capacity. With both an increase in labor supply and an increase in labor demand, we know that the number of workers employed will increase, but the wage outcome is indeterminate; the resulting wage depends on the magnitude of the shifts and elasticities of labor supply and demand. So, the resulting wage could be less than, equal to, or greater than the original wage. This is the difficulty in estimating labor market outcomes without restrictive assumptions.

Bartik (2000) approximated this situation of a shift in both labor supply and labor demand by developing a scenario where investment occurs and capital stocks expand until the rate of return to capital returns to the old level. Domestic demand and exports expand as the price for final goods are reduced given lower unit costs due to lower wages. Domestic demand for new production also increases from the additional income earned by the new workers and the returns to capital received by owners. The expansion in capital has a feedback effect on the labor market—demand for labor increases as a result of increased product demand—reducing the wage and displacement adjustments. How much the wage and displacement adjustments are reduced depends on the substitutability of labor in production. His scenario produced the employment and wage impacts discussed earlier. We use this capital adjustment scenario in our simulation analysis to account for the resulting shift in labor demand expected after a wage decrease.

An alternative more complex situation occurs when the economy expands or contracts and the labor force experiences a new influx of workers. Because the economy is dynamic, changes in the macroeconomic situation causes constant shifting of labor supply and labor demand. As gross domestic product (GDP) growth increases, so does demand for consumer goods increase, and consequently demand for labor will increase, shifting labor demand to the right (increase). As GDP growth falls, so does demand for consumer goods decrease, and consequently demand for labor will decline,

Figure 1a  
**Increase in labor supply**

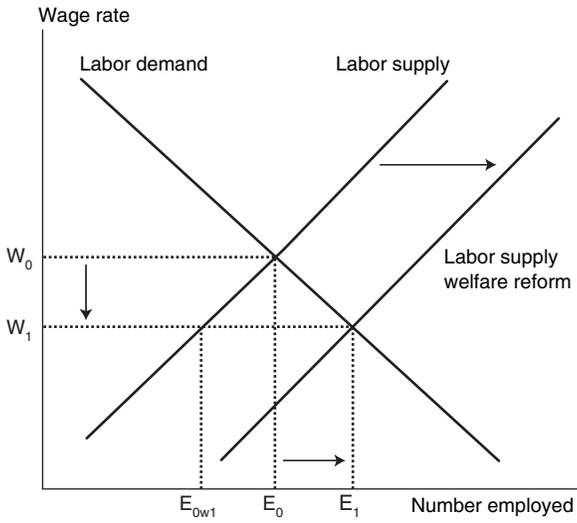


Figure 1b  
**Increase in labor supply with unemployment**

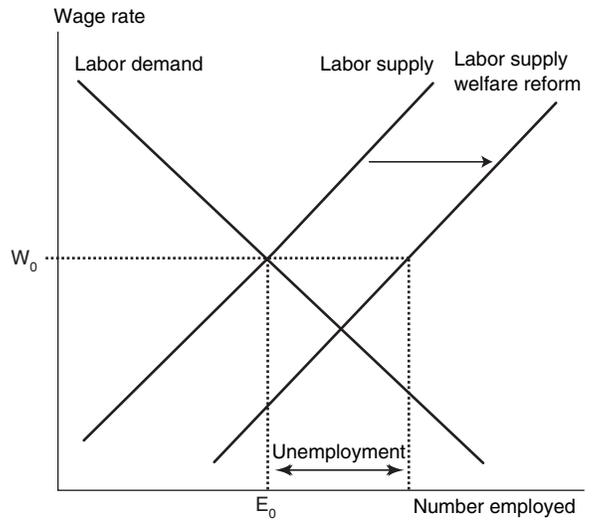


Figure 1c  
**Zero elasticity (perfectly inelastic) labor supply**

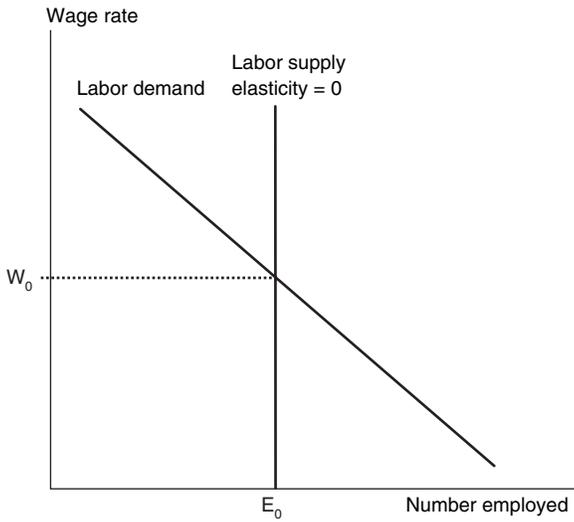


Figure 1d  
**Increase in labor supply, zero elasticity labor supply**

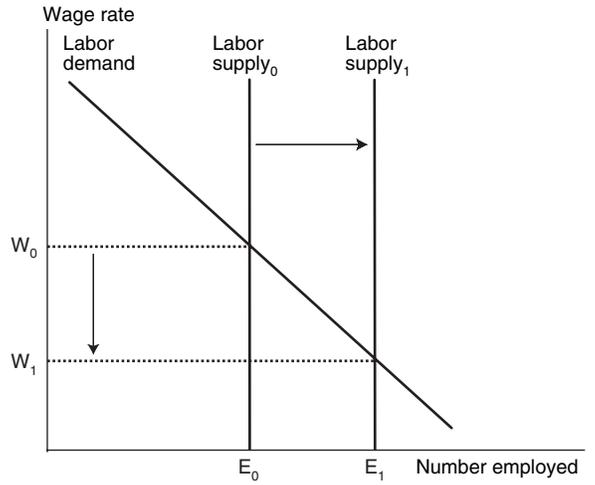


Figure 1e  
**Change in wages, zero elasticity versus positive elasticity labor supply**

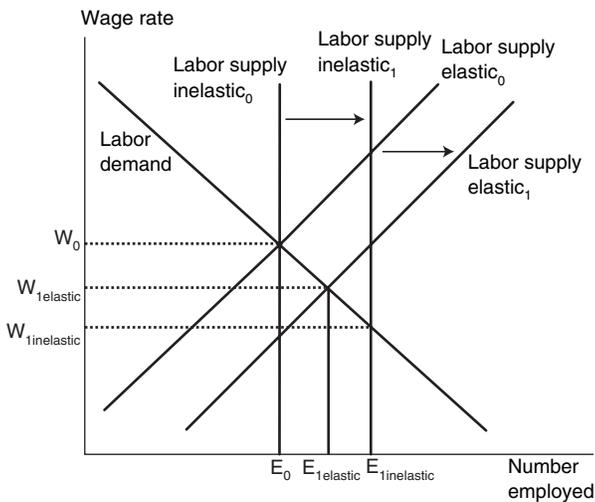


Figure 1f  
**Increase in labor supply with zero elasticity labor demand**

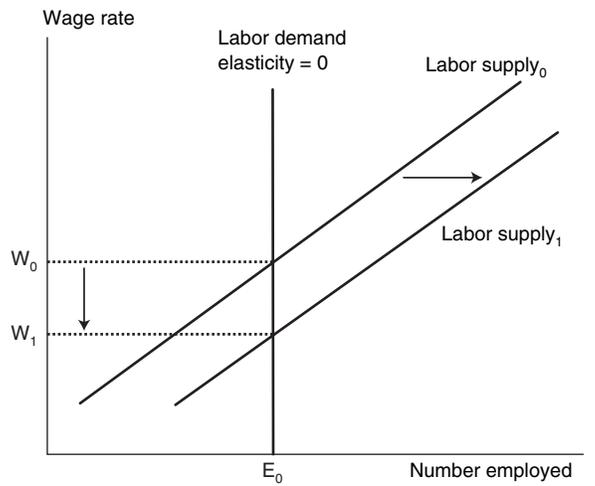


Figure 1g

**Change in wages, zero elasticity versus negative elasticity labor demand**

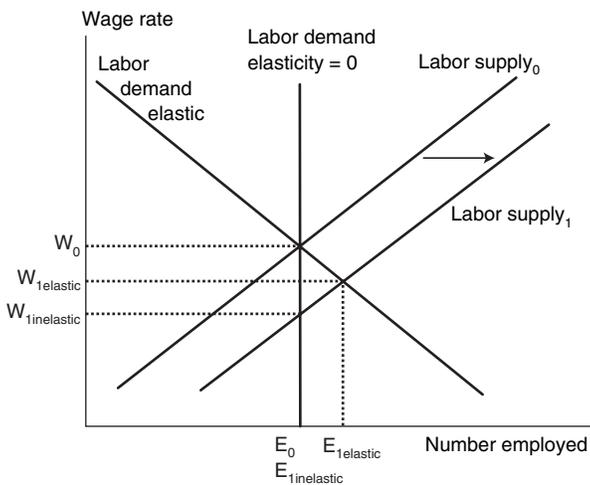


Figure 1h

**Increase in labor supply and demand**

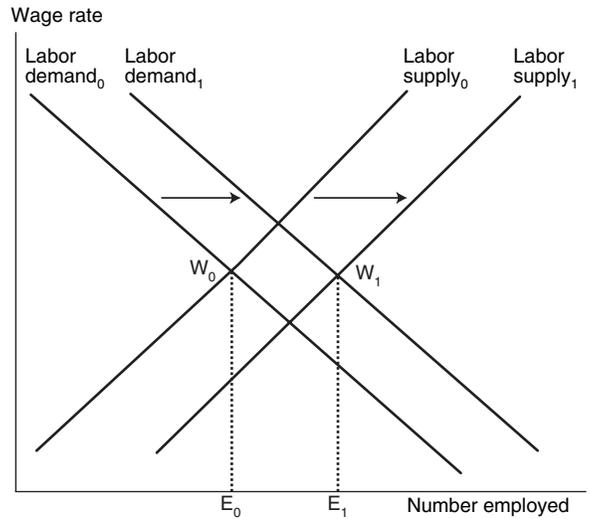


Figure 1i

**Increase in labor supply with small increase in labor demand**

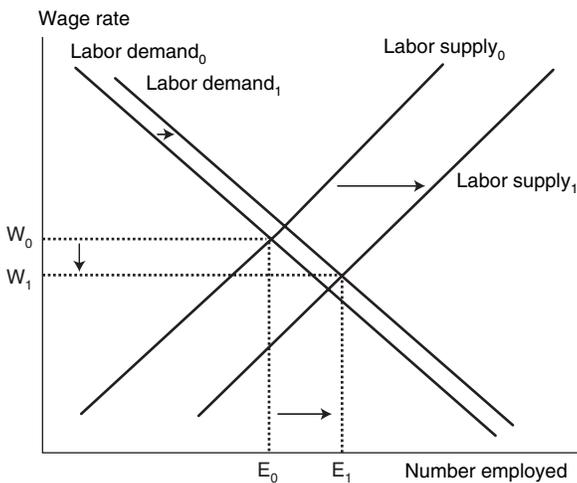
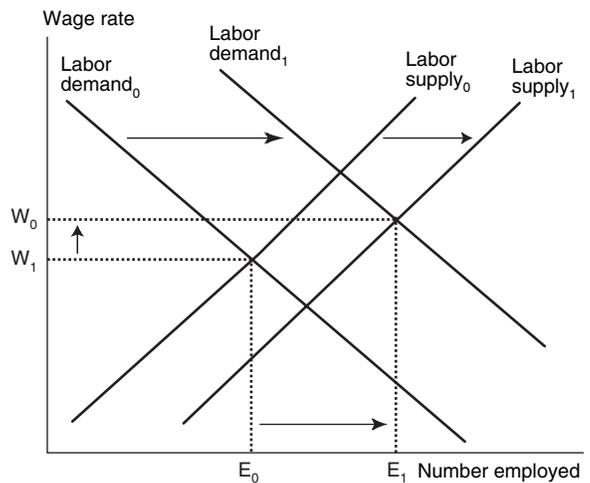


Figure 1j

**Increase in labor supply with large increase in labor demand**



shifting to the left. As a result of these changes, wages will fall and workers, taking into account their reservation wages, may drop out of the labor force to pursue nonmarket activities, such as education or child rearing, which in turn will decrease labor supply, a shift to the left. Any policy change or other labor market phenomenon is taking place in the context of a dynamic economy and so is in addition to movements in labor demand and labor supply that are already taking place. This is the challenge of estimating the impact of a policy change.

In this dynamic process of an influx of workers during macroeconomic change, several qualitatively different labor market responses are possible. Movements of labor demand due to macroeconomic conditions would either mitigate or exacerbate the impact on the wage rate from the influx of workers. For example, if increases in labor demand due to economic expansion are small, then the influx of workers would result in a decline in wages and a level of

worker displacement that would look similar to analysis that held demand constant (fig. 1i). If the labor market is tight—that is, there is excess demand for labor, or there are more jobs than workers to fill them—displacement and wage impacts will be reduced or not occur from the exogenous increase in labor supply (fig. 1j). Consequently, capturing the impact of an influx of workers in a dynamic economy necessitates estimates not only of the impact of the influx of workers on the labor market, but also of the impact of macroeconomic conditions on the labor market. Labor supply and demand elasticities must be estimated, as well as the magnitude of the demand and supply shifts. None of the models discussed earlier attempt to make this more complex analysis. Our analysis accounts for both the movements of labor supply and labor demand within the context of a changing economy to determine the net effect on the labor market of public assistance recipients moving into the labor force.

## Household Impacts

This study also addresses whether or not public assistance recipients moving into the labor force are better off working than receiving transfer payments: That is, do they attain a higher household income and do they rise above the poverty level? Researchers have approached the issue—estimating whether or not earnings replace transfers and public assistance recipients are better off once they leave the program—in several ways. Results are mixed. Some are better off because the earnings that replace welfare transfers raise incomes above the poverty level; others are not because income remains below the poverty level even with the earnings.

One approach has been to calculate expected earnings and transfer program reductions for a typical public assistance recipient. This approach was used by Burtless (1995); McMurrer, Sawhill, and Lerman (1997); Acs et al. (1998); and Ellwood (2000). Generally, they found that, if recipients were to work full-time, their earnings would be enough to raise income above the poverty level. If recipients work only part-time, earnings alone will not be adequate to lift them out of poverty. When earnings from part-time work are combined with Earned Income Tax Credit (EITC), food stamps, Medicaid, and child care subsidies, household income rises to or above the poverty level.

A second approach, used with postwelfare reform survey data, is to evaluate the effectiveness of State welfare programs through the TANF leavers studies.<sup>7</sup> In a review of these studies, Brauner and Loprest (1999, p. 6) report that “leavers are not earning enough to raise their income far above the poverty level,” and that additional sources of income, such as EITC, Medicaid, food stamps, child care subsidies, and child support are important. The U.S. General Accounting Office (1999) also reviewed the State leaver studies. They found that, when quarterly earnings reported by former welfare recipients are extrapolated to annual earnings, the estimated earnings are greater than the maximum annual amount of cash assistance and food stamps that a three-person family with no other income could have received in these States. However, if these earnings were the only source of income for the families after they left welfare, many of them would remain below the Federal poverty level.

<sup>7</sup>See the website for the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation: <http://aspe.hhs.gov/hsp/leavers99>.

Schoeni and Blank (2000, p. 6) reported that “few of the TANF Leaver studies explicitly compare post-welfare income with the income they would have received if remaining on public assistance. The scant evidence available in a few States suggests that between one-half and two-thirds report higher incomes post-welfare.” Using the Current Population Survey (CPS) March Supplement 1977-1999, they looked at the impact of welfare reform on key indicators of well-being for all women, both single mothers and married women, grouped by education levels and age groups. They found that family earnings and income rose as a result of the welfare reform changes and that poverty declined. However, the poorest women did not experience the same gains to income as did other recipients under TANF. The earnings of other family members are an important factor in these results, “an issue worth further research” (Schoeni and Blank, 2000, p. 25).

## **Macroeconomic Conditions**

Our second research question looks at how a change in macroeconomic conditions affects labor markets and consequently public assistance under welfare reform. An economic downturn can be characterized by rising unemployment, a reduction in the availability of new jobs for public assistance recipients and layoffs for some of those able to get and keep jobs during the favorable economic circumstances. Economic growth can be characterized by job growth and increases in personal income.

Past research can help us analyze the impact of the phases of the business cycle—recession and expansion—on public assistance recipients. Of particular interest are the effects of a recession because job loss is not uniform across all occupations. Using data from the CPS for 1975-97, Hoynes (2000) found that the effect of a downturn on low-skill jobs is more than three times as great as the effect on higher skilled White men, but the difference in the employment effect is smaller for the 1990-91 recession. Smith and Woodbury (1999) found that employment for minimum wage workers fell from 7.1 million in 1988 to 6.2 million in 1992, while overall job growth was about 4 percent.