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Labor Market Structure and Monetary Policy

Wage earnings comprise about two-thirds of the total income of individuals in the U.S. economy. Besides being the primary source of households' income, the wage rate plays a key role in labor market adjustment. Wage rate determination and labor market adjustment also influence the way the Federal Reserve's monetary policy affects the economy.

This *Weekly Letter* explores three alternative models of demand and supply behavior in the labor market and the consequences for monetary policy. If the conventional, competitive market framework applies, then monetary policy is essentially neutral in terms of affecting real wage rates and therefore employment in the long run. But in recent years, two alternative views of wage determination have emerged, the bargaining model and the model of "efficiency wages." If these theories more accurately describe the way the labor market functions, then they suggest that monetary policy can have long-term impacts.

Competitive labor market

The conventional approach to modeling how wages are determined uses a competitive market framework. In a competitive market, no single participant has a significant impact on the prevailing wage rate—that is, individual workers and firms take the wage or the price as given. At any particular wage rate, a profit-seeking firm hires the number of workers for which the last added worker's contribution (productivity) is exactly matched by the given wage rate. Typically the net contribution to the firm's output of adding one more worker declines as the number of workers increases. Consequently, in order for firms to want to hire more workers the wage rate must fall, and vice versa.

Individuals decide how much time to devote to work by balancing their choices of leisure versus the income received for work. The amount of work an individual is willing to do increases as the wage rate rises, unless the wage and, hence, income reach such a high level that one starts to value leisure more than income at the margin.

The actual levels of wages and employment are simultaneously determined by the interaction of these demand and supply factors. In the competitive model, the market-clearing wage rate represents the marginal contribution of the last worker added (or the marginal productivity of labor). Thus, one is paid for the economic value of one's contribution. Consequently, workers' productivity is the key determinant of the wage obtained in the market. Most economists take the competitive model as a baseline description of how the labor market operates.

Empirical findings both support and refute this view. Some studies that examine economy-wide aggregate data have found a pattern of close comovement between the measures of average compensation and productivity. However, other studies that have examined firm level data found little evidence to support the equality of wages and marginal productivity. Thus, how representative the competitive model is of the workings of an actual labor market appears to be an open issue.

Bargaining model

An important challenge to the basic price-taking assumption of the competitive model is the widely observed labor market practice of wage-bargaining between employers and labor unions. In contrast to the passive price-takers of competitive markets, parties in a bargaining process are strategic players, and factors such as the relative strength of an employer versus a union play an important role. As long as firms do not dominate workers and therefore remain price-takers, the behavior of the demand for labor described in the competitive model still best characterizes the firm's position in the labor market.

On the other hand, the behavior of workers in a bargaining model differs from that of the competitive case: The aggregate labor supply depends not on individual decisions, but is collectively determined by the union. Consequently, the relative emphasis the union puts on securing a higher level of employment of union members rather

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than a higher wage rate will bias the potential bargaining outcome. One extreme example is when a union picks the wage rate and leaves the employment decision up to the firm—this is known as a “right-to-manage” case. Firms in this case respond very much as they would in the competitive case, because they take the wage rate as given and thus simply resort to the demand for labor curve to find an optimal level of employment. This level of employment, however, would likely be lower than in the competitive setting since the wage picked by the union is likely to be higher than the market determined wage.

A steady trend of declining labor union membership over recent decades is one development that has cast doubt on how well the bargaining view of wage rate determination describes the current overall U.S. labor market. Unionized labor has made up about 16 percent of the labor force in recent years compared to over 30 percent during the 1960s.

Efficiency wages

Several studies have found substantial interindustry wage differentials, even when differences in worker quality, job attributes, and, in some cases, unionization were considered. Within the competitive market view, it is hard to reconcile the case of, say, a maintenance electrician in a department store earning a different wage from a maintenance electrician in an auto parts company. In a simple competitive market the wage differential will be bid away by workers moving from low-paying to high-paying industries, which would lead to little variation in compensation for similar jobs in different industries.

“Efficiency wage” theories propose an explanation of why it might be profitable for some firms to pay wages above the market-clearing level. If, for example, the costs of labor turnover are very high for the firm, it might be profitable to pay a higher wage to reduce turnover. This view relaxes the simplifying assumption of the competitive view that the quality of labor is uniform; it acknowledges the possibility that the productive effort of a worker may depend on the wage received.

For example, workers have some discretion over the pace of work, so they may be able to shirk some of their responsibilities without being de-

tected. In that case, there is a minimum wage rate that would give workers the right incentive not to shirk. Thus, paying a higher wage would encourage workers to put forth their full effort, since they would have more to lose if they were caught shirking and then dismissed. Different industries might be subject to the monitoring problem in varying degrees and consequently might have different levels of optimal wages. Hence, interindustry wage differentials are to be expected across various industries.

This view is not without criticism. In theory, it is possible to devise a payment mechanism that can overcome most of the problems raised by proponents of the “efficiency wage” explanation. For example, instead of paying a higher wage to prevent shirking, deferring part of the employee’s compensation until later in the employee’s tenure would have the same effect. This arrangement would reduce the inclination for the worker to shirk by making the cost of getting fired higher in terms of the lost future compensation. At the same time, an employer would have ample opportunity to monitor the real effort of workers over time. Thus, the apparent ease with which the shirking problem can be overcome casts some doubt on the importance of its role in wage determination (see Katz 1986).

Implications for monetary policy

Theories are necessarily caricatures of the actual workings of markets; therefore, no single view can be expected to encompass all of the features of how the labor market actually works or how wages are set in practice. Instead, each theory is likely to contain an element of truth. Knowing which factors dominate is important. For example, different theories of the labor market have different implications for the effects of monetary policy in the short run as well as in the long run.

According to the classical and traditional Keynesian macroeconomic views, an increase in the money supply will not have much effect on the level of employment and output in the long run, because the labor market is assumed to behave according to the competitive labor market model in the long run. The main difference between the classical and the traditional Keynesian views is the rate at which both real wages and employment adjust to an increase in money supply. In the classical view, real wages and employment adjust almost immediately; in the traditional

Keynesian view, real wages adjust relatively slowly, because of labor contracts, and consequently a money supply increase would raise employment in the short run.

However, in the wage-bargaining and efficiency wage labor market models, the effects of an increase in the money supply could be long-lasting. Blanchard and Summers' (1986) explanation of the persistent high unemployment in Europe during the 1980s provides a rationale for long-run effects of a money supply change when the bargaining model dominates. According to their explanation, the employed are "insiders" who are mainly concerned with maintaining their employed status and act accordingly in wage-bargaining with their employers. Now consider an increase in the money supply, which leads firms to hire more workers, so that they can increase output to meet the resulting temporary increase in aggregate demand. According to this model, the newly employed, who are now "insiders" will exert influence over subsequent bargaining to secure their "insider" status. Hence, the status of the employed becomes self-sustaining, and a policy action, like an increase in the money supply, might actually lead to a long-run increase in employment.

Though not as clearly developed as the previous bargaining model example, an increase in the money supply and subsequent increase in the ag-

gregate demand may increase output in the long run in the efficiency wage labor market model when price levels are slow to adjust in the short run. The overall wage level would be pushed up due to an increase in the firm's demand for additional workers in the labor market. The higher wages and the commensurate increase in workers' efforts may lead to higher productivity in the long run.

These examples illustrate the need to know more about the structure of labor markets, since such insight could contribute to better understanding the mechanism that transfers monetary policy actions to real economic activity.

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