Economics of Labor

Lloyd G. Reynolds
Stanley H. Masters
Colletta H. Moser

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LLOYD G. REYNOLDS
YALE UNIVERSITY

STANLEY H. MASTERS
STATE UNIVERSITY OF NEW YORK AT BINGHAMTON

COLLETTA H. MOSER
MICHIGAN STATE UNIVERSITY

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PREFACE

This book is designed for a one-semester or one-quarter upper division course for economics majors. We have deliberately included more material than most students can cover in a semester so that teachers can select according to their own priorities.

The content has been shaped by three considerations: economic analysis is central; there is now a large research literature which provides tests of theoretical predictions; and economics is a policy science, which comes alive as it is applied to concrete problems.

The core of any course in economics is an exposition of concepts which can be used to organize reality. On this front labor economics is much richer than it was a generation ago. The Smith-Marshall-Hicks theories of the pricing of labor now seem highly simplified; and they focused mainly on demand for labor as derived from product demand, rather than on labor supply and the structure of labor markets. The horizons of theory have now expanded to include such topics as: the effect of taxation, and of income maintenance programs, on labor supply decisions; the fact that individual supply decisions are usually set in a broader context of household decision-making; the logic of decisions about education and job training, and the effect of accumulated human capital on a person's lifetime earnings stream; the importance of long-term employment commitments in shaping worker and employer behavior; theories of employment; discrimination on the basis of age, gender, or race, and the impact of discrimination on employment and earnings; developments in information and search theory, which provide deeper insights into the dynamics of labor markets. We have tried to incorporate this recent work on the frontiers of our subject.

A second development is the great enlargement of our data base. In earlier days one had to rely on highly aggregated statistics. But now the growing availability of work-experience samples and employing-establishment samples, and the ease of manipulating this material by computer techniques, has led to an outpouring of econometric studies. Theoretical predictions, which used to be discussed in a speculative and often inconclusive way, can now be subjected to rigorous tests. We have scanned the research literature and tried to extract the plums from the pudding. In using this material, we have avoided presentation of "facts for facts sake," which can become tedious. We have chosen rather to weave research findings into the narrative of each chapter at points where they serve to confirm, refute, or sharpen up analytical results.

Labor market theory provides interesting intellectual puzzles; but better puzzles are to be found in pure mathematics or philosophy. Theory becomes most interesting, as well as most useful, when we consider how it can contribute to informed discussion of such policy issues as reduction of unemployment, establishment of fair employment practices, alleviation of poverty, public policy toward unionism and collective bargaining, improvement of labor markets, investment in human capital. The reader will find policy analysis running like a thread through almost every chapter of this book.

Union organization and collective bargaining deserve attention in a labor economics course. But these are large and multi-disciplinary subjects, where it is easy to become lost in institutional detail. We have tried to meet this dilemma by focusing on the *economics* of industrial relations, that is, on issues which can be handled with economic tools. These issues include: models of a union's economic objectives, including the interrelation of wage and employment objectives; economic factors shaping the size of collective bargaining units; analysis of the bargaining process, including the rationale and the cost of strikes; typical provisions of a collective agreement or "union contract"; the union impact on the pattern of relative wage rates in the economy; and the further effects of unionism on length of job tenure, labor turnover, productivity, and profit.

The concluding chapter of the book provides perspective on the structure and results of U.S. labor markets by contrasting them, on one hand, with labor markets in centrally planned economies such as the U.S.S.R., and on the other hand, with labor markets in the less developed countries. This is a feature not usually found in labor economics texts, and we hope that students will find it interesting and instructive.

We have provided several pedagogical aids in each chapter: a chapter summary, highlighting key issues and conclusions; a list of key concepts, which are defined in a Glossary at the end of the book; a set of review questions, which may be useful also for class discussion or essay-type exams; and selected readings, for those who wish to pursue a particular subject in depth.

The book is written for students, rather than to impress our colleagues in the profession. We have tried to make the exposition as clear and simple as is consistent with accuracy. While we make considerable use of geometry, we have asked in each case: "Is this diagram really necessary?" The objective has been a book which will be understandable to the average student in the average college, but without boring above-average students. How well we have succeeded, the reader must judge. We shall welcome critical comments, which will help to improve the quality of future editions.

L.G.R.

S.H.M.

C.H.M.

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THE STUDY OF LABOR ECONOMICS

Labor economics is a branch of applied microeconomics, and it uses the market framework you studied in the introductory course. Sellers and buyers meet in a market, which determines a price and a quantity exchanged. Here the sellers are workers offering a supply of labor, while the buyers are employers. The market price is the wage rate for a particular job, while the quantity dimension is the number employed.

This seems simple enough, and your introductory text no doubt included a chapter on wage determination. What more is there to be said? What can a course in labor economics add to what you already know?

First, the supply of and demand for labor are more complicated than supply and demand for wheat. Labor supply involves individual decisions about how much work to do, over a limited time and over a lifetime. It also involves decisions about how much to invest in education and training, which increase one's stock of *human capital*. On the demand side, a company offers a package of wage rates plus fringe benefits and other terms of employment in return for an hour of labor. But the output the company gets from this hour of labor depends on management. A large organization invests heavily in recruiting and screening workers, training them on the job, motivating them to high productivity, and inducing them not to leave the company. The exploration of these complications of supply and demand will take us several chapters.

Second, labor markets differ in important respects from commodity markets. Information is usually less adequate on both sides of the labor market. It is hard for the employer to estimate a worker's productive capacity, and it is hard for the worker to judge what a job will be like before working on it. There is usually no central market, each company's employment office being to some extent a separate market. The worker must be physically present on the job, so working conditions are important, and these may be unusually hard to estimate in advance. The employment contract is not a one-day affair, to be reconsidered and perhaps abandoned the next day. Both worker and employer expect the employment relation to continue over an extended period, and this helps to shape the terms of the contract.

Third, the market is supplemented, and at times overridden, by institutional rules imposed by the employer, by union–employer negotiation, or by the government. The employer sets wage rates for each job in the plant, including specialized jobs not found in other companies for which there is no general market. The employer establishes conditions and methods of work, lays down rules for plant discipline, determines an expected speed of work, and tries to achieve this through monitoring by supervisors. In a nonunion plant, the worker's options are to accept this framework of rules or to quit the job. But satisfactory jobs are scarce. Thus quitting involves risk, and workers usually prefer to avoid it. In a unionized plant, wages and other terms of employment are negotiated between management and union representatives. An important issue in labor economics is how much difference unionism makes to wage levels, wage structure, labor productivity, company profits, and employee satisfaction on the job.

Fourth, labor market results raise important policy issues. The number of people seeking work usually exceeds the number of jobs available. What are the main reasons for unemployment, and which of these are remediable by government action? Many wage rates are so low that even full-time workers find themselves living below the "poverty line." Is there a case for government action to mandate higher wages? Employers are often charged with discriminating against certain groups in the labor force. What constitutes labor market discrimination, how does it affect the pattern of wages and employment, and what has been the impact of government efforts to reduce discrimination?

As such issues boil up in the political process, the public expects economists to provide some guidance to action. So it is important to explore both what economics can contribute and the point at which economic analysis falls short of definitive answers.

SOME PECULIARITIES OF LABOR MARKETS

The structure of labor markets will occupy us for many chapters to come. But, as a beginning, let us note some ways in which labor markets differ from markets for wheat or steel sheets or shoes.

1. Multiplicity of Markets. We often speak of *the* labor market. But in reality there are thousands of markets for different kinds of work. These differ widely in skill level, from restaurant dishwashers to top surgeons. They differ also in geographic scope—from local markets for most blue-collar and white-collar occupations, to national markets for college teachers and business executives, to international markets for doctors, scientists, and engineers.

These thousands of markets, however, are interrelated. Just as product markets are linked by consumers' choices among goods, so labor markets are linked by workers' choices among jobs. People, and especially young people, will move from one occupation to another if they can gain by so doing, and they will move geographically for the same reason.

But while the walls around labor markets are porous, the walls still exist. Movement is not easy or costless. We can, on paper, construct a system of competitive labor markets in which barriers to movement would be at a minimum. At the other extreme, we can construct a system in which movement among markets is impossible, as in J. E. Cairnes' model of "noncompeting groups."[1] The real world falls somewhere between these extremes. What are the main barriers to mobility in practice? If we assume that free choice of jobs is desirable, how might existing barriers be reduced? These are central issues in labor market analysis.

2. No Central Clearinghouse. For many goods there is a single point of sale. This is true of wheat, corn, sugar, and other basic materials sold on commodity exchanges. Even where there are many points of sale, as for retail sale of consumer goods, communication among these is close enough to hold price differences within narrow bounds.

In labor markets the communication network is usually less well developed. So if we speak of "the market for machinists in Cincinnati," we are speaking figuratively rather than literally. Each plant that hires machinists is to some extent a separate market. This increases workers' costs of job search and makes them less willing to change jobs except under pressure of necessity. It also means that wages and other conditions of employment can differ considerably among employers, for long periods of time.

There are, to be sure, institutions which perform a clearinghouse function: (a) local offices of the state employment service, (b) private employment agencies, which are particularly active in the area of white-collar employment; and (c) the local union office, which refers workers to vacant jobs in some industries, notably building construction, merchant shipping, and longshoring. Most of the labor market traffic, however, bypasses these institutions. When workers are asked how they found their present job, the two most common answers are "heard it from a friend" or "just walked in and applied."

3. Workers Not Standardized. Here, again, there is a marked contrast with product markets. Many goods, especially raw materials and semifinished goods, are completely standardized. Even where there are several brands of a good, these are usually quite similar in physical characteristics.

But when a company has to select among applicants for a job, it is dealing with people whose productive capacity differs and is largely unknown. Workers differ in age, sex, and racial origin. Under federal law, discrimination among applicants on the basis of race or sex is unlawful; but this does not mean that it has been entirely eliminated.

1. See J. E. Cairnes, *Political Economy* (New York: Harper, 1874)

Workers differ also in intelligence, manual dexterity, physical strength and energy, work motivation, and other characteristics which affect productivity on the job. Employers appraise these characteristics as best they can, sometimes by tests administered in the personnel office, sometimes by taking years of education as an indicator of intelligence and motivation (a practice whose reliability and legality has recently been challenged). Mistakes are bound to be made, however, and so final selection is usually made after a probationary period of work on the job.

Workers differ also in amount and type of formal education, years of work experience, and amount of specific job training. Each worker is a combination of native abilities and specific skills acquired through education and training. This second component is commonly called *human capital.* It resembles physical capital in that it costs something to acquire but yields a return through higher earnings in later years. Young people and their parents have to decide how much to invest in acquiring human capital. Employers also have to decide how much it pays to invest in training workers on the job, balancing training costs against expected returns.

4. Continuity of Employment Relation. In buying and selling goods, each day is a new experience. What a consumer or a business buys today need have no relation to what was bought yesterday or may be bought tomorrow. But in the purchase of labor, continuity does matter. A company which decided each morning whether to keep its present work force or to hire a completely new crew would not be acting economically. Indeed, it probably could not get anyone to work for it.

In most jobs and industries, a worker is hired with an expectation of permanence, subject to good behavior. This has advantages for both employer and worker. The worker will often have gone through a training period, and in any event will have become more productive through experience on the job. The company thus "has an investment in the worker," and this investment would be lost by replacing the worker, even with someone of comparable native ability. In addition, turnover of workers disrupts work teams whose members have become friends and learned to work harmoniously.

The worker, too, typically prefers continuity to change. Familiarity with work routines, work conditions, and work associates makes life more secure and pleasant. Additional years of service usually bring important benefits: longer vacations, larger pension rights, and greater security against layoffs. So, losing a job that one had expected to keep is a real hardship. Most workers have substantial job tenure, and length of tenure normally increases with age.

5. Workers Deliver Themselves Along with Their Labor. Buyers and sellers of a product stand apart from the objects in which they deal. These objects have no direct effect on their personal life. But the seller of labor must be physically present. This means that the conditions under which work is carried on are an important part of the bargain. These conditions are partly physical—heat or cold, noise, dust, risks of injury from machinery. But they are also social—pace of work, closeness of supervision, fairness of treatment by supervisors.

The "employment package" thus has many components in addition to the wage. There are tradeoffs among these components in each worker's mind. One cannot say that a worker will seek the highest wage available in the market. Rather, he or she will seek the job which offers the greatest *net advantage,* considering all wage and non-wage terms of employment. By the same token, the employer has numerous options in competing for labor. Raising the wage will attract more new applicants and help to retain present employees. But an improvement in any other condition of employment will also help to attract labor. The fact that one company offers a higher wage level than another does not prove that its total employment package is superior. It may be offering more money to compensate for other unattractive features of the job.

The complexity of the employment package complicates the problem of job search. Some important conditions of employment, especially those involving human relations, can be learned only after one is actually on the job. So a worker, on the basis of limited information, takes a job which *looks* satisfactory. But after a few weeks of work, which reveal the full range of nonwage conditions, the worker may decide that the choice was mistaken, and so quits and tries again. The employer, of course, is also experimenting on the basis of limited information. A company takes on a worker who *looks* trainable and productive. But during the probationary period this may turn out not to be so, and the worker is let go. Labor turnover in the economy is thus not just purposeless waste. Much of it is an inevitable accompaniment of imperfect information on both sides of the market, which means that job shopping often involves "shopping by working."

These considerations explain some additional facts of life in the labor market. Turnover is much higher among young workers than among older workers, because for young people uncertainty on both sides of the market—will they like the work, can they do the work?—is unusually great. Turnover is higher among short-service workers than among long-service workers. If a worker is going to quit, or if the worker is dismissed for unsatisfactory performance, this usually happens after a short period of service. Long tenure is an indication of job satisfaction and good performance.

6. Workers' Inferiority in "Bargaining Power." It is usually said that labor markets differ from other markets in that the scales are tilted in favor of the buyer. There are more workers seeking jobs than there are vacancies available. The worker, with limited resources, needs a job badly and quickly. The employer can afford to wait, and can pick and choose among a surplus of applicants. Thus, the employer has a dominant voice in setting conditions of employment.

Under nonunion conditions, there usually is no "bargaining" in the ordinary sense. The employer defines a package of wage and nonwage conditions of employment. The worker can take it or leave it. The worker's "bargaining power," then, really means his or her ability to refuse or quit a job; and this depends on the alternatives open to the worker.

A worker's ability to quit depends, first, on the state of demand for labor. Demand for a particular kind of labor may fall because of lagging sales in a particular company or industry. Demand for most kinds of labor fluctuates with the swings of the business cycle. So workers quit their jobs most readily at cycle peaks, and the quit rate drops sharply during recession.

Ability to quit, or to bargain for better terms without quitting, depends also on individual skill and ability. A worker of average ability in a low-skilled occupation is readily replaceable and has little leverage. But a person in a high-skilled occupation, or a person of outstanding ability in any occupation, can make demands on the employer, and the employer may comply rather than lose such a valuable employee. The most visible examples are star athletes and artistic performers; but business executives, professional people, and skilled craft workers also often have considerable bargaining power.

Thus, assertions that workers are inferior in bargaining power must be viewed with some caution. The statement is probably true for most workers most of the time. But many workers do have individual bargaining power, and their number increases when general demand for labor is high.

There are also reasons to think that the employer's position is less powerful today than it was 60 years ago. First, governments have learned how to reduce the severity of recessions by increasing aggregate demand. Since the 1930s we have not seen the large masses of hungry job-seekers portrayed in earlier writings. Second, unemployed workers today have greater resources to draw on than they used to have—personal savings, a second wage earner in many families, unemployment compensation, welfare payments, food stamps, and so on. Thus, workers are less fearful of losing their jobs and can be more choosy in selecting new jobs. Third, the U.S. labor force today is considerably more skilled than it was in 1940 or 1900. The percentage of jobs requiring specialized skills and training has increased substantially, while the amount of unskilled labor has greatly diminished. Finally, today's labor force is more highly educated. A high school graduate in a blue-collar job today will not accept the treatment that immigrants from Sicily received in 1910.

So, while there is still some imbalance of bargaining power in the labor market, there is less of this today than there was in earlier generations. The growth of union organization has also provided an offset to employer power in many industries.

THE ROLE OF ORGANIZATIONAL RULES

What Markets Can and Cannot Do

With all the peculiarities described above, labor markets still do operate. Indeed, they perform economic functions which one can scarcely imagine being performed without them.

The labor market is a reasonably effective instrument both for determining relative wage rates and for raising the general wage level as national output rises. The great increase in real wages in the United States over the past century is not due in any large measure to union activity or government decree. It has occurred mainly because employers were able and impelled to keep raising their wage offers in the market year after year: able because development of new machinery and production methods was steadily increasing output per hour of labor; impelled because the labor market forces each company to bid against others to hold its share of the labor supply. The labor market is the main mechanism by which increases in productivity have been translated into higher wages and living standards.

The market also does reasonably well in determining relative wage levels for different plants, industries, occupations, and regions. One can always find many unusual or inequitable wage rates; but, viewed broadly and over the long run, the national wage structure is not unreasonable. Moreover, it is evolving over the course of time in a way that is understandable on economic grounds. Wage inequalities of every sort are diminishing and this is due mainly, though not exclusively, to changing supply-and-demand conditions.

Finally, the labor market is the only device we have for sorting out many millions of workers with varying skills and interests among the multitude of different jobs in the economy. Any attempt to do this by administrative methods, in addition to encroaching on personal liberty, would be hopelessly cumbersome and inefficient. Even communist countries rely mainly on wage inducements in the market to secure a desirable allocation of the labor force.

Recognition that the labor market does some things well, however, should not blind us to the things it does poorly or cannot do at all. It is not highly effective, for example, in regulating working conditions—physical conditions, safety and sanitation, work speeds, treatment by supervisors, and other personnel policies. The market still sets limits in the sense that, if plant conditions become too bad, workers have the option of leaving. But these limits may be quite wide. Working conditions are hard for the market to evaluate and control because they are intangible, qualitative, hard for the worker to discover before he or she is on the job, and hard to bargain about on an individual basis. Workers often conclude that the effective remedy is not individual bargaining or quitting (the market solution), but group pressure through a union.

The labor market does not provide security against arbitrary demotion or discharge by supervisors. It is not good at establishing minimum standards which, in order to survive, must be enforced on all employers simultaneously. (For example, safety and health standards.) Nor is it a good device in areas where there are substantial economies in collective action. Pensions, unemployment compensation, and other income security devices could be set up by individual employers, and if enough employers adopted them, the market might force others to follow. There are economies, however, in applying insurance principles to the entire labor force through government security programs. Finally, the labor market cannot improve itself. Organized effort is required to reduce the structural defects described earlier and to enable the market to perform its natural functions better.

Another fact of life is that most workers regard resort to the market—that is, a change of employers—as a disaster rather than as an opportunity. They typically want to continue with their present employer. Regarding as academic advice that they can improve the company's behavior by leaving it, they prefer to change the company's behavior without leaving.