

Working in the Macroeconomy

A study of the US labor market

Martin F. J. Prachowny

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Preface

This book is a sequel to *The Goals of Macroeconomic Policy*, published in 1994, which also dealt with potential conflicts in the labor market. Whereas the former was mainly devoted to an elaboration of stabilization policy issues, the present study is more concerned with raising the profile of the labor market in macroeconomic analysis. Also, some matters which were previously taken for granted are now given a more thorough examination. For instance, in *Goals* I merely asserted that most people work fixed and common hours; here, I present detailed empirical evidence to support this position as well as a theoretical argument for a voluntary choice of common hours even when individuals differ with respect to their tastes for working hours. This makes for a stronger justification of the reservation-wage model of labor supply and of the economic rents that have such a powerful effect on workers' welfare during business cycles. Also, the role of adjustment and disequilibrium costs in the labor market that generated the natural rate of unemployment, the crucial variable in the evaluation of stabilization policies in *Goals*, now is subjected to a number of different assumptions to verify their importance. Furthermore, the distinction between "secure" and "marginal" workers played a pivotal role in determining the Pareto efficiency of various policy options in *Goals*; here a whole chapter is devoted to making the distinction explicit and an attempt is made to count secure and marginal workers during a business cycle. Taken together, I hope that *The Goals of Macroeconomic Policy* and *Working in the Macroeconomy* have a harmonious blend of theoretical developments, common-sense observations and bold conclusions.

The first draft of the book was written while I was on sabbatical leave at the University of Washington. The congenial atmosphere

in the Department of Economics enabled me to work with just the right combination of discipline and distraction to generate a steady stream of computer printout. I am particularly grateful to my West Coast colleagues, Yoram Barzel and Shelly Lundberg, for sharing with me their accumulated wisdom on labor economics. My Queen's colleague, Chris Ferrall, was kind to extract the data from the Current Population Survey that are presented in Ch. 1. Most importantly, the warm friendship and unstinting hospitality of Janis and Neil Bruce made our stay in Seattle both productive and pleasant. As with previous projects, my wife Marguerite has provided invaluable editorial assistance.

The *IS-LM-AS* model presented in Chs 4 and 5, was previously developed in my earlier book, *Money in the Macroeconomy*. I am grateful to Cambridge University Press for permission to reprint and paraphrase portions of that material.

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Introduction

Macroeconomics, despite its reliance on aggregation and generalization, has to keep track of activities in three distinct markets: (1) goods and services, (2) assets, and (3) labor. It is the interaction of these markets that determines the most important variables of economic activity: (1) the unemployment rate, (2) the inflation rate, and (3) the interest rate. Nevertheless, since its beginnings in the throes of the Great Depression of the 1930s, macroeconomic theory has treated analysis of the labor market as a neglected stepchild. The *IS-LM* model of the macroeconomy, developed by J.R. Hicks (1937) and Alvin Hansen (1953) to popularize the Keynesian innovations and still the workhorse of textbooks in the subject area, is of course restricted to the first two markets. Even though unemployment was then and is now the major reason for stabilization policy, a strategic simplification allowed the focus of attention to shift to aggregate demand for goods and services, with the presumption that the underlying production function of the economy would translate output into jobs. Later, when the Phillips curve made its appearance in the postwar period, it led a separate life from the mainstream model and was only intended to accommodate a discussion of sporadic and relatively short bouts of inflation. Only in the 1970s was the Phillips curve converted to an aggregate-supply relation which could be allowed to interact with aggregate demand and created the *IS-LM-AS* model. Even here, the supply and demand decisions in the labor market are suppressed and the goal was to achieve “full-employment output,” as opposed to “full employment” itself.

The purpose of this book, as the title suggests, is to redress this imbalance by featuring the important behavioral relationships in the labor market and to incorporate them into a macroeco-

conomic model that also contains the traditional relationships from the other two markets. In fact, instead of the usual procedure, the aim here will be to transfer the events in the goods and money markets to the labor market through their effects on the real wage.

It is tempting to speculate what path macroeconomics would have taken if the labor market had remained the focal point of the analysis and the “imperfections” in that market were addressed directly. How would the subject differ today if Hicks, a noted labor economist in his own right, had drawn a downward sloping labor-demand curve instead of *IS* and an upward sloping labor-supply curve instead of *LM*, had pinpointed the wage and employment situation during the Depression in that diagram, and had advocated Keynesian policies to rectify the situation? For reasons that are somewhat obscure now, major advancements were made in our understanding of consumption theory, investment behavior, and money demand, but not in the supply and demand relationships in the labor market. Labor economics as a discipline emerged from its historical and institutional approach only in the 1960s — too late to make a contribution to macroeconomic analysis, whose practitioners had a vested interest in the existing structure, especially in the debate concerning the effectiveness of stabilization policy that engulfed the profession from the 1970s onward. Even now, the constrained optimization models in labor economics that produce labor-supply and labor-demand decisions are not the basis of aggregate-supply decisions.

There were at least two missed opportunities that would have created a firmer foundation for labor-market analysis in macroeconomics: (1) the reservation-wage model and (2) direct welfare evaluations of various wage-employment outcomes. Reservation prices are applied in situations where indivisibilities lead to high prices and all-or-nothing decisions, but they are also appropriate under conditions where the consumer faces a fixed quantity on offer. As Ch. 1 will demonstrate, there is ample evidence that firms dictate the number of hours that they expect from their employees and that the decision to accept or reject a job offer depends on the person's reservation wage. Not only does this model remove the indeterminacy of the slope of the labor supply curve, as there must be a positive relationship between actual wages and the number of people who have opted to be in the labor force, but variations among individuals in reservation wages lead to differences in eco-

conomic rents rather than in hours of work. These rents, in turn, create winners and losers during business cycles as the real wage rises or falls. Instead of adopting the reservation-wage model, there is still no agreement on the best model for the labor-supply decision; still worse, the antagonists in the stabilization-policy debate do not seem to recognize that much of the conflict between them is based on whether hours of work are flexible in a business cycle or fixed by a separate optimization process.

Iso-profit and iso-utility curves, originally designed to analyze efficient bargains by McDonald and Solow (1981), are also able to illustrate what combinations of wages and employment lead to welfare changes for both firms and workers and these analytical devices could have played the same pivotal role in macroeconomics as indifference curves in international trade theory. Instead of imposing imperfections such as rigid wages on the labor market by assumption or *ad hoc* reasoning, these iso-profit and iso-utility curves would have graphically indicated that the vast majority of labor-force participants are better off when the labor market operates with excess supply because the wage is higher than in equilibrium. In conjunction with the rents generated by reservation wages, welfare evaluations of various disequilibrium combinations of wages and employment would have indicated that "secure workers," a category that will receive a great deal of attention in this study, have incentives and resources to prevent a competitive determination of wages and they will try to impose institutions that give them a bigger voice in this process.

Another strategic error, in my view, committed by macroeconomists is the unwillingness to accept the lessons learned from the optimal-intervention literature developed by Bhagwati and Ramaswami (1963) for international trade distortions. The point of their argument was that the remedy for a distortion had to be in the same market as the distortion itself and had to reverse the distortion precisely by a subsidy/tax scheme. Thus, if unemployment is the policy problem, the first-best solution was likely to be optimal intervention in the labor market. If, in the end, aggregate-demand management was the only available response, more attention to its second-best characteristics would have improved the quality of the debate over the past two decades. Thus, despite the often-repeated emphasis on microeconomic foundations of macroeconomic theory, the best choices about the appropriate apparatus

have not always been made: fewer overlapping-generations models or perfect foresight assumptions and more labor-market optimization models would have left the subject in a better state of affairs.

This is not to claim that labor-market analysis has been completely neglected in macroeconomics. There are many articles and books in the literature that treat aggregate labor-market issues, with *The Brookings Papers on Economic Activity* being consistently the most devoted to these topics, but very little of it becomes a permanent feature of macroeconomic models. Even in influential treatises or advanced textbooks such as Blanchard and Fischer (1989), who devote a long chapter to "Some Useful Models" for "analyzing real world issues" (p. 505), only one short section is devoted to a specification of the labor market. They explain: "The next two equations [(21) and (22)] give output supply and labor demand as functions of the real wage and a technological shock. They can be derived from profit maximization under perfect competition" (p. 518). The labor supply equation is merely assumed to be a positive relationship to the real wage, without specifying the optimization procedure involved or without reference to a reservation-wage model with which this equation would be consistent. Then, "Equation (24) specifies the nature of the nominal rigidity: the nominal wage is set to equalize expected labor demand and expected labor supply. Given the nominal wage, employment is determined by labor demand . . . The wage may be set by bargaining between firms and workers, with the nominal wage set one period in advance. Or the wage may be set by firms, based on efficiency wage considerations, and again set one period in advance." In other words, in equilibrium there can be no unemployment since supply and demand are equal, but later (p. 554), there is "equilibrium unemployment" that arises from another model. Moreover, if the wage rigidity leads to a real wage that creates excess demand, there is nothing in the model to modify the requirement that employment is demand determined; therefore it must be possible to coerce the voluntarily unemployed to work. Finally, the wage-setting process seems to be a matter of indifference to workers as if their bargaining strength had no effect on their welfare.

The authors claim that, "Often the economist will use a simple *ad hoc* model, . . . one that emphasizes one aspect of reality and ignores others, in order to fit the purpose for which it is being used" (p. 505). While this is an unexceptionable observation,

it seems that the unnecessary detail is always in the labor market and that the important aspects of reality deal with asset and goods markets. In this book, I intend to reverse these priorities.

Travelling along this road is not as lonely as might be imagined. Other macroeconomists have become disillusioned with the treatment of unemployment as voluntary and are prepared to acknowledge that the labor market operates in a complicated environment where agents are trying to protect ill-defined property rights to a job. The recent book by Phelps (1994) is an excellent example of such re-evaluations. This is not the place for a detailed comparison between Phelps' and my approach, but it is worth remarking that he is also concerned with the day-to-day employee-employer relationship. His model of the macroeconomy has many more linkages between markets than mine, but perhaps less discussion of welfare effects of macroeconomic events on participants in the labor market. Also, contrary to recent tradition, he is not "silent on policy questions" (p. 359). He argues (Ch. 20) that structuralist policies can and should change the natural rate of unemployment. While policy discussion in this book will concentrate on moving the labor market back to the natural rate rather than reducing the natural rate itself, I suspect that the same inability to find Pareto-improvements identified here will operate in the structural-policy environment as well.

Macroeconomics is — or should be — a policy-oriented discipline, much like international trade and public finance. Involuntary unemployment is the distortion in the labor market that requires our undivided attention; maximizing output for its own sake is not an optimality argument so that we do not always have the right objective function in our macroeconomic models and policy options are not always sharply drawn. Even if the inevitable conclusion is that policy intervention is not warranted, the analytical firepower devoted to models that either assume continuous equilibrium in the labor market or nominal wage rigidities would be better deployed in making welfare comparisons for different groups under various conditions to determine what is a Pareto improvement and what is not.

Overview of the Book

This book sets the labor market at center stage of macroeconomic analysis. As a prologue, data on labor-market activity during busi-

ness cycles are presented in Ch. 1, with charts and regressions showing how hours per worker, employment, unemployment, vacancies, and wages move during recessions and recoveries. The next two chapters present theoretical models of the labor market, with Ch. 2 devoted to the traditional model and its weaknesses, while Ch. 3 presents a new approach that is better equipped to explain the developments discussed in Ch. 1 because it relies on reservation wages and adjustment costs faced by firms to fill vacancies. Then, Chs 4 and 5 include the labor market in a relatively standard macroeconomic model and explain how shocks or unpredictable events cause output, inflation, interest rates, real wages, and the unemployment rate to respond. Throughout the book there is an important distinction between "secure" and "marginal" workers who have conflicting interests in the labor market. This distinction arises from the fact that adjustments in the labor input are at the extensive margin so that lay-offs create involuntary unemployment for a small minority of workers but no adverse consequences for the vast majority of labor-force participants. In Ch. 6, this distinction between secure and marginal workers and the conflict between them in the labor market is explored; also an attempt is made to measure job security during business cycles. The last two chapters are also connected; they explore the requirements of stabilization policies that are Pareto efficient by improving the welfare of some individuals without making anyone worse off. Traditional fiscal and monetary policies do not fit the bill, but direct labor-market intervention through a program of the government as employer of last resort would provide job opportunities for the unemployed without adversely affecting those who remain employed.

Empirical Applications

Many of the theoretical propositions to be made in this study will be subjected to empirical verification ranging from formal hypothesis testing to anecdotal evidence. This exercise is carried out for only one country, the United States. (This decision is not motivated by chauvinism; I am Canadian.) No attempt is made to provide grand generalizations that apply to diverse settings and therefore conclusions that are drawn for US labor-market conditions may be entirely inappropriate for other countries, although researchers are certainly encouraged to test these ideas in other

circumstances. Macroeconomic and labor-market data for the US are most readily available from the CITIBASE data bank (recently renamed DRIBASE) or from the most current *Economic Report of the President*. Data sources provided in the text refer, where applicable, to the name of each variable in CITIBASE.

