It is estimated that in 1960, the year after Singapore obtained self-rule from Britain, its rate of unemployment stood at 13.5 per cent. Over the next four decades, the unemployment rate steadily declined to reach an average of just over 2.5 per cent in the 1990s. This downward trend in the movement of the unemployment rate has been accompanied by low inflation rates over the same period (except for the episodes of the two oil shocks in the seventies). Price stability is to a great extent the result of a monetary policy that is centred on maintaining an exchange rate target. Via a deliberate policy choice of allowing a gradual appreciation of the Singapore dollar, Singapore’s domestic inflation has been kept below foreign inflation. With an exchange-rate-based monetary policy, Singapore has been able to maintain a stable and low rate of inflation. Since monetary policy has not been used to generate short-run booms, the resulting price stability has provided an economic environment within which real factors have played an important part in reducing the huge amount of joblessness that existed in Singapore at independence and in raising its workers’ real purchasing power, which saw an increase by a factor of three from the early sixties to the late nineties.

To make sense of the shifts of the average unemployment rate over four decades, it seems reasonable to abstract from monetary factors and concentrate on non-monetary shocks and propagation mechanisms. It also seems important to model unemployment as having the feature that, in equilibrium, identical workers who are unemployed cannot go to a firm and promise to work for it at a lower than prevailing wage. We want to generate endogenous job rationing in general equilibrium with those who are employed being unambiguously better off than those who are not. Over the past fifteen years or so, a body of work has developed that provides a framework for thinking about the determinants of the natural rate of unemployment. Unlike the earlier Keynesian literature, which focused on deviations from an exogenous natural rate, there has emerged a theory of an endogenous natural rate.

My own exposure to this line of work began as a graduate student at Columbia University in the late eighties. At that time, Professor Edmund Phelps was reworking macroeconomic theory to provide an account of the decadal rise in unemployment in Europe since the early seventies. His early
1968 paper had provided a labour-turnover model in a monetary setting. Later, Steven Salop developed a prototypical general-equilibrium model of quitting that was stripped of monetary complications. Subsequently, the companion shirking model was given a general-equilibrium characterisation by Carl Shapiro and Joseph Stiglitz. Phelps brought together elements from the asymmetric information view of the labour market and intertemporal dimensions of firms’ labour demand to develop an intertemporal general-equilibrium theory of the natural rate. I participated in his project as a PhD student and attempted to extend the original Salop model to incorporate explicitly the forward-looking behaviour of firms, giving the real interest rate a key role in shaping the evolution of the path of equilibrium unemployment.

Coming from a country that is so integrated into the world economy, whose value of trade is three times greater than its GDP, the theory that Professor Phelps was then developing seemed appealing to me as just the right framework for thinking about Singapore’s long-term unemployment and wage performance provided that it could be extended to the global economy. Data gathered on the experience of the other three highly open East Asian economies of Hong Kong, South Korea and Taiwan also showed a steady decline of the unemployment rate from the early sixties accompanied by steady rises in the real wage. It seemed to me that traditional trade models – running from Ricardian to Heckscher–Ohlin to monopolistically competitive models – were missing something important by assuming full-employment at the outset. In the traditional models, international trade can affect real factor rewards but not aggregate unemployment. This conclusion is problematic especially when thinking about the influence of trade on jobs and wages in small open economies whose trade share out of GDP is high. Since integration into the global economy represents such a major economic shock to these countries, affecting both the wages that firms can afford to pay as well as the bundle of goods that workers are able to purchase with their pay, surely the equilibrium amount of joblessness must be affected along with changes in the real factor rewards structure.

This book represents my attempt at showing how both aggregate equilibrium unemployment and real wages are endogenously affected by trade in different theoretical settings. In undertaking this enterprise, the book makes a departure from the conventional treatment of unemployment in the international economics literature. In contrast to standard pure trade-theoretic models, the natural rate of unemployment is not exogenous – it moves in response to economic shocks; and in contrast to open economy macroeconomics, the focus is on structural unemployment rather than on cyclical unemployment. By focusing on the determinants of the natural rate
of unemployment, the theory places an emphasis on real (as opposed to monetary) factors in accounting for long-run movements in wages and unemployment. The theory is micro-foundation based, being built up from optimisation problems solved by decision-making workers and firms. The crucial new element that is introduced to standard full-employment trade models is the informational asymmetric problem arising from the difficulty that firms have in monitoring the effort levels of workers.

I owe a great debt to Professor Phelps for my intellectual capital accumulated over many years and for his encouragement. However, I bear sole responsibility for any errors and shortcomings in this book. Finally, I wish to dedicate this book to my wife, Lian Leck, whose commitment and integrity in her work have set an example for me.