

Labour Mobility and Unemployment: Some Evidence From Labour Force Survey

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Dissertation submitted in part-fulfilment of the Masters Course in Economics
(MSc. Economics)
University College London
September 1997

Declaration

I, Lim Hock Eam, declare that this dissertation is my own original work and that all source material used has been clearly identified and acknowledge. No part of this dissertation contains material previously submitted to the examiners of this or any other University, or any material previously submitted for any other examination.



(Lim Hock Eam)

12 September 1997.

I would like to thank my supervisor, Jonathan Thomas, for his encouragement and stimulating guidance throughout preparation of this dissertation. Thanks are also due to Richard Dickens for providing the Labour Force Survey data.

Abstract

The rise and persistence of unemployment emerged as a serious macroeconomics problem during the 1980s. This highlighted the possibility of imperfect labour mobility as significant factor. Thus, understanding the relationship between labour mobility and unemployment is important in analyzing the unemployment during the 1980s.

Using Labour Force Survey (LFS) data from 1975 to 1990 inclusively, this dissertation analyzes this relationship at both aggregate and disaggregate levels. At the aggregate level, the relationship appears to be negative with no evidence that labour mobility drives aggregate unemployment. This negative relationship also emerges at industry and regional level. These results point against sectoral shock explanations for the rise in joblessness.

However, both high unemployment industries and regions have higher mobility. This suggests that the unemployment can affect mobility differently at two levels. First, at the aggregate level, it may reduce mobility through its effects on job offer arrival probabilities, and the potential cost of changing industry. At the industry and regional level, it may raise mobility. Since the unemployment differences across industries and regions represent varying employment opportunities and prospects, high differences may encourage mobility towards low unemployment industries and regions.

The data also suggests a role for individual heterogeneity. Among the selected high unemployment demographic groups, old workers, male workers, and nonwhite workers have low mobility. However, high unemployment young and manual workers, they have high labour mobility. Thus, low mobility as symptom of high unemployment only applied to certain groups. Policies constructed to reduce unemployment by raising mobility must target the appropriate groups.

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Chapter One : Introduction

The secular rise and persistence in United Kingdom (UK) unemployment undoubtedly represents a rise in labour market friction. Popular sources of this friction include sectoral shocks and mismatch'. A sectoral shock will lead to a shift in employment demand and a reallocation of labour between expanding and declining sectors. As this movement takes time, unemployment rises (Lilien, 1982). Strictly speaking, this unemployment should be cyclical, but it may persist because of mismatch that causes imperfect labour mobility. Thus, its persistence may be a symptom of imperfect labour mobility. Layard, Nickell and Jackman (1991) concluded in their study, "mismatch could easily account for one-third of total unemployment in the mid-1980s". It is therefore important to understand the relationship between labour mobility and unemployment in analyzing the increasing trend of unemployment during the 1980s, to throw a light on whether low labour mobility is related to high unemployment.

Labour mobility is a way of achieving the efficient use of human resources. Speedy mobility across firms, sectors and regions enhances the ability of the economy to adapt to sectoral shocks. However, if labour fails to move due to friction's factors like poor skill or a lack of information, it will cause substantial unemployment that lead to an inefficient allocation of resources. This unemployment can only be effectively reduced by policies which facilitate mobility*.

¹ Mismatch is defined as a situation in which the characteristics of unemployed workers, particularly in terms of skill, work experience or location, differ from those of the jobs are available.(Jackman & Roper, 1987).

² Examples of these policies are removal of skill friction (re-training and education) and migration friction (increase availability of affordable housing, public facilities), and equalize the development of different region and industry.

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Bibliography

Journals:

Abraham, K.G., and Katz, L.F. (1986), "Cyclical Unemployment: Sectoral Shocks or Aggregate Disturbances", *Journal of Political Economy*, 94, 507-522

Becker, B.E., & Hill, S.M. (1983), "The Long-Run Effects of Job Changes and Unemployment among Male Teenagers", *Journal of Human Resources*, 18, 197-212.

Brainard, S.L. and Cutler, D.M. (1993), "Sectoral Shifts and Cyclical Unemployment Reconsidered", *Quarterly Journal of Economics*, 108, 218-243.

Caplin, A. and Leahy, J. (1993), "Sectoral Shocks, Learning and Aggregate Fluctuations", *Review of Economic Studies*, 60, 777-794.

Evans, G.W., "Sectoral Imbalance and Unemployment in the United Kingdom: 1963-1984", *Oxford Economic Papers*, 45, 441-456.

Jovanovic, B. and Moffitt R., (1990), "An Estimate of a Sectoral Model of Labor Mobility", *Journal of Political Economy*, 98, 827-852.

Jackman, R. and Roper, S. (1987), "Structural Unemployment", *Oxford Bulletin of Economics and Statistics*, 49 (1), 9-36.

King, I., (1993), "Sectoral Shift Models of Unemployment: Measurement Ahead of Theory", *Bulletin of Economic Research*, 45:3, 175-196.

Layard, R. & Nickell, S. (1987), "The Labour Market", in R. Dornbusch and R. Layard (eds) *The Performance of the British Economy*, Oxford: Clarendon Press.

Lilien, D. (1982), "Sectoral Shifts and Cyclical Unemployment", *Journal of Political Economy*, 90, 777-793.

Loungani, P. and Rogerson, R., (1989), "Cyclical Fluctuations and Sectoral Reallocation: Evidence from the PSID", *Journal of Monetary Economics*, 23, 259-273.

Lucas, R.E. and Prescott, E.C. (1974), "Equilibrium Search and Unemployment", *Journal of Economic Theory*, 7, 188-209.

Mills, T.C., Pelloni, G. and Zervoyianni, A. (1995), "Unemployment Fluctuations in the US: Further Test of the Sectoral Shift Hypothesis", *Review of Economics and Statistics*, 77, 294-303.

Mills, T.C., Pelloni, G. And Zervoyianni, A. (1996), "Cyclical Unemployment and Sectoral Shift: Further Tests of the Lilien Hypothesis for the UK" *Economic Letters*, 52, 55-60.

Murphy, K.M. and Topel, R.H. (1987), "The Evolution of Unemployment in the United States: 196% 1985" *NBER Macroeconomics Annual*, 2, 11-58.

Nickell, S. (1982), "The Determinants of Equilibrium Unemployment in Britain", *Economic Journal*, 92, 555-575.

Thomas, J.M. (1996), "Sectoral Shifts and the Mobility of Displaced Workers: When are Microdata Useful?", *Economics Letters*, 52, 337-343.

Van de Klundert, Th. (1990), "On Socioeconomic Causes of 'Waiting Unemployment' ." *European Economic Review*, 34, 1011-1022.

_____ (Aug 1991), "Labour Mobility: Evidence From the Labour Force Survey", *Employment Gazette*, 437-452.

Books:

Green, W. (1993), *Econometric Analysis*, Prentice-Hall International, USA.

Gujarati, D.M. (1995), *Basic Econometrics*, McGraw-Hill, USA.

Jefferys, M. (1954), *Mobility In The Labour Market*, Routledge & Kegan Paul Ltd, UK.

Layard, R. (1986), *How to Beat Unemployment*, Oxford University Press, UK.

Layard, R., Nickell, S., & Jackman, R. (1991), *Unemployment: Macroeconomic Performance and the Labour Market*, Oxford University Press, UK.

Sinclair, P. (1987), *Unemployment: Economic Theory & Evidence*, Basil Blackwell, UK.

Smith, S.W. (1994), *Labour Economics*, Routledge, UK.

White, M. (1991), *Against Unemployment*, PSI Publishing, UK.