CENTRE for ECONOMIC PERFORMANCE

CEP Discussion Paper No 673

February 2005

Inactivity Among Prime Age Men in the UK

Giulia Faggio and Stephen Nickell

Abstract
Inactivity rates among prime-age men in the UK have risen by at least five times since the early 1970s whereas unemployment rates are much the same. Furthermore, inactivity is strongly concentrated among the unskilled and those suffering from a limiting long-term illness or disability. In our analysis of inactivity rates by region and age group we find that male inactivity responds negatively to variations in the wages of low level occupations and positively to fluctuations in incapacity benefit.

Keywords: inactivity, disability
JEL Classification Codes: J60

This paper was produced as part of the Centre's Labour Markets Programme. The Centre for Economic Performance is financed by the Economic and Social Research Council.

Acknowledgements
Giulia Faggio is a Research Officer at the Centre for Economic Performance, London School of Economics. Stephen Nickell is an Associate of the Centre for Economic Performance, Professor of Economics at the London School of Economics and External Member of the Bank of England Monetary Policy Committee.

Published by
Centre for Economic Performance
London School of Economics and Political Science
Houghton Street
London WC2A 2AE

ISBN 0 7530 1813 6

1 Introduction

It is no surprise that there are more inactive people of working age in the UK than there are unemployed people. Inactive individuals are those without work who are not looking for a job and they usually fall into one of four categories; full-time students, looking after family, sick or disabled, early retired. So thinking of all the students, carers, housewives, early retired and so on, the fact that there are more of these than the unemployed seems fairly reasonable. What is, perhaps, more surprising is that there are more inactive men between the ages of 25 and 54 (prime-age) than there are unemployed prime-age men. The surprise arises from the fact that many would judge it to be most unusual for a prime-age man to …gure in any of the four categories noted above. In fact, however, there are around twice as many inactive prime-age men today as there are unemployed prime-age men and most of them are sick or disabled. This contrasts with the 1970s, when the numbers were the other way around, that is twice as many unemployed as inactive.

Our purpose here is to shed some light on this picture and to see the extent to which inactivity rates respond to incentives in the form of ‡uctuations in available wages and bene…ts. In the next section of the paper we present a brief picture of UK prime-age male inactivity since the 1970s and then in Section 3 we consider how shifts in the pattern of labour demand by skill and changes in the invalidity bene…t system have contributed to changes in inactivity. In Section 4 we analyse the relationship between prime age male inactivity rates and both wages and bene…ts and conclude with a summary of our …ndings.

2 A Picture of UK Male Inactivity

One of the most dramatic changes in the UK labour market since the 1970s has been the huge rise in the numbers of inactive prime-age men. So whereas unemployment rates among such men are now much the same as in the 1970s, their inactivity rates are many times higher (see Table 1). Furthermore, prime-age inactivity has been rising steadily since the 1970s and continued to rise in the 1990s at a time when the UK labour market was apparently increasingly buoyant.

2.1 Inactivity and Skills

Given the shift in the demand for labour against the unskilled since 1980 (see Nickell and Bell, 1995, for example), we might expect bigger increases in inactivity among the unskilled. As we can see from Table 2, this is exactly what has happened. So while back in the 1970s, the differences between the unskilled and the rest were minimal, by the late 1990s, inactivity rates among the unskilled were three or four times those among the remainder. This rise in inactivity among the low skilled has contributed between 50 to 70 per cent of the overall rise in inactivity among prime-age men[1]. Indeed, using LFS definitions, since the early 1980s there has been no increase in prime-age inactivity among those outside the bottom skill quartile.

One of the interesting features of the UK labour market in the 1990s is the reduction in the regional dispersion of unemployment relative to the situation in previous decades (Jackman and Savouri, 1999, for example). So is this some pattern to be found when looking at inactivity rates? The simple answer is no. In Table 3, we see that male inactivity rates in the low employment regions continue to rise more rapidly in the 1990s than those in the high employment regions, just as they had in the 1980s. So once we take inactivity into account, the North-South divide is as wide as ever.

2.2 Inactivity and Disability

Prime-age men who are inactive report themselves as being in one of four major categories, namely, full-time student; looking after family; early retired; sick or disabled. Around 70 per cent say they are inactive because of sickness or disability. So disability is a key factor in understanding the rise in male inactivity. In Table 4, we see that some 16 per cent of prime-age men report themselves as having a limiting long-standing illness (LLSI) and around 14 per cent report a limiting health problem or disability (LHPD). These two categories appear to be systematically different, because of the distinct definitions. In the case of LLSI, the illness limits "things people normally do" whereas in LHPD, the illness limits "the kind of work the person does". The former is apparently a slightly broader category, at least among the prime-aged, with systematically bigger numbers.

Two key facts emerge from Table 4 concerning the incidence of chronic illness. First, the proportion reporting an LLSI has barely risen since the late 1970s. Second, by contrast, the numbers reporting an LHPD have risen systematically throughout the 1980s and 1990s. These different patterns may perhaps

arise because LLSI is less responsive to a decline in labour demand than LHPD, which refers directly to work. Either way, the proportionate rise in illness or disability in the 1980s and 90s is smaller than the rise in inactivity.

As we have already noted, around 70% of inactive prime-age men report sickness or disability as the reason for their inactivity. Unsurprisingly, this is consistent with around 71 to 75% of this same group reporting an LLSI or an LHPD. So, in the light of this, is the typical prime-age man with an LLSI or an LHPD inactive? The answer is no. As we can see from Table 4, the majority of those with a limiting illness or disability are economically active. However, whereas in the 1970s a mere 10 per cent of this group were inactive, by the late 1990s this number had risen to around 35% (LLSI) or 43% (LHPD). Among those without an LLSI, inactivity has also risen, but since the early 1980s, there has been no rise in inactivity among those without an LHPD. These numbers imply that most of the rise in prime-age male inactivity since the 1970s can be accounted for by rising inactivity among the increasing numbers with chronic illness or disability[2].

In Tables 5 and 6, we consider further interactions, particularly between disability and skills. Looking …rst at the rise in chronic illness, we see in Table 5 that this increase is concentrated in the bottom skill quartile and is markedly bigger in the low employment region. By contrast, outside the bottom skill quartile there is very little rise in the incidence of chronic illness in either low or high employment regions. Turning to the inactivity rates among those with chronic ill-health, these have risen signi…cantly in all groups but particularly among those in the bottom skill quartile. Indeed by the late 1990s, inactivity in this group exceeded 50 per cent in the low employment region. This completes the picture of patterns of prime-age male inactivity since the 1970s (see Faggio and Nickell, 2003, for more detail). The next step is try and explain what is going on.

3 Shifts in Demand and the Bene…t System

A fundamental change in the UK labour market since the mid-1970s has been the dramatic weakening of the market for unskilled labour. Throughout the 1980s and into the 1990s, there has been a strong shift in demand in favour of skilled workers and against unskilled workers in the UK. This change came about because of the rapid expansion in the production and export of low-skill intensive goods by developing countries (Wood 1994) and because technical change has been biased in favour of the skills

(Berman et al., 1998). The consensus view is that the latter e¤ect is dominant (Machin et al., 1999).

At the same time as this shift in demand, the UK has seen a shift in supply in the same direction, so there are more skilled and fewer unskilled workers in the population of working age. Unfortunately for the unskilled, the shift in demand outpaced the shift in supply (Nickell and Layard, 1999). On top of this, the UK had a particularly large group of very unskilled workers in the …rst place, relative to the rest of Northern Europe[3].

This weakening of demand among the low skilled impacts on low skill workers in two ways, …rst by reducing their relative wages and second by reducing the number of available vacancies. How will this in‡uence inactivity rates? Inactivity is the alternative to labour market participation and it is a particularly relevant alternative for those su¤ering an actual or "potential" chronic illness[4] or disability. Such individuals who …nd themselves without work or have work options which are very badly paid will tend, one way or another, to move into a life on invalidity bene…t (IVB, now incapacity bene…t). The mechanisms are various. For example, in the 1980s, some individuals who were hard to place in work were advised by the Employment Service to claim IVB (National Audit O¢ce, 1989). In the early 1990s, it was found that doctors, whose certi…cation was required for IVB entitlement, were in‡uenced by their assessment of the probability of patients …nding a job (Ritchie et al., 1993).

The level of available bene…ts will also tend to be a signi…cant factor in the whole process. In Figure 1, we see that there was a dramatic rise in IVB relative to the long-term unemployment bene…t, available to those who remain the labour force, from the mid-1980s to April 1995. Prior to this date, invalidity bene…ts had two components, a basic bene…t and an earnings-related additional pension, based on earnings in the tax years from 1978/9. On top of this, there was an age-related addition, which was higher for those who became sick at a young age. All this was simpli…ed after April 1995, when the additional pension was eliminated. As we can see from Figure 1, this generated a dramatic shift in IVB whose size varies signi…cantly across age groups. This variation suggests there is some potential for identifying the supply side impact of IVB on inactivity.

Once in the IVB system, the pressure to take up work is minimal. For example, Beatty and Fothergill (1999) report that in their survey of working-age men who had not worked for six months, only 5 per cent of those reporting themselves as long-term sick were looking for a job. Given all the factors described above, it is not surprising that the number of prime age men on IVB more than

doubled from the early 1980s to the mid-1990s[5].

This discussion suggests that variations in the prime-age male inactivity rate will depend on variations in invalidity bene…ts and other bene…ts of inactivity relative to earnings, particularly low-skill earnings, and, possibly, on direct measures of labour demand. To pursue this further, there are, in the UK, some major relative variations in IVB by age group and over time as we saw in Fig.1. This suggests that using age group/time cells as the unit of observation we may be able to identify bene…t e¤ects on inactivity. As it happens, there are also some signi…cant variations in the wages of each occupation group by region and over time. That is, the time series patterns of regional wages relative to the national averages di¤er signi…cantly within broad occupation groups. Since bene…ts exhibit no regional variation, we may use region/time cells as the unit of observation to identify the impact of available wages on inactivity. We can also investigate the direct impact of labour demand, using vacancy rates, because their time series patterns also vary signi…cantly across regions. Of course, it would be good strategy to use age group/region/time cells as the basic units of observation but given the sample sizes available in our surveys, the sizes of these cells would be too small. The next step, therefore, is to describe the data and empirical results.

3.1 Data and Results

In the previous section, we suggest two basic empirical models worth investigating. First, we set these out in some detail and then we present the results.

3.2 The Regional Model

Using the standard British regions, we use a number of surveys to construct the data which allow us to estimate equations of the following type[6],

$$ia_{rt} = \alpha_r + \alpha_t + \sum_j \beta_j \ln(w_{rtj}/w_{tj}); + \sum_k \gamma_k ed_{krt} + \sum_i \varsigma_i d_{irt} + \omega(sick)_{rt} + \epsilon_{rt} \quad (1)$$

r = region, t = time

ia = prime age male inactivity rate. LF de…nition. (LFS, GHS) (See Table 1)

α_r = region dummies, α_t = time dummies

w_{rtj} = basic hourly wage rate in region r, occupation level j, time t. (New Earnings Survey, NES)

w_{tj} = aggregate average basic hourly wage rate in occupation level j, time t (NES)

ed_{krt} = proportion of prime age men with quali…cation k in region r at time t (LFS, GHS)

$sick_{rt}$ = proportion of prime age men with an LLSI in region r at time t (GHS)

d_{1rt} = registered vacancy rate in region r at time t (Regional Trends)

d_{2rt} = $\frac{1}{3}\sum_{\ell=0}^{2} \frac{¢N_{rt\,¡\,\ell}}{(N_{rt\,¡\,\ell}+N_{rt\,¡\,\ell\,¡\,1})/2}$, where N_r is employment in region r (NES)

The idea here is that inactivity rates are in‡uenced by pecuniary incentives, as embodied in the wage[7], as well as possibly by direct measures of the demand for labour. Of course, bene…ts are also an important part of the pecuniary incentives, but these are captured by the time dummies. Direct measures of the demand for labour include the vacancy rate, a stock measure, and the proportional change in employment, averaged over three years, a ‡ow measure. In addition, we include education levels and sickness rates as controls.

We do not simply investigate equation (1) but we also split the sample of prime age men into those who are long-term sick or disabled and the remainder, who we describe as "the well". We then analyse inactivity rates among these two sub-groups.

3.3 The Age Group Model

Using nine age groups, we utilise surveys to generate the data allowing us to analyse equations of the form,

$$ia_{at} = \alpha_a + \alpha_t + \beta \ell n \left(b/w\right)_{at} + \epsilon_{at} \qquad (2)$$

a = age group [(20-24),(25-29),(30-34),(35-39),(40-44),(45-49),(50-54),(55-59),(60-64)]

α_a = age group dummies, α_t = time dummies

b_{at} = weekly bene…t paid to long-term sick or disabled with contributory bene…t entitlement, age-group, a, time, t. (UK Dept of Work and Pensions)

w_{at} = basic hourly wage rate, age-group, a, time, t (NES)

The general idea is to capture the impact of bene…ts on inactivity by making use of the large di¤erential exogenous shifts in bene…ts across age groups over time. The use of age group dummies and time dummies makes the structure of (2) equivalent to a di¤erence in di¤erences speci…cation which others have used in this same context (see, for example, Gruber, 2000)[8]. In addition to the basic model described in (2), we also analyse the same model applied only to the bottom education group (those without quali…cations).

3.4 The Results

The results for the regional model are presented in Table 7. In the …rst column, we see OLS estimates of equation (1). This is a somewhat restricted version of the general equation described in the text. The relative wage term for the high occupation group and the variables capturing education levels below high are all completely insigni…cant and are simply dropped.

The …rst point to note is that the labour demand variables, namely the vacancy rate and the proportional changes in employment, have a strong positive impact on inactivity. This is completely inconsistent with the idea that there is a strong negative direct e¤ect of labour market buoyancy on inactivity rates. Replacing the vacancy rates by local unemployment rates and restricting proportional changes in employment to the production sector does not help at all, the coe¢cients remain "wrongly" signed and often signi…cant. These results are particularly interesting in the light of both the positive cross-section regional correlation between inactivity and unemployment rates and the popular view that surges in inactivity follow periods of recession. However, our results suggest that this is not the correct way of thinking, something that was also suggested by the rise in prime-age male inactivity during the buoyant labour market of the mid to late 1990s.

So how should we interpret our result which suggests that rises in vacancy rates are associated with increases in inactivity rates? The obvious interpretation is one of reverse causality, so that increased inactivity re‡ects reduced labour supply and more un…lled vacancies. In the light of this, these demand

terms have no place in models to explain inactivity, so in the second column in Table 7, we simply drop them. Turning to the second important point, we see a strong negative wage e¤ect on inactivity. The question here is whether or not we have correctly indenti…ed the labour supply impact of wages. This would be the case if relative wage movements across regions within low level occupations are primarily driven by labour demand shifts. To check on this we repeat the exercise using an IV estimator. The instruments are described in detail in the Notes to Table 7. These are constructed by taking the initial industrial composition of each region and constructing a regional demand index by taking aggregate industry employment shares at each time period and weighting these by the initial industrial composition in each region. So, for example, regions where industry was initially concentrated in sectors which decline over time in aggregate will have low labour demand growth. In column 3, we present the IV results and …nd that the negative wage e¤ect on inactivity is somewhat larger than in the previous column. This suggests that the OLS coe¢cient was biased down to some extent. The IV result suggests that a downward shift of 1% in the regional wage relative to the national average within low level occupations induces a rise of 0.23 percentage points in the overall regional inactivity rate.

When we separate the sample into the long-term sick and the long-term well, we see immediately that the wage e¤ect on the inactivity rate is very much larger for the long-term sick, around four times as large as the overall e¤ect in column 3.

Turning now to the age-group model, the results are presented in Table 8. These indicate that ‡uctuations in incapacity bene…t have a signi…cant impact on overall male inactivity rates and a much bigger impact on the inactivity rates of those without quali…cations. For example, if incapacity bene…ts are raised by 20 per cent, we can expect overall male inactivity rates to go up by around 0.7 percentage points but low skill rates to rise by around 1.8 percentage points. These numbers, while signi…cant, are hardly dramatic but this simply re‡ects the fact that changes in inactivity depend crucially on how the incapacity bene…t system is operated, not simply on how generous it is. Indeed, it may be argued that a generous system which is operated rigorously is superior to a system which is mean but lax.

4 Summary

Inactivity rates among prime-age men in the UK have risen by at least …ve times since the early 1970s whereas unemployment rates are much the same. Furthermore, inactivity is strongly concentrated

among the unskilled and those suffering from a limiting long-term illness or disability. In our analysis of inactivity rates by region and age group we find that male inactivity responds negatively to variations in the wages of low level occupations and positively to fluctuations in incapacity benefits.

5 Endnotes

1. 50% is the number generated using GHS data, 70% is derived using LFS data, where the definitions are a bit different (see Table 1).

2. To be more precise, around 70% of the rise in prime-age male inactivity since the 1970s can be accounted for by rising inactivity among the increasing numbers with an LLSI and more or less all the rise since the 1980s can be accounted for by rising inactivity among the increasing numbers with an LHPD.

3. The results of the OECD Literacy Survey (OECD 1997) indicate that some 22 per cent of the population of working age in the UK is at the lowest level of literacy (close to illiteracy) compared with around 10 per cent in the typical northern European country (Germany, Netherlands, Sweden).

4. A potential limiting illness or disability may be thought of as one which emerges following job loss, when the individual concerned is diverted into the invalidity benefit system.

5. See Huddleston (2002) for further analysis. In particular, it is worth noting that most of the inactive who are chronically sick or disabled are claiming incapacity benefit (invalidity benefit prior to 1995) and by 2001, over 50 per cent of these claimants were suffering from mental or behavioural disorders (mostly depression) or diseases of the muculoskeletal system (mostly back pain). In 1979 the equivalent proportion was below 25 per cent (UK Social Security Statistics).

6. A full description of the data may be found in the Data Appendix.

7. We might argue that inactivity rates depend on

$$\ell n\left(b_t/w_{rt}\right) = \ell n\left(b_t/w_t\right) - \ell n\left(w_{rt}/w_t\right)$$

Then $\ell n\left(b_t/w_t\right)$ is absorbed into the time dummies.

8. Bell and Smith (2003) pursue this same line. Unfortunately, as far as we can tell, they use the LF de…nition of inactivity prior to 1992 and the ILO de…nition from 1992 on.

6 References

Beatty, C. and Fothergill, S. (1999), "Incapacity Bene…t and Unemployment", Centre for Regional Economic and Social Research, She¢eld Hallam University, July.

Bell, B., and Smith, J. (2003), "Health, Disability, Insurance and Labour Force Participation in the UK", Bank of England.

Berman, E., Bound, J., and Machin, S. (1998), "Implications of Skill Biased Technological Change: International Evidence", Quarterly Journal of Economics, Vol.113, 1245-79.

Faggio, G. and Nickell, S. (2003), "The Rise in Inactivity Among Adult Men", in R. Dickens, P. Gregg and G. Wadworth (eds.), The Labour Market Under New Labour, (Basingstoke, Hants: Palgrave MacMillan).

Gruber, J. (2000), "Disability Insurance Bene…ts and Labor Supply", Journal of Political Economy, 108(6), 1162-83.

Huddleston, T. (2002), "Explaining the Growth in the Number of People Claiming Incapacity Bene…ts", Department of Work and Pensions.

Jackman, R. and Savouri, S. (1999), "Has Britain Solved the 'Regional Problem'?" in Gregg, P. and Wadsworth, J. (eds), The State of Working Britain, (Manchester: Manchester University Press).

Machin, S., Van Reenen, J. and Desjonqueres, T. (1999), "Another Nail in the Co¢n: Or Can the Trade Based Explanation of Changing Skill Structures be Resurrected?", Scandinavian Journal of Economics, Vol.101, 553-54.

National Audit O¢ce (1989), Invalidity Bene…t: Report by the Comptroller and Auditor General, (London: HMSO).

Nickell, S. and Bell, B.(1995), "The Collapse in Demand for the Unskilled and Unemployment Across the OECD" Oxford Review of Economic Policy, Vol.11(1), 40-62.

Nickell, S. and Layard, R. (1999), "Labour Market Institutions and Economic Performance", in Ashenfelter, O. and Card, D. (eds.) Handbook of Labor Economics, Vol.3 (Amsterdam: North Holland).

Nickell, S., Jones, P. and Quintini, G. (2002), "A Picture of Job Insecurity Facing British Men", Economic Journal, 112, 1-27.

Ritchie, J., Ward, K., and Duldig, W. (1993), GPs and IVB, DSS Research Report no.18 (London: HMSO).

OECD (1997), Literacy Skills for the Knowledge Society, (Paris: OECD).

Wood, A. (1994), North-South Trade, Employment and Inequality, (Oxford: Clarendon Press).

7 Data Appendix

Inactivity Rate: In the regressions these are taken from the GHS (1976, 78, 80) and the LFS (1975, 77, 79, 81, 83-99). They refer to prime age men, using the LF de…nition (see Table 1).

Wages: These refer to the basic hourly rate of full-time employees, de…ned as weekly pay minus overtime pay divided by weekly hours minus overtime hours. The regions refer to the ten listed in Table 3 and the age groups cover the nine listed in Table 8 (New Earnings Survey).

Occupation level: There are two used in the regression in Table 7, namely low and high. These are based on the standard occupational classi…cation and are described in detail in Nickell et al. (2002), Table 2. There, four occupation levels are de…ned. Here we take "low" as the bottom two and "high" as the top two. (New Earnings Survey).

Education: In the regressions we make use of the high education category, those with at least a …rst degree, and the low education category, those without any quali…cations (GHS, LFS).

Sickness/Disability: These are described in detail in Table 4.

Vacancy Rate: Vacancies divided by employment (Regional Trends).

Employment: Employment refers to employees who earn enough to be in the PAYE system (New Earnings Survey).

Bene…ts: Average weekly amount paid to the long-term sick or disabled if they are entitled to contributory bene…t (UK Department of Work and Pensions). Used in Table 8.

Ratio of Sickness to LT Unemployment Bene…t: For men entitled to contributory sickness bene…t (UK Department of Work and Pensions). Used in Fig.1

Table 1
Inactivity and Unemployment Rates of Prime-Age Men (%), 1972-2002

	Inactivity Rate (%)			Unemployment Rate (%)		
	GHS	LFS	LFS (ILO)	GHS	LFS	LFS(ILO)
1972-76	1.6	1.1		3.4	4.0	
1977-78	2.1	2.0		3.8	4.3	
1979-81	2.6	2.5		5.8	5.7	
1982-86	3.4	4.7		9.1	9.0	
1987-91	4.0	5.7		7.1	7.2	
1992-96	5.9	5.7	6.9	9.7	9.4	8.8
1997-99	7.9	7.2	8.3	5.3	5.9	5.3
2000-01	7.9	7.4	8.5	3.5	4.7	4.2
2002-03		7.3	8.4		4.6	4.1

Notes

(i) GHS is the General Household Survey, LFS is the Labour Force Survey.

(ii) Data are available as follows: GHS, 72-96, 98, 2000, 01. LHS, 75, 77, 79, 81, 83-2003. LFS (ILO), 92-2003.

(iii) The inactive are those who are not working and not unemployed. LF unemployed are those without a job who are (a) looking for work in the reference week or (b) prevented from seeking work by temporary sickness or holiday or (c) waiting to start a job or (d) waiting for the results of a job application. ILO unemployed are those without a job who are available to start work in two weeks and (a) have looked for work in the previous four weeks or (b) are waiting to start a job.

(iv) The GHS uses the LF de…nition up to 1996, the ILO de…nition in 98, 2000, 01. The LFS series uses the LF de…nition. The LFS (ILO) series uses the ILO de…nition.

Table 2

Inactivity Rates for Prime-Age Men in and outside the Bottom Skill Quartile (%), 1972-2002

	GHS		LFS	
	BSQ	NBSQ	BSQ	NBSQ
1972-76	2.2	1.4		
1977-78	2.9	1.8		
1979-81	3.5	2.3	4.3	1.9
1982-86	5.8	2.6	7.4	3.8
1987-91	8.1	2.6	9.6	4.4
1992-96	11.7	4.0	13.4	3.1
1997-99	15.4	5.6	17.7	3.7
2000-01	15.6	5.1	18.1	3.8
2002-03			18.0	3.6

Notes

(i) As in Table 1.

(ii) BSQ (the bottom skill quartile) is based on educational quali…cations. Until the early 1990s, those in the bottom skill quartile are a subset of those without quali…cations. So the BSQ numbers refer to the mean for those with no quali…cations. Later, those without quali…cations are less than 25 per cent of prime age men. So the bottom quartile also includes some proportion of the next education group, ie. those with some GCSEs. So now the BSQ numbers refer to a suitably weighted average of those without quali…cations and those in the next education group. NBSQ represents those outside the bottom skill quartile.

Table 3

Inactivity Rates for Prime-Age Men by Region (%)

Regions	Low Employment		High Employment	
	GHS	LFS	GHS	LFS
1972-76	2.1	1.3	1.2	0.9
1977-78	2.9	2.5	1.5	1.7
1979-81	3.4	3.3	2.0	1.9
1982-86	4.5	5.9	2.7	3.9
1987-91	5.7	7.1	3.0	4.8
1992-96	8.0	7.6	4.5	4.4
1997-99	10.3	9.3	6.2	5.8
2000-01	10.2	9.3	6.5	6.2
2002-03		9.2		6.2

Notes

(i) As in Table 1.

(ii) Low employment regions are North, Yorkshire/Humberside, North West, Wales, Scotland. High employment regions are East Midlands, West Midlands, East Anglia, South East, South West.

Table 4

Percentage of Prime-Age Men A¤ected by Chronic Illness and their Inactivity Rates

	Chronic Illness (%)		Inactivity Rates (%)			
			With		Without	
	LLSI	LHPD	LLSI	LHPD	LLSI	LHPD
1972-76	11.2		10.0		0.4	
1979-81	14.7		11.9		0.7	
1982-86	14.0	8.7	15.9	28.8	1.2	1.9
1987-91	14.8	10.4	19.2	28.5	1.3	1.5
1992-96	16.2	12.2	26.3	36.3	1.8	1.5
1997-99	16.6	12.6	33.8	43.1	2.8	1.9
2000-01	14.8	14.0	34.2	41.8	3.1	2.0
2002-03		13.5		41.2		2.3

Notes

(i) As in Table 1.

(ii) LLSI refers to a limiting long-standing illness. This is reported in the GHS, where people are asked if they su¤er from a long-standing illness which limits things which they would normally do. LHPD refers to a limiting health problem or disability. This is reported in the LFS and refers to a health problem or disability which a¤ects the kind of work the person does.

(iii) The GHS failed to ask a consistent question of this type in 1977-78. The LFS question was changed in 1997 and we have made a slight adjustment to the data post-1997 to generate a consistent series.

Table 5

Percentage of Prime-Age Men A¤ected by Chronic Illness

	Men in the Bottom Skill Quartile				Men outside the Bottom Skill Quartile			
	High Employment Region		Low Employment Region		High Employment Region		Low Employment Region	
	LLSI	LHPD	LLSI	LHPD	LLSI	LHPD	LLSI	LHPD
1972-76	12.5		14.6		10.1		11.5	
1979-81	16.9		19.7		13.1		14.2	
1982-86	17.1	11.2	20.0	11.4	11.8	7.1	13.5	9.1
1987-91	17.7	15.3	23.1	20.5	12.2	7.1	14.3	9.4
1992-96	21.3	20.5	26.6	26.3	13.1	7.8	14.8	10.4
1997-99	21.3	23.1	26.6	28.4	14.4	7.7	14.4	10.3
2000-01	18.3	24.5	30.0	29.0	11.3	8.5	13.5	11.6
2002-03		23.7		27.6		8.3		11.2

See notes to previous tables for de…nitions and sources.

Table 6

Inactivity Rates of Prime-Age Men by Various Categories (%)

	Men in the Bottom Skill Quartile				Men outside the Bottom Skill Quartile			
	High Employment Region		Low Employment Region		High Employment Region		Low Employment Region	
	LLSI	LHPD	LLSI	LHPD	LLSI	LHPD	LLSI	LHPD
1972-76	9.8		17.2		7.0		11.3	
1979-81	11.0		22.6		7.4		14.3	
1982-86	17.9	25.2	28.6	42.9	9.6	22.5	18.7	33.1
1987-91	23.3	30.9	38.9	48.3	10.8	18.3	21.3	32.3
1992-96	29.7	41.3	51.0	55.1	16.32	26.2	29.2	40.0
1997-99	41.0	51.3	54.8	64.5	24.7	32.3	36.7	45.5
2000-01	42.1	51.4	54.5	64.3	25.0	31.7	35.1	42.5
2002-03		51.4		63.3		31.4		41.8

See notes to previous tables for de…nitions and sources.

Table 7
The Impact of Wages on Prime-Age Male Inactivity, 1979-98
Dependent Variable: Inactivity Rate$_{rt}$ (%)

	All			Long-term sick			Long-term well		
	OLS	OLS	IV	OLS	OLS	IV	OLS	OLS	IV
100ln $\frac{w_{rt}}{w_t}$ (low occ.)	-0.055	-0.095	-0.23	-0.32	-0.48	-0.96	-0.055	-0.050	-0.046
	(3.3)	(6.3)	(3.4)	(2.2)	(4.0)	(2.0)	(2.8)	(3.1)	(0.8)
High education$_{rt}$(%)	-0.13	-0.21	-0.16	0.19	-0.42	-0.13	-0.11	-0.079	-0.10
	(2.2)	(3.8)	(2.1)	(0.4)	(0.9)	(0.2)	(1.7)	(1.4)	(1.5)
Long-term sick$_{rt}$(%)	0.006	0.025	0.028	-	-	-	-	-	-
	(0.3)	(1.0)	(0.9)						
Vacancy rate$_{rt}$(%)	0.018	-	-	0.083	-	-	-0.001	-	-
	(4.4)			(2.3)			(0.2)	-	
100MA(4 lnN_{rt})	0.059	-	-	-0.046	-	-	0.048	-	-
	(1.3)			(0.1)			(1.0)		
Region dummies	X	X	X	X	X	X	X	X	X
Year dummies	X	X	X	X	X	X	X	X	X
T	19	21	20	19	21	20	18	19	19
N	10	10	10	10	10	10	10	10	10
$\overline{R}^2$	0.92	0.92	0.87	0.76	0.75	0.73	0.52	0.53	0.52

Notes

i) r refers to region, t refers to time, t ratios in parentheses.

ii) Long-term sick refers to those with a limited long-standing illness (see Table 4). w is the basic hourly wage for those in low level occupations (see Data Appendix). High education refers to those with degrees. The vacancy rate refers to vacancies divided by employment. MA(¢ ln$N$) is a three-year moving average of proportional employment changes.

iii) In the IV regressions, the wage variable is taken as endogenous and the instruments are $x_{rt}, x_{rt\,i\,1}$ where x_{rt} = $\sum_i \lambda_{iro} S_{it.}$

i = one digit industry index,

λ_{iro} = $\frac{\text{employment in } i \text{ region } r \text{ in period 1975-80}}{\text{employment in region } r \text{ in period 1975-80}}$

S_{it} = $\frac{\text{employment in industry } i \text{ at time } t}{\text{total employment at time } t}$

x_{rt} is therefore a measure of labour demand in region r based on movements in aggregate industry employment shares weighted by the initial industry shares in each region.

Table 8

The Impact of Incapacity Bene…t on Male Inactivity, 1982-99

Dependent Variable: Inactivity Rate$_{at}$ (%)

	Groups	
	All	Low education
100 ln$(benefit/wage)_{at}$	0.037	0.089
	(2.4)	(3.8)
Age group dummies	**X**	**X**
Year dummies	**X**	**X**
T	18	18
N	9	9
$\overline{R}^2$	0.99	0.99

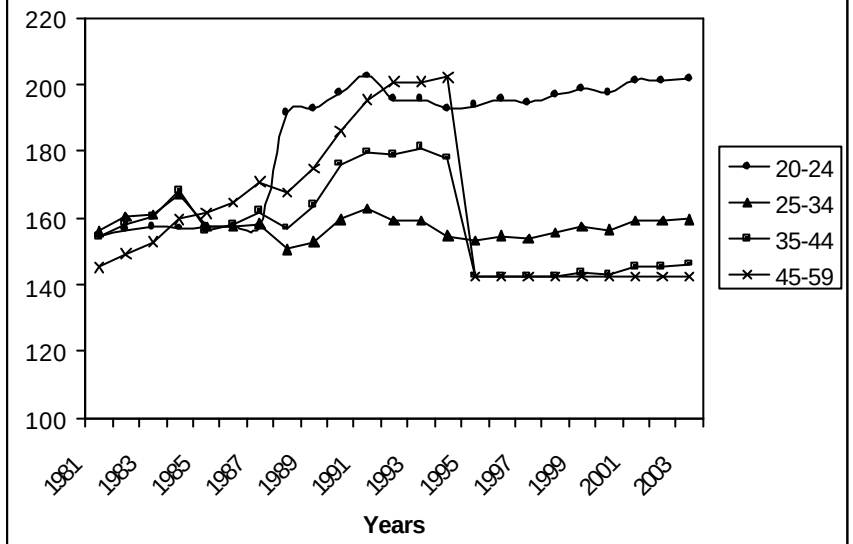
Notes

i) a refers to age groups [(60-64),(55-59),(50-54),(45-49),(40-44),(35-39),(30-34),(25-29),(20-24)], t refers to time. t ratios in parentheses.

ii) bene…ts refers to the weekly rate of incapacity bene…t, wage to the basic hourly wage rate.

iii) low education refers to those without quali…cations.

Fig.1: Men Entitled to Contributory Sickness Benefits, Ratio of sickness benefit entitlement to long-term unemployment benefits by age group: average of single men, 1981-2003



CENTRE FOR ECONOMIC PERFORMANCE
Recent Discussion Papers

672	Chiara Criscuolo Ralf Martin	Multinationals and US Productivity Leadership: Evidence from Great Britain
671	Roberto Torrini	Profit Share and Returns on Capital Stock in Italy: the Role of Privatisations Behind the Rise of the 1990s
670	Silvia Ardagna Francesco Caselli Timothy Lane	Fiscal Discipline and the Cost of Public Debt Service: Some Estimates for OECD Countries
669	Alejandro Cuñat Marco Maffezzoli	Can Comparative Advantage Explain the Growth of US Trade?
668	Francesco Caselli Silvana Tenreyro	Is Poland the Next Spain?
667	Francesco Caselli	Accounting for Cross-Country Income Differences
666	Gianluca Benigno Pierpaolo Benigno	Designing Target Rules for International Monetary Policy Cooperation
665	Olmo Silva	Entrepreneurship: Can the Jack-of-All-Trades Attitude be Acquired?
664	Maarten Goos	Sinking the Blues: the Impact of Shop Closing Hours on Labor and Product Markets
663	Christopher A. Pissarides Giovanna Vallanti	Productivity Growth and Employment: Theory and Panel Estimates
662	Philip R. Lane Gian Maria Milesi-Ferretti	Financial Globalization and Exchange Rates
661	Alex Bryson Lorenzo Cappellari Claudio Lucifora	Do Job Security Guarantees Work?
660	David Marsden Richard Belfield	Unions, Performance-Related Pay and Procedural Justice: the Case of Classroom Teachers

659	Rachel Griffith Rupert Harrison John Van Reenen	How Special is the Special Relationship? Using the Impact of R&D Spillovers on UK Firms As a Test of Technology Sourcing
658	Douglas Kruse Richard B. Freeman Joseph Blasi Robert Buchele Adria Scharf Loren Rodgers Chris Mackin	Motivating Employee Owners in ESOP Firms: Human Resource Policies and Company Performance
657	Christopher Crowe	Inflation, Inequality and Social Conflict
656	James Banks Richard Disney Alan Duncan John Van Reenen	The Internationalisation of Public Welfare Policy
655	Eran Yashiv	The Self Selection of Migrant Workers Revisited
654	Hilary Steedman Sheila Stoney	Disengagement 14-16: Context and Evidence
653	Ralf Martin	Globalisation, ICT and the Nitty Gritty of Plant Level Datasets
652	Jörn-Steffen Pischke	Labor Market Institutions, Wages and Investment
651	Anthony J. Venables	Evaluating Urban Transport Improvements: Cost Benefit Analysis in the Presence of Agglomeration and Income Taxation
650	John Van Reenen	Is There a Market for Work Group Servers? Evaluating Market Level Demand Elasticities Using Micro and Macro Models
649	Rachel Griffith Stephen Redding Helen Simpson	Foreign Ownership and Productivity: New Evidence from the Service Sector and the R&D Lab

The Centre for Economic Performance Publications Unit
Tel 020 7955 7673 Fax 020 7955 7595 Email info@cep.lse.ac.uk
Web site http://cep.lse.ac.uk