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TRENDS IN EARNINGS INEQUALITY AND EARNINGS MOBILITY, 1977-1999: THE IMPACT OF MOBILITY ON LONG-TERM INEQUALITY

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The views expressed in this report are the authors' and do not necessarily reflect those of the Department of Trade and Industry.

Foreword

Debate over employment relations has long been at the forefront of the political agenda, and so it remains today. Promoting good employment relations is an important task of government. Our role in the Department of Trade and Industry is to encourage the development of a skilled and flexible labour market founded on the principle of social partnership.

To aid Ministers in making sound decisions we have an ongoing programme of evaluation and research in employment relations. In-house researchers, economists and policy advisors devise research projects to be conducted on our behalf by external researchers, who are chosen through a competitive tendering process. Projects typically look at areas where we are interested in identifying good practice, in assessing the impact of particular policies or regulations, or examining emergent trends. Details of the programme appear regularly in *Labour Market Trends* and can also be found at **http://www.dti.gov.uk/ir/emar/**

The Research Series is where we disseminate the results of this work, as a contribution towards an open community debate about how we might best achieve our overall aim of improving competitiveness.

Mark Beatson
Director, Employment Relations Market Analysis and Research Branch

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Background

Earnings inequality in Britain has increased dramatically over the last 2 decades among all employees, men and women and young and old workers alike. In 1977, employees in the top 10 per cent of the earnings distribution earned 2.75 times the amount of employees in the bottom 10 per cent. By 1997 the top 10 per cent earned nearly 4 times the amount of employees in the bottom 10 per cent.

Evidence based on a cross-section, or 'snapshot', of the earnings distribution tells us about inequality at a point in time. From a welfare perspective, however, the degree of lifetime or long-term earnings inequality is likely to be a greater cause for concern. It is therefore important to know whether or not the increase over time in cross-section earnings inequality has led to an increase in lifetime earnings inequality.

A rise in cross-section earnings inequality may not represent an increase in lifetime pay differentials if the rise is 'shared out' among employees. One process by which inequality can be 'shared out' among employees is earnings mobility. The extent to which individuals 'move around' the earnings distribution, possibly also experiencing unemployment, determines the degree to which any change in inequality represents a change in lifetime, or long-term, earnings inequality. Assessing the relationship between a rise in cross-sectional and lifetime pay dispersion requires longitudinal earnings data which tracks individuals over a long period of time.

This study uses longitudinal data on individuals between 1977 and 1997 to investigate the extent to which the observed increase in cross-section earnings inequality represents a widening of lifetime differentials in Britain. Although the experience of unemployment is clearly an important dimension of labour market inequality, individuals experiencing unemployment are generally excluded from measures of cross-section inequality and lifetime, or long-term, inequality. A methodology is developed to provide a more inclusive measure of inequality.

The study has three main parts. First it examines in detail the changes in cross-section pay inequality over the period. It then looks at the pattern of earnings mobility over time. Finally, it examines the relationship between changes in cross-section and lifetime pay inequality. Special attention is paid to different labour market groups and working patterns throughout.

The key findings in terms of inequality are:

- rising levels of cross-section earnings inequality for all employees; male employees experienced the largest rise in earnings inequality;
- unemployment is an important element of inequality;
- inequality is lower among prime age workers (25-49 years), but increased by nearly twice as much among this group of employees.

The key findings in terms of mobility are:

- the earnings progression of female employees improved over this period (1977-1997) although earnings mobility has fallen among male employees;
- there is a considerable degree of persistence in low pay with between 40 and 50 per cent of employees who remain in employment over a 6 year period remaining in the lowest quarter of the earnings distribution;
- the unemployed are most likely to gain employment in the lowest paid sections of the earnings distribution and low paid employees are more likely to go on to experience unemployment than higher paid employees.

The key findings in terms of long-term inequality are:

- mobility reduces lifetime earnings inequality but the extent to which hourly earnings mobility reduces longer-run earnings inequality has fallen since 1977 – long-term earnings inequality has therefore increased by more than cross-section earnings inequality;
- male employees, particularly prime age groups (25-49 years), experienced the greatest increases in cross-section and long-term inequality; earnings mobility fell as earnings inequality increased;
- female employees were less likely to experience falling earnings mobility. However, female employees still experienced increases in long-term inequality.

Overall there is clear evidence that lifetime earnings inequality has risen over the same period that cross-section inequality has increased. Earnings mobility has fallen among men and to a lesser extent among women. Hence the measured earnings inequality observed over the past 20 years has increased long-term inequality across the population.

One
INTRODUCTION

The rise in earnings inequality in the United Kingdom (UK) from the late 1970s to the early 1990s is now well documented. An increase in the dispersion of earnings has also been found in the United States and to a lesser extent other continental European countries. There is still considerable debate about the cause of greater earnings inequality. The proposed explanations include the argument that greater competition with low labour cost countries has slowed down the wage growth of low skilled workers in the domestic economy. Others believe that technological changes in the workplace, such as the increased usage of sophisticated machinery and computers, have favoured high-skilled labour leading to an increase in the differential of wages between high and low skilled workers. Throughout this period there has also been considerable labour market deregulation affecting labour market institutions which are known to compress the distribution of earnings (abolition of Wages Councils, changes in legislation affecting trade union power).

A more neglected issue concerns the extent to which the greater cross-sectional dispersion of earnings represents an increase in lifetime earnings inequality. If there is no earnings mobility then individuals maintain their relative position in the earnings distribution. This means that any increase in cross-sectional earnings inequality will translate into an increase in lifetime earnings inequality. If there is earnings mobility then individuals change places in the earnings distribution and an increase in cross-sectional earnings inequality will have less impact on lifetime earnings inequality. In the extreme, mobility can mean that an increase in inequality may lead to no change in lifetime earnings inequality. From a welfare perspective changes in lifetime earnings inequality are more important than short-term fluctuations in earnings inequality.

Detailed exploration of the relationship between earnings mobility and earnings inequality is rarely conducted given that it requires datasets which track individuals, and details of their pay, over long periods of time so that the links between earnings dispersion and earnings mobility can be identified. This study seeks to address the issues raised above by exploring the relationship between cross-sectional earnings inequality and earnings mobility over time via the interrogation of a panel dataset of earnings spanning a 21 year period (1977-1997). The analysis is conducted over three 7 year periods. These periods are characterised in terms of changes in inequality, mobility and finally the extent to which mobility reduces long-term earnings inequality. This allows us to assess the extent to which changes in inequality represent changes in lifetime earnings inequality.

The report is set out as follows. Chapter 2 contains a review of the relevant literature. Chapter 3 describes the dataset used in the analysis. Chapter 4 outlines the methodology. Chapter 5 documents changes in the distribution of earnings and Chapter 6 considers earnings and employment mobility. Chapter 7 contains the key results on the effect of mobility on earnings inequality. Chapter 8 summarises the main findings.

Two
RESEARCH REVIEW

2.1 Trends in earnings inequality

The upward trend in earnings inequality in Britain began in the late 1970s and has continued throughout the 1990s. A number of studies document this trend in Britain. Gosling, Machin and Meghir (1994) examine male wages between 1966 and 1992 using data from the Family Expenditure Surveys. They find that after a short period in the 1970s when the distribution of earnings compressed, inequality in male earnings grew. Drawing on historical data they conclude that by 1992 weekly earnings inequality among male manual full-time workers was higher than at any time during the last century. Bell (1995), using individual level data from the New Earnings Survey, shows rising inequality in both weekly and hourly earnings for male and female employees from the late 1970s up to the 1990s.

Rising earnings inequality has also occurred in several other countries (OECD, 1996). Earnings inequality began to rise earlier in the United States and Canada and has remained at a higher level than in Britain. On the other hand, several European countries have experienced very little increase in earnings dispersion, and inequality in France has even declined over the past 2 decades.

Cross-national comparisons of the trends in earnings inequality can help provide explanations and hypotheses for the underlying factors which account for the observed rise in earnings inequality. Explanations include skill biased technological change, the growth of international trade with low labour cost economies and institutional change.

Technological change has always been a feature of the industrial world and at least throughout the 20th century appears to have been biased in favour of highly skilled workers (Goldin and Katz, 1996). Skill-biased technological change (SBTC) describes technological developments that displace one skill group in favour of another, usually low skilled workers in favour of high skilled workers.[1] Technology acts as a substitute for low skilled workers but a complement to high skilled workers. Supporters of this hypothesis argue that the rapid nature of the SBTC over the last couple of decades can account for the rise in earnings inequality. If technological change is skill biased and high skilled labour acts as a complement then the demand for skilled labour will increase. If supply fails to keep up with the change in demand then high skilled workers' wages will rise relative to the wages of low skilled workers. In favour of the technological change hypothesis Machin *et al* (1996) and Berman *et al* (1997), *inter alia*, show that the rise in the demand for skilled labour has occurred mainly within sectors and firms (and in the traded and non-traded sectors alike) and is correlated with measures of technology (such as the use of computers and expenditure on research and development).

Supporters of the trade hypothesis (Wood, 1994, Rodrik, 1997) claim that a rise in trade with countries with low labour costs ('developing economies') has led to increased specialisation in the production of goods and services with a high skill content in 'advanced economies'. This has led to an increase in the demand for skilled workers which has exceeded their supply with the result that their wages have increased. In contrast, low skilled workers have experienced a fall in the demand for their labour and greater competition with low wages in the low labour cost economies. It is argued that overall this led to an increase in the relative wages of high skilled workers. It has been suggested that while SBTC may have led to an increase in demand for high skilled workers, trade accounts for the recent *acceleration* in the pace of technological change (Wood, 1998). However, the increased demand for high skilled workers in sectors with no competition from low wage countries over the period that pay differentials increased is inconsistent with the trade hypothesis.

Another argument emphasises the weakening of labour market institutions which tend to compress earnings dispersion, such as trade unions, minimum wages or collective wage bargaining. The US and Britain both underwent considerable reform to labour market institutions during the 1980s which may have led to greater earnings inequality. In addition, the end of incomes policies, designed to reduce wage inflation, in the late 1970s probably led to an increase in wage dispersion. Cross-national studies have been used to show that in countries where institutions are strong inequality has grown less, and within country studies show that a weakening of institutions is associated with a rise in earnings inequality. Katz, Loveman and Blanchflower (1995) compare changes in the structure of wages in the US, Britain, France and Japan. They claim that the increase in the wage differentials between skill groups in the US, Britain and Japan since the early 1980s has been due to a demand shift in favour of high skilled workers which outstripped supply. They suggest that inequality started rising in the US before Britain due to the power of British unions. In addition, high minimum wages and strong

unions appear to have prevented the sharp rises in earnings inequality in France that were experienced in the US and Britain over the same period. Machin (1997) shows that the decline in the role of two institutions known to have wage compression effects (unions, Wage Councils) in Britain during the 1980s and early 1990s mirrored the rise in earnings inequality.

Analysis of changes in earnings inequality between skill groups suggests that there has been a demand shift in favour of high skilled workers, whether driven by skill biased technological change or trade (Schmitt, 1995). Changes in the supply of skills in the workforce can partly explain trends in inequality within countries and between countries. However, earnings inequality has not only increased between skill groups, it has also increased within skill groups. Trade and technology theories can clearly shed light on why inequality has increased between skill groups but do not explain the long-term increases in earnings inequality within skill groups.[2] Changes in institutional wage-setting mechanisms (minimum wages, collective wage bargaining, Wages Councils) can lead to increases in earnings differentials within similar groups of workers. In Britain there has been an overall decline in collective wage-setting agreements and a general shift towards wage bargaining at the firm and individual level. Consequently, earnings differentials between similar workers have opened up. There are now few occupations that can be characterised by a 'going-rate' of pay.

One possible explanation for the increase in earnings inequality within similar groups of workers is the increase in the use of performance related pay (PRP). Since the 1980s the use of PRP (profit sharing schemes, commission, bonuses, etc) has increased from the use of commission in sales occupations in the 1980s to the present day where we see the likely introduction of incentive pay schemes for teachers and other public sector workers. In the private sector PRP is used in many new occupational areas. There has been a considerable growth in call-centres where the smallest differences between workers can be monitored and rewarded (Fernie and Metcalf, 1998). PRP allows employers to reward small differences in workers' productivity. Under collective wage-setting agreements groups of workers are typically paid according to the average productivity of the group. With PRP individuals can be paid on the basis of their own productivity (performance). Consequently a shift from collective wage-setting agreements to PRP will lead to an increase in the dispersion of wages and a greater pro-cyclicality of wages; as the economy dips into recession PRP will fall.[3]

The empirical evidence suggests that cross-sectional inequality has increased both between skill groups (high skill/low skill) and within skill groups. To the extent that inequality has risen between skill groups lifetime earnings inequality will be affected by the ease in which individuals can acquire higher levels of skill (and new skills), as the movement around the distribution is affected by the acquisition of skill.

2.2 Earnings mobility and lifetime earnings inequality

A rise in earnings inequality over time may not represent an increase in lifetime earnings inequality if the change is 'shared out' among employees. One process by which inequality can be 'shared out' is earnings mobility. The extent to which individuals move around the earnings distribution, possibly also experiencing unemployment, determines the degree to which any change in inequality represents a change in lifetime, or long-term, earnings inequality. For example, a simple two person/two period case highlights how mobility can reduce longer-run inequality.

In both cases the ratio of the highest to the lowest earner has risen between time period 1 and time period 2 from 2:1 to 4:1; cross-sectional pay dispersion has increased. However, the ratio of the highest and lowest *average* earnings over both periods is different. In the case with no mobility the ratio is 3:1 while in the case with mobility the ratio is lower at 2.25:1. Cross-sectional dispersion has risen in both but the fact that person B moves from the bottom to the top when there is mobility reduces its impact on lifetime earnings differentials.

Most studies of earnings inequality use current earnings to quantify earnings differences between workers. Studies which use cross-sectional data on current earnings cannot assess the extent to which cross-sectional dispersion reflects lifetime

	No mobility		***Mobility***	
	Time period 1	*Time period 2*	*Time period 1*	*Time period 2*
Person A	£200	£400	£200	£200
Person B	£100	£100	£100	£800

earnings differentials. A number of recent studies have sought to distinguish between rises in inequality which are due to temporary movements in earnings from those which are associated with permanent differences in earnings. These studies suggest that permanent differences are important. For the US Gottschalk and Moffit (1994), Moffit and Gottschalk (1995) and Gittleman and Joyce (1996) use time series of earnings to address this point. Their studies suggest that there has been a significant increase in permanent differences in earnings over the period that cross-sectional studies show rising earnings inequality. These findings imply that rises in cross-sectional earnings inequality in the US have been accompanied by rising lifetime earnings inequality.

For Britain, Dickens (1996a) uses the New Earnings Survey Panel Dataset to analyse male earnings between 1975 and 1994. His findings suggest that the rise in earnings inequality since the late 1970s represents an increase in both permanent and temporary components, with an increase in the permanent component explaining most of the overall rise in inequality. In a separate study Dickens (1996b) measures earnings mobility using transition matrices to compute a measure of mobility within the wage distribution. Results for the 1990s show considerable levels of immobility. Comparisons with the mid-1970s and the mid-1980s reveal a fall in wage mobility over time. Dickens (*op cit.*) reports a fall in his mobility index of 41 per cent between 1980 and 1994, with most of the fall occurring in the early 1980s. Ramos (1999) uses the British Household Panel Study to examine permanent and transitory monthly earnings differences for male full-time employees between 1991 and 1995. His findings suggest that permanent differences account for around one quarter of overall earnings variation. Unfortunately his study is limited to a short time period and is unable to comment on whether the permanent component of earnings differences has increased or decreased over time.

The OECD (1997) found that cross-sectional measures of earnings inequality over estimate longer-run inequality. Between 1986 and 1991 their findings suggest that averaged weekly earnings inequality of British full-time employees who were continuously employed over the 6 year period was between 6 and 16 per cent lower than in any single year. This implies that 84 to 94 per cent of single year inequality represents long-run inequality between individuals.

Stewart and Swaffield (1997) extend the analysis of earnings transitions to include changes in economic status. They show that low paid workers are more likely to experience spells of unemployment and non-employment and generally have a less stable pattern of employment than higher paid workers. They also identify persistence in low pay for low paid employees who remain in employment; i.e. these workers become trapped in low paid jobs.

Past research evidence suggests that earnings mobility has fallen alongside increases in both the permanent component of earnings differences and transitory fluctuations. It would appear that lifetime earnings inequality has increased as earnings mobility has failed to mitigate the increase in cross-sectional inequality. This empirical study of pay is designed to investigate changes in lifetime, or long-term, earnings inequality in Britain since the mid-1970s.

End Notes

[1] An example is the displacement of packers in factories by fully automated packing machinery which requires only engineers and high level technicians to monitor and control the process.

[2] Clearly both trade and SBTC can lead to increases in earnings inequality within skill groups in the short-run, but within group earnings inequality has been rising for the last 2 decades.

[3] PRP among many white-collar workers is less likely to exhibit a pro-cyclical relationship.

Three

THE NEW EARNINGS SURVEY PANEL DATASET AND THE JOINT UNEMPLOYMENT AND VACANCY OPERATING SYSTEM

3.1 The New Earnings Survey Panel Dataset

This study makes use of longitudinal information on earnings available in the New Earnings Survey Panel Dataset (NESPD). The New Earnings Survey, an annual survey of pay, is based on a 1 per cent random sample of employees who are members of the pay-as-you-earn (PAYE) income tax scheme. Employees are selected for the survey on the basis of a specific pair of digits in their National Insurance (NI) number. Their employers are required to supply information based on administrative records. The same pair of digits has been used since 1975; thus allowing the linkage of individuals' records. The linked records of employees appearing in the survey more than once provides the longitudinal data used in this study.

Given the time span of the NESPD used in this analysis (1977-1997) it is important to be aware of a number of changes in the method by which information is collected and its coverage.[4] Since the mid 1980s information relating to one quarter of the sample has been obtained directly from large organisations via payroll interrogation software. Many of these organisations provide information on *all* employees with the appropriate NI number digits, including some employees not in a PAYE scheme. Consequently, the coverage of low paid workers earning below the PAYE income tax threshold has increased. However, the coverage of low paid workers remains incomplete.[5] The remaining three quarters of the sample is identified from lists supplied by the Inland Revenue taken from PAYE records about a month before the survey pay-period (April). Employers are then contacted and requested to supply details of the named employees.

3.2 The Joint Unemployment and Vacancy Operating System

This study also uses the Joint Unemployment and Vacancy Operating System (JUVOS) dataset. JUVOS is a longitudinal record, updated on a monthly basis, of claims for unemployment-related benefits. Since 1984 a longitudinal record of claimant unemployment has been available for members of the NESPD. Information from JUVOS is useful for the purposes of this study because it can be used to trace the economic status of previous or future NES members in the years where no earnings information is available for them. However, there is still a significant proportion of the panel in any given year for whom economic status cannot be identified.[6] Nonetheless, this additional information on unemployment status can provide a more detailed picture of the relationship between earnings inequality, earnings mobility and the experience of unemployment.

End Notes

[4] A more detailed exploration of the effect of changes in coverage and the lack of contact with survey members (attrition) can be found in Appendix 1.

[5] Orchard and Sefton (1996) estimate that the NES covers around 70 per cent of part-time men and 80 per cent of part-time women. McKnight *et al* (1998) estimate that the NES covers approximately half of all employees earning below the Lower Earnings Limit for National Insurance contributions.

[6] They may be unemployed but not claiming benefits, economically inactive, self-employed, in a very low paid job, retired, or failed to be traced during the survey period.

Four
METHODOLOGY

To assess the extent of widening earnings inequality, earnings mobility and how both have evolved over time, a 21 year span of the NESPD is used (1977-1997) broken down into three 7 year sub periods (1977-1983, 1984-1990 and 1991-1997). These time periods are chosen carefully, to capture the fullest possible extent of the growth in earnings dispersion (1979-1992) whilst maximising the potential within these data for longitudinal analysis. Linked JUVOS-NESPD data are only available from 1984 onwards, by choosing these three time periods information in the final two periods can be supplemented with information on unemployment.

Previous studies of earnings mobility have used samples of individuals with complete earnings records for the period of analysis. This creates a number of problems. Cross-sectional inequality is lower among groups of individuals with continuous records of employment. Upward earnings mobility is also likely to be higher and lifetime earnings inequality lower. The experience of unemployment is an important element of inequality and therefore excluding individuals who experience unemployment and not capturing it in a measure of inequality provides only a partial view.

One of the main innovations of this analysis is the widening of the concept of inequality to include the experience of unemployment and non-employment. Expanding the concept in this way provides a measure of labour market inequality rather than the more narrowly defined measure of earnings inequality. This aids our understanding of how the level and change in inequality varies for different groups of individuals. These groups are defined in terms of their contact with the labour market over each of the three 7 year periods. Three groups of individuals are considered:

1. Individuals who are observed in the NESPD for the full 7 year period. This group is referred to as 'continuously' employed;
2. Individuals who are observed in the NESPD *or* JUVOS for the full 7 year period. This group is referred to as economically active;
3. All individuals who appear at least once in the NESPD over the 7 year period.

When individuals are not observed in the NESPD (groups 2 and 3) their earnings are set to zero.[7] Analysis of these three groups of individuals overcomes some of the problems of sample selection that arise when individuals have no earnings observation in a particular year or years either through lack of contact or unemployment/non-employment.

4.1 Measuring earnings dispersion

The analysis begins by describing and delineating the nature and extent of changes in earnings dispersion and mobility over the last 21 years. Whilst relatively simple, the analysis reveals some insights into the nature of the labour market changes that take place over this period in terms of their cross-sectional and longitudinal impacts upon earnings.

To map the changes in earnings inequality over the 21 year period the ratio of employees' earnings in the top 10 per cent of the earnings distribution to those in the bottom 10 per cent is compared over time. The analysis is then extended to assess whether the overall rise in inequality has predominantly been due to a widening in the top half of the earnings distribution or the bottom half of the distribution.

No single index of inequality captures all aspects of inequality so a number of different measures have been employed. The four inequality indices[8] used are the Gini coefficient, the Mean Log Deviation (MLD), Theil I_1 and Theil I_2.[9] These measures differ in the importance they attach to different portions of the earnings distribution. The Gini coefficient is most sensitive to inequality in the middle of the distribution, the MLD to inequality in the lower portion of the distribution, the Theil I_1 to both extremes of the distribution and the Theil I_2 to inequality at the top of the earnings distribution.[10] However in all cases a rise in the index indicates greater inequality.

4.2 Measuring mobility

For each 7 year period mobility within the distribution of earnings is examined, noting the proportion who remain in each group, movements between groups, and movements out of the earnings distribution, combining this with information on those who move into the distribution. For the two later periods (1984-1990 and 1991-1997[11]) additional information available via the JUVOS link allows us to assess the link between mobility and unemployment entry and exit.

4.3 Measuring the impact of mobility on inequality

To quantify the role of earnings mobility in ameliorating the secular rise in cross-sectional earnings differentials, the analytical framework

developed by Shorrocks (1978) is employed. This methodology allows us to quantify the extent to which earnings mobility reduces cross-sectional inequality in the long-run. The procedure involves estimating an earnings immobility index R which measures the ratio of earnings inequality averaged over a number of years (T) to the weighted average of the sub-period inequalities. The weights are computed as the share of total earnings (over the period t = 1 to T) that accrued in year t.

$$R = \frac{\text{Average inequality over T years}}{\text{Weighted average of inequality in t = 1, T years}}$$

The mobility index, M = 1 – R, identifies the extent to which mobility ameliorates rises in cross-sectional inequality. M ranges from 0 (no equalising mobility) to 1 (fully equalising mobility). The results from this exercise are used to assess the percentage reduction in inequality (according to all four of measures) due to mobility (averaging income across a number of years). The use of the four indices determines in which portion of the earnings distribution mobility has had the greatest impact, as its impact may be uneven.

End Notes

[7] For technical reasons we cannot set earnings to zero, instead earnings are set to 0.01. One problem with this approach is that it treats all spells of unemployment equally. Because we only have annual observations on individuals, an individual who is unemployed at the survey date and whose spell of unemployment lasts for, say, 1 month is treated the same as an individual whose spell of unemployment lasts for, say, 9 months.

[8] See Appendix 2 for more detail on these four inequality indices.

[9] Theil I_2 is sometimes referred to as half the coefficient of variation squared.

[10] For more information on the measures of inequality used see Atkinson (1970), Sen (1973), Theil (1967), Cowell (1995).

[11] For 1997 JUVOS information is available up until January. Consequently, our measure of unemployment only records individuals who were missing from the NESPD (recorded in April) and were present in JUVOS January 1997 and hence will under-record unemployment.

Five
TRENDS IN EARNINGS INEQUALITY

This chapter documents changes in earnings inequality across the full 21 year period (1977-1997) and across each sub-period (1977-1983, 1984-1990, 1991-1997). A number of measures of inequality are used ranging from ratios of different points in the earnings distribution to four inequality indices which combine information on all employees pay to give composite measures. Inequality is measured for: all employees; employees continuously employed over the 7 year periods; employees and the unemployed, and; everyone recorded in the panel in the 7 year periods. Examining the experience of these different groups of individuals extends previous research in earnings inequality by developing a more inclusive measure of inequality which captures the experience of unemployment and periods out of the employee earnings distribution. The main findings are:

- earnings inequality continued to increase over the 21 year period;
- inequality is higher among male employees than among female employees, although from 1984 greater increases in inequality are recorded among females;
- inequality is lowest among prime age employees but the greatest increases are recorded among this group, particularly among prime age males.

5.1 Trends in earnings inequality: ratios of employees pay

The first measure of earnings inequality is a simple, intuitive measure. Employees are ranked, on the basis of their earnings, from lowest to highest. The ranked population is divided into ten equal segments (deciles) each containing 10 per cent of all employees. The first decile is made up of employees with the lowest earnings, and so on through to the highest earners. The decile breakpoints identify the level of earnings below which 10, 20, 30, …, 100 per cent of employees earn. These breakpoints provide a useful way in which the dispersion of earnings can be measured. The most commonly used measures compare the ratio of the top with the bottom (90/10 ratio), the ratio of the top with the middle (90/50 ratio) and the ratio of the middle with the bottom (50/10 ratio).

5.1.1 The widening of the earnings distribution

In this section the 90/10 ratio is used to trace cross-sectional trends in inequality, documenting changes in earnings dispersion of hourly earnings[12] and for males and females separately. For employees, inequality is measured among full-time and part-time employees. There are too few males working part-time to make this distinction for men. The analysis provides an overview for the complete 21 year period (1977-1997) and detailed comparisons for the 7 year sub-periods (1977-1983, 1984-1990, 1991-1997).

Trends in hourly earnings inequality (Figure 5.1), measured by the 90/10 ratio, show a steady increase between 1977 and 1997. Inequality is higher among full-time employees than part-time employees and highest among full-time male employees. In 1977 inequality among male and female employees working full-time was virtually identical but diverged up to 1983, with inequality among males employed full-time increasing by more than for full-time females. These differences remained between 1984 and 1997. Trends in inequality of hourly earnings for female part-time employees' mirrors that of their full-time counterparts. This finding suggests that while the NESPD has increased its coverage of employees working a few hours, their hourly rates of pay are not substantially lower than those of part-time workers previously covered by the survey.

5.1.2 Changes within the distribution of earnings

In this section the overall measure of inequality is broken-down to consider whether the rise in inequality has been due to a widening of the top half of the distribution (measured by the 90/50 ratio) or a widening of the bottom half (measured by the 50/10 ratio).

Table 5.1 shows the percentage change in hourly earnings inequality between the beginning and the end of each 7 year period. For all employees the top half of the distribution of hourly earnings widens by most within all three time periods. Inequality according to all three ratios (90/10, 90/50, 50/10) increased by more over the first 7 year period (1977-1983) and least in the last 7 year period (1991-1997). This result holds for full-time male employees, but females working full-time experienced the largest increase in inequality in the middle period (1984-1990). For part-time female employees the 50/10 ratio fell between 1977-1983. However, hourly earnings inequality, according to all three measures, grew considerably more among part-time female employees than among full-time male and female employees between 1984-1990 and 1991-1997. This may, partly, be due to changes in the coverage of part-time employees.

Table 5.1: Percentage change in hourly earnings inequality 1977-1983, 1984-1990, 1991-1997

		1977-1983	*1984-1990*	*1991-1997*
All employees	90/10	16.2	9.2	7.3
	90/50	9.3	5.6	3.9
	50/10	6.3	3.4	3.3
Male full-time employees	90/10	17.2	13.0	5.9
	90/50	9.1	7.0	3.3
	50/10	7.4	5.6	2.5
Female full-time employees	90/10	9.0	14.2	7.2
	90/50	6.3	7.8	2.1
	50/10	2.5	6.0	5.0
Female part-time employees	90/10	7.3	17.2	16.8
	90/50	12.9	9.8	8.7
	50/10	-4.9	6.8	7.4

Source: NESPD 1977-1997

5.2 Changes in inequality measured by a range of inequality indices

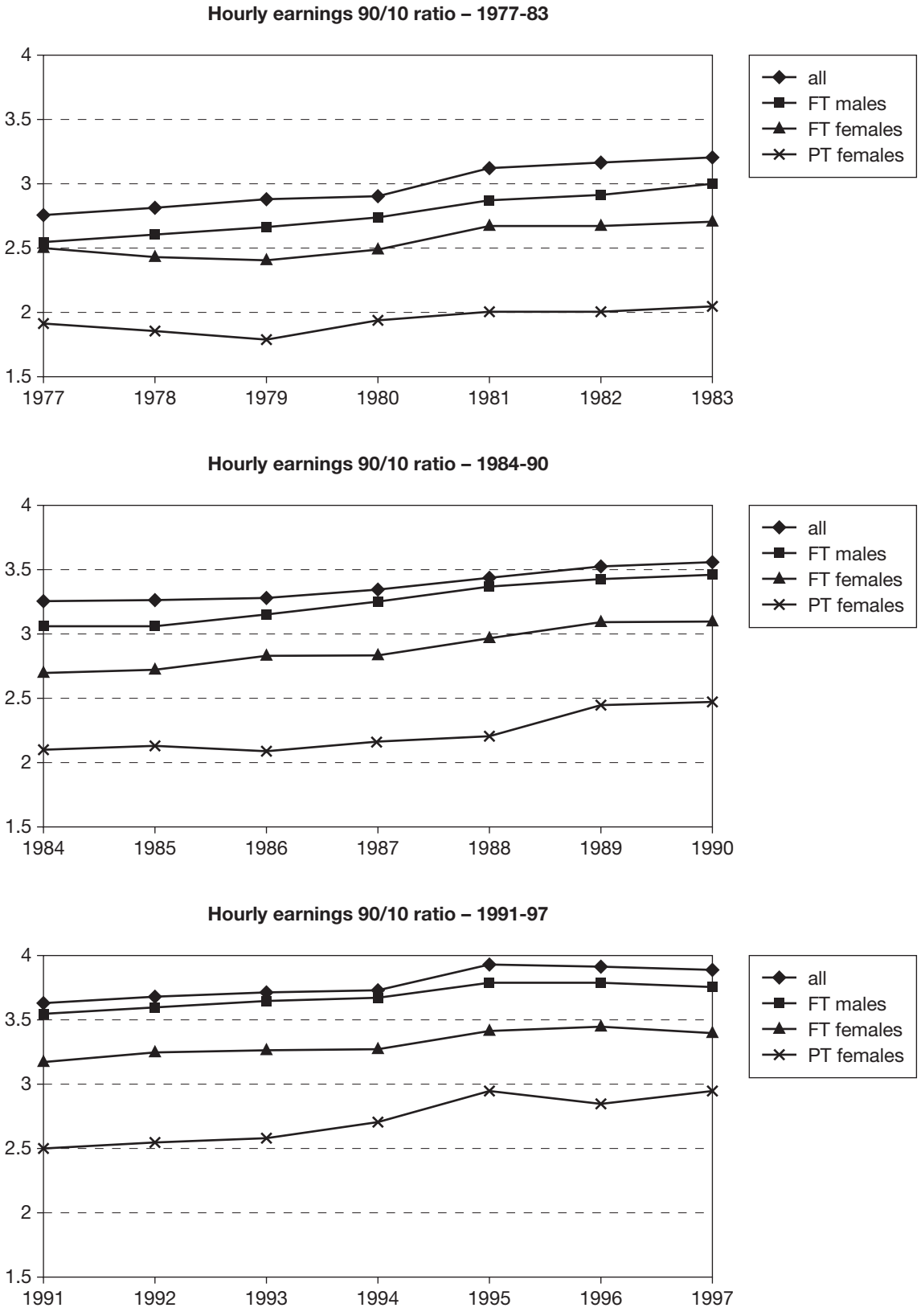
Four measures of inequality widely used in the income inequality literature: the Gini coefficient, the Mean Logarithmic Deviation (MLD), Theil I_1 and Theil I_2 (outlined in the Methodology chapter above) are adopted in this section. These are more complete measures of inequality than the previous decile comparisons because they use information from all points of the earnings distribution rather than just two sections. Four measures are used because each is sensitive to inequality in different parts of the earnings distribution. Hourly earnings inequality, inequality in hourly earnings and unemployment experience (labour market inequality) and hourly earnings and experience out of the employee earnings distribution is measured for all employees and prime age employees by gender.

5.2.1 Earnings inequality among the 'continuously' employed

The employees selected in this section have earnings observations in all 7 years for the period under investigation. The sample comprises of men aged 16 to 58 and women aged 16 to 53 in the base year (1977, 1984, 1991). Restricting the sample in this way means that the sample ages over the periods of investigation, by the end of each of the 7 year periods the youngest employees are aged 23. The upper bound on age was chosen to limit the extent to which individuals in the samples exit the labour force as they reach retirement age.

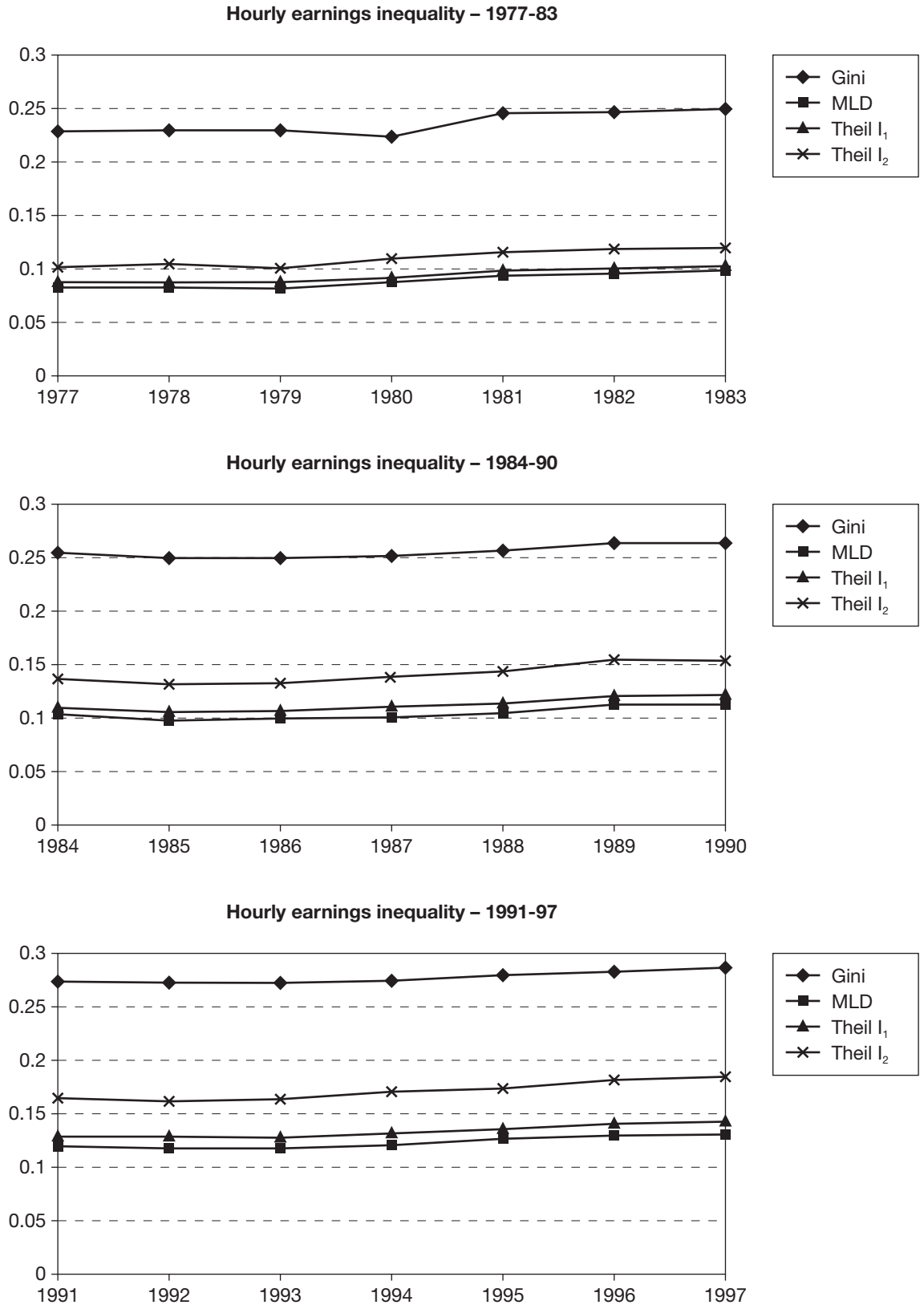
Figure 5.2 documents changes in hourly earnings inequality in the three 7 year periods. Earnings inequality rose during the period 1977 to 1983 among these employees. All four measures show a steady level of inequality between 1977 and 1979, followed by increasing inequality every year between 1980 and 1983. The percentage change in inequality over this 7 year period depends on the inequality measure and ranges from 9 to 18 per cent (Table 5.2). The increase in inequality is lower when measured by the Gini index (9 per cent) indicating that changes in inequality have been driven by an increase in the difference between employees' earnings at the top and the bottom of the distribution, rather than changes in the middle.

Figure 5.1: Inequality in hourly earnings 1977-1983, 1984-1990, 1991-1997



Source: NESPD 1977-1997

Figure 5.2: Changes in hourly earnings inequality among the 'continuously' employed 1977-1997



Source: NESPD 1977-1997

Table 5.2: Percentage change in hourly earnings inequality – 'continuously employed'

	Gini	***MLD***	***Theil I_1***	***Theil I_2***
Sensitivity	*Middle*	*Bottom*	*Extremes*	*Top*
1977-83	9.3	18.1	17.2	17.8
1984-90	4.3	8.7	11.0	12.5
1991-97	4.0	9.2	10.1	12.9

Source: NESPD 1977-1997

The change in earnings inequality measured by the 90/10 ratio was lower in the 1984-1990 period than in the 1977-1983 period, a result which is replicated here. Overall the change in inequality was lower in the 1984-1990 period (ranging from 4-13 per cent) than in the 1977-1983 period. The highest increase is measured by Theil I_2 suggesting that the greatest changes were due to changes at the top of the distribution.

In line with the two earlier time periods, earnings inequality is fairly stable in the first 3 years of the final period (1991-1997) and then rises in the remaining 4 years (1994-1997). The percentage change in inequality is very similar to that observed in the 1984-1990 period, but generally lower than that found in the 1977-1983 period.

Prime age employees are more likely to have a continuous record of employment over the 7 year periods than employees in the younger (age 24 and under) and older (age 50 and over) age groups. Consequently, restricting the sample to employees who had a continuous record of employment is less likely to lead to sample selection problems for this group than for the wider age group. In addition, a number of other factors are likely to affect younger and older employees. Lower wages during periods of training for young workers, job experimentation and part-time employment during periods of study may lead to fluctuations in earnings among younger employees. Older workers may choose to reduce their hours and/or 'down shift' (i.e. take lower level jobs) as they reach retirement age.

Examining the results for prime age employees (Table 5.3) reveals that most of the increase in inequality occurred after 1980. For the 1977-1983 period, inequality changes very little in the first 3 years (1977-1979). Compared with the whole sample, earnings inequality is generally lower among prime age employees but over each of the three 7 year periods hourly earnings inequality increases by more than for all employees. This is particularly the case for prime age male employees for whom inequality increases by twice as much as that found among all male employees.

The inequality indices sensitive to changes in the extremes of the earnings distribution show a greater increase in inequality than the Gini. The largest increases are recorded by the MLD, suggesting that a deterioration in the relative hourly earnings of low paid prime age workers has lead to the greatest increases in earnings inequality over this period. In the 1977-1983 period there is very little difference in hourly earnings inequality among prime age men and prime age women. This does not mean that inequality *between* men and women is low, as it is a measure of inequality among men and women. In the second period (1984-1990) and final period (1991-1997) inequality among women is always lower than that measured among men.[13]

Table 5.3: Percentage change in hourly earnings inequality – 'continuously' employed prime age

	Gini		***MLD***		***Theil I_1***		***Theil I_2***	
Sensitivity	*Middle*		*Bottom*		*Extremes*		*Top*	
	Men	*Women*	*Men*	*Women*	*Men*	*Women*	*Men*	*Women*
1977-83	18.4	15.5	40.6	27.1	34.8	25.0	33.8	19.8
1984-90	13.7	12.9	28.0	26.7	31.0	23.8	37.9	18.8
1991-97	8.5	7.2	17.6	17.3	17.9	17.5	19.9	20.0

Source: NESPD 1977-1997

Workers can offset an increase in hourly earnings inequality by adjusting their hours of work.[14] Analysis of weekly earnings inequality revealed that between 1977 and 1983 inequality increased by most for prime age men and women 'continuously' employed full-time over the 7 year period. This suggests that prime age employees were not able to off-set the increase in hourly earnings inequality by adjusting their hours of work. The increases are very similar to those found using hourly earnings for prime age males; the figures for prime age females tend to be lower.

5.2.2 Inequality in earnings and the experience of unemployment

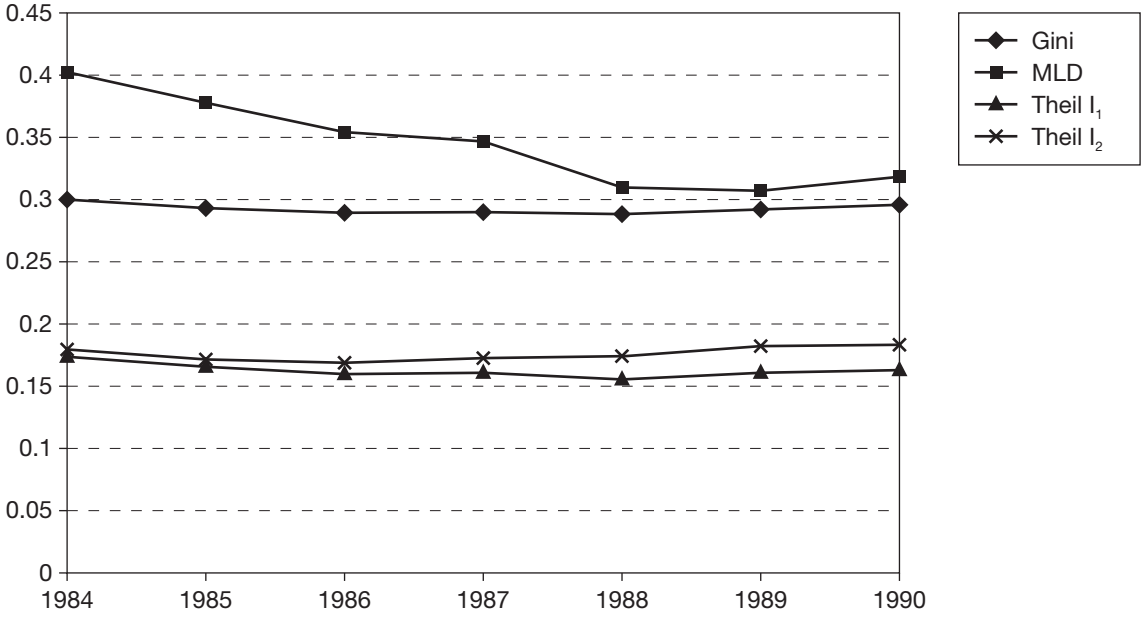
Widening the concept of inequality to include the experience of unemployment provides a measure of what will be referred to as 'labour market inequality' to reflect the fact that this measure is wider than earnings inequality alone. The analysis has to be restricted to 1984-1997 due to the time-limited availability of JUVOS data. The full tables of results can be found in Appendix 3 (Tables A3.4 and A3.5).

Inequality is higher when the concept is widened beyond earnings inequality to incorporate the experience of unemployment. Over periods when unemployment declines, and there is no change in the dispersion of earnings, inequality according to this measure will fall. Between 1984 and 1990 inequality measured by the Gini, MLD and Theil I_1 falls. This result is driven by much lower claimant unemployment rates in 1990 compared with 1984 as hourly earnings inequality increased over this period. The MLD, which is sensitive to changes in the lower part of the earnings distribution, naturally falls by most. However, the falls in unemployment are not enough to wipe out the rise in inequality measured by Theil I_2.

All four measures of labour market inequality record increases between 1991 and 1997 (Figure 5.4). Changes in claimant unemployment are particularly picked up the MLD. The other three measures show steadily rising inequality over this 7 year period.

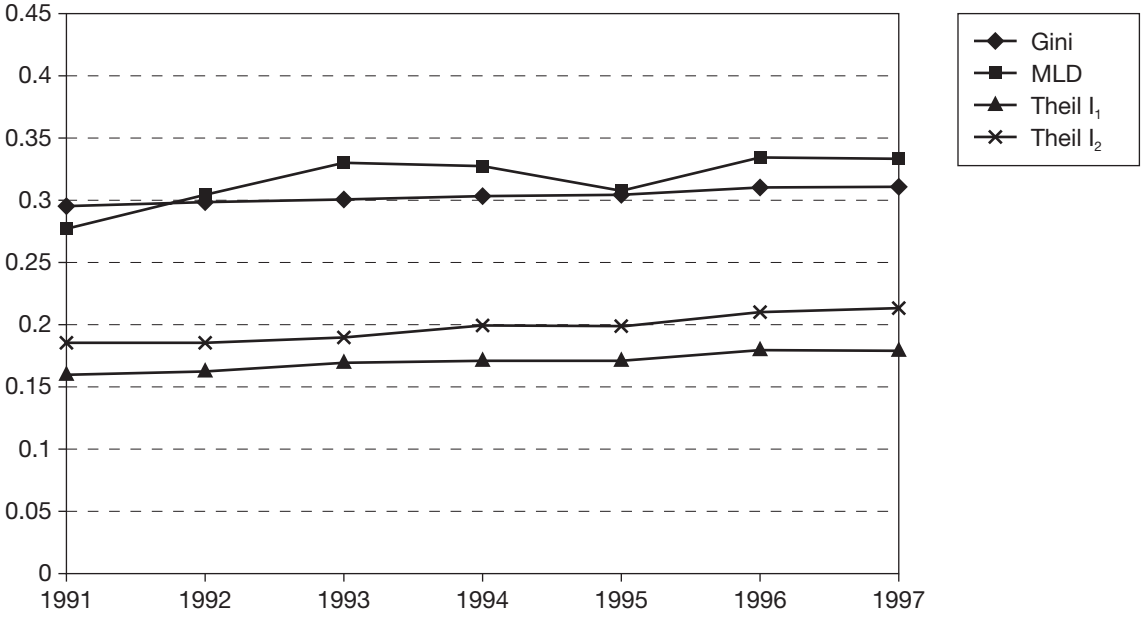
Labour market inequality among prime age economically active men and women rose between 1984 and 1990. All measures of inequality, with the exception of the MLD, record increases in labour market inequality. However, these increases are less than the increases in hourly earnings inequality found among 'continuously' employed prime age employees because the experience of claimant unemployment fell over this period and falls in unemployment translate into falls in inequality measured in this way. However, the increases are greater than among all economically active individuals. This result suggests that although prime age employees are less likely to experience unemployment than younger and older age groups, rising levels of hourly earnings inequality dominate and overall inequality rose over this period.

Figure 5.3: Inequality among the economically active – 1984-1990



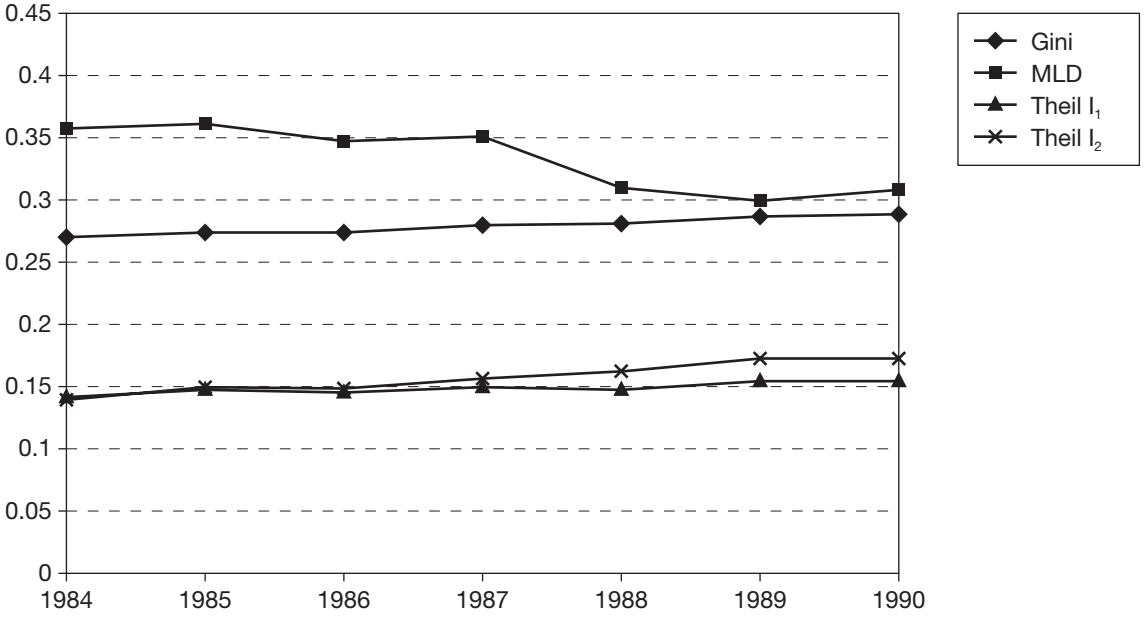
Source: NESPD-JUVOS 1984-1990

Figure 5.4: Inequality among the economically active – 1991-1997



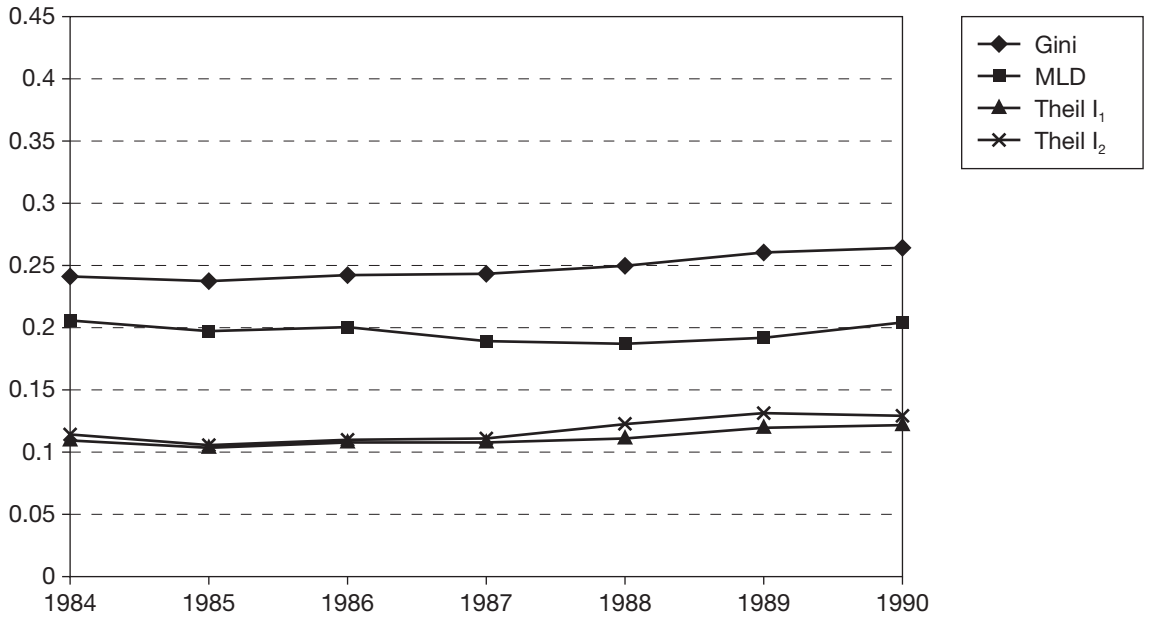
Source: NESPD-JUVOS 1991-1997

Figure 5.5: Inequality among economically active prime age men – 1984-1990



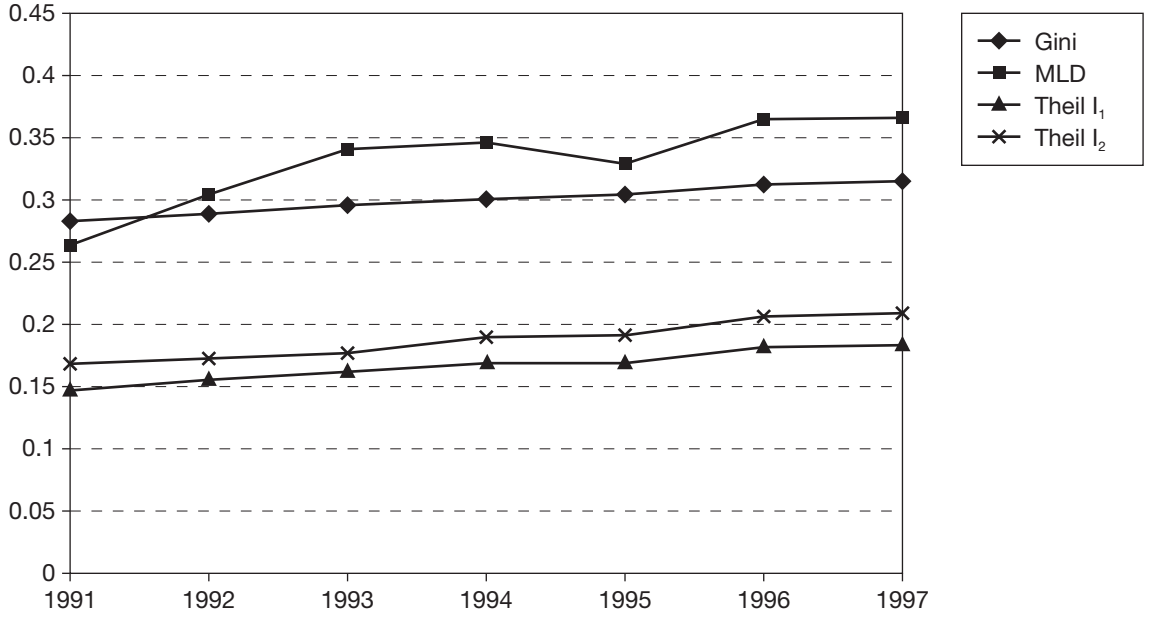
Source: NESPD-JUVOS 1984-1990

Figure 5.6: Inequality among economically active prime age women – 1984-1990



Source: NESPD-JUVOS 1984-1990

Figure 5.7: Inequality among economically active prime age men – 1991-1997



Source: NESPD-JUVOS 1991-1997

Between 1991 and 1997 inequality in hourly earnings and the experience of unemployment increases according to all four measures. The increases in labour market inequality over this period are higher than the increases in hourly earnings inequality over the same period. Prime age men (Figure 5.7) and women (Figure 5.8) also experience a greater increase in labour market inequality than in hourly earnings inequality over this period. The MLD, which is sensitive to changes in unemployment, increases by most, but even the Gini shows greater increases in inequality. Prime age men experience greater increases in labour market inequality than prime age women. This may partly be due to the fact that women are less likely to be claimant unemployed than men although generally hourly earnings inequality was higher among prime age men than prime age women over the same period.

The greatest observable difference between prime age men and women is the higher levels of labour market inequality recorded by the MLD. This is because the MLD is most sensitive to the way in which unemployment has been quantified and men record higher levels of claimant unemployment than women.

5.2.3 Inequality in hourly earnings and non-employment

Finally, the sample is widened still further to include all individuals who appear at least once in the hourly earnings distribution for each of 7 year periods. The concept of inequality within this framework is stretched to the limit as it now includes individuals who may have chosen not to participate in the labour market, or they might have moved into self-employment. The other complication is that they may just be missing from the NESPD for that year. This issue will complicate the picture more for women than for men as women's labour market participation decisions are complicated by more factors than men's. We know from other studies that during economic downturns women are traditionally more likely to exit the labour market into non-employment than men who are more likely to enter unemployment.

Including labour market experience in a measure of inequality will clearly increase estimates of inequality unless labour market experience is evenly distributed among all workers. Table 5.4 shows changes in inequality (hourly earnings and experience out of the panel) for each 7 year period. The tables containing the full sets of results can be found in Appendix 3 (Tables A3.6 and A3.7). Inequality is higher according to all four measures than for hourly earnings alone, particularly when measured by the MLD due to its sensitivity to the way periods out of the earnings distribution have been quantified. The levels of inequality year-on-year fluctuate much more than for other definitions due to the changes in economic activity among the sample.

Inequality among the whole sample of individuals increased between 1977 and 1983. Increases in inequality are less than those found in hourly earnings of 'continuously' employed workers over the same period, with the exception of the MLD. The increases found among prime age men are much higher than those found among all individuals and prime age women. With the exception of the MLD, all measures of inequality show a fall for prime age women. This is undoubtedly due to increasing rates of labour market activity among women over this period because hourly earnings inequality increased between 1977 and 1983.

Prime age men also experienced large increases in inequality between 1984 and 1990, estimates range from 7 per cent (Gini) to 23 per cent (Theil I_2). The picture for prime age women is different; inequality fell according to the Gini, MLD and Theil I_2. Overall inequality fell over this period among all individuals with the exception of the estimate measured by the MLD, which records a 6 per cent increase. These results are likely to be driven by falling claimant unemployment rates between 1984 and 1990 and increasing levels of labour force participation among women.

Over the 1991 to 1997 period inequality increased among all individuals. Prime age males experience particularly large increases in inequality (ranging from 11 per cent to 29 per cent). Lower increases are found among prime age women (the MLD shows a very slight fall) again this is likely to be due to increasing labour market participation rates.

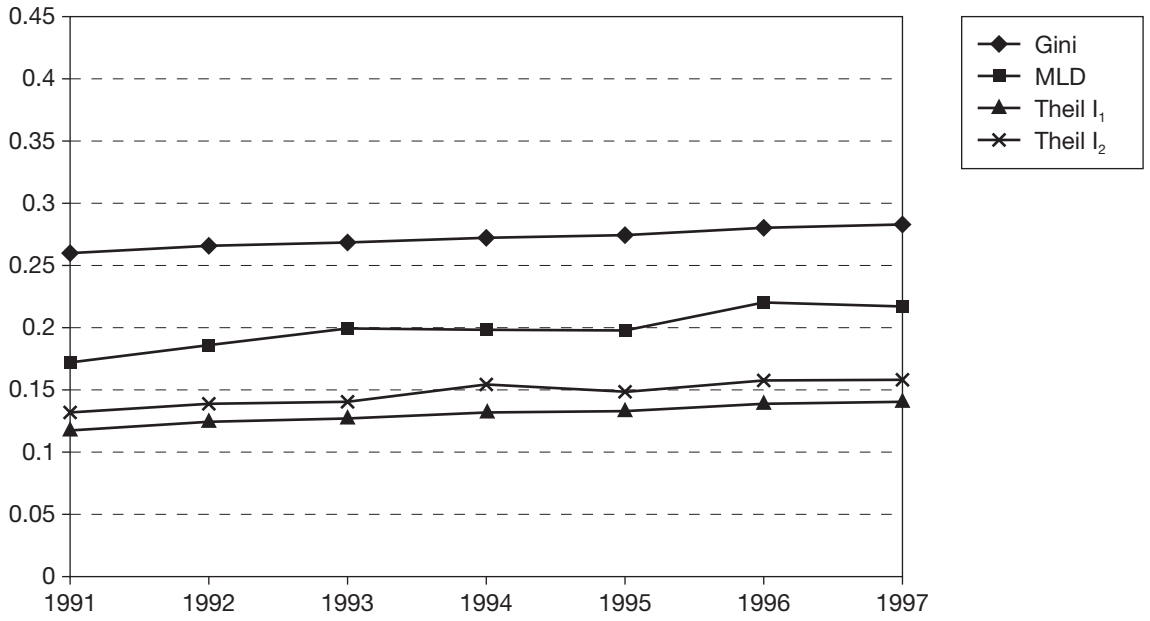
End Notes

[12] The measure of hourly earnings excludes overtime pay and is computed for employees whose pay was unaffected by absence during the survey pay period.

[13] If changes in coverage are affecting the results one would expect that increasing the coverage of low paid workers would lead to greater increases in inequality (particularly when measured by the MLD) among women as women make up the greatest share of low paid workers. However, inequality is higher among prime aged men and over each 7 year period inequality increases more for these men than for women.

[14] The results for weekly earnings can be found in Appendix 3 (Tables A3.1, A3.2 and A3.3).

Figure 5.8: Inequality among economically active prime age women – 1991-1997



Source: NESPD-JUVOS 1991-1997

Table 5.4: Changes in the distribution of hourly earnings and employee status

		Gini	*MLD*	*Theil I_1*	*Theil I_2*
1977-83	All	5.7%	26.7%	11.2%	16.4%
	Prime age men	11.7%	32.7%	21.0%	32.1%
	Prime age women	-1.7%	13.4%	-3.9%	-3.7%
1984-90	All	-1.5%	6.4%	-3.1%	-1.2%
	Prime age men	6.9%	15.5%	11.6%	23.1%
	Prime age women	-5.4%	-1.4%	12.0%	-11.8%
1991-97	All	2.3%	7.5%	4.6%	8.4%
	Prime age men	10.5%	20.6%	20.6%	29.4%
	Prime age women	1.4%	-0.1%	1.8%	5.6%

Key Findings:

- earnings inequality increased between 1977 and 1997 and in each of the 7 year time periods 1977-1983, 1984-1990 and 1991-1997. The largest increases were observed in the first two periods;
- inequality is higher among men and they experienced greater increases in inequality than women;
- decile ratios show that the top half of the earnings distribution widened by more than the bottom half;
- the greatest increases for male full-time employers, and for those 'continuously' employed over a 7 year period was recorded in the first period (1977-1983);
- for female employees the greatest increases were recorded in the middle period and the increase appears to have been driven by a widening of the bottom half in the final period (1991-1997);
- inequality is lower among prime age employees but increases in inequality are approximately twice as high among this group in all three periods; increases in inequality are higher among prime age men than prime age women;
- including the experience of unemployment and non-employment in a measure of inequality results in higher levels of recorded inequality.

Six
CHANGES IN EARNINGS MOBILITY

This chapter explores movement around the earnings distribution as well as changes in employment status. Particular attention is paid to changes in the earnings progression of low paid employees. The main findings are:

- men are more upwardly mobile than women but upward mobility for women has increased over the 21 year period whereas it has fallen for men;
- there is evidence of a continuing low-pay/ no-pay cycle with low paid employees more likely to go on to experience spells of unemployment than higher paid employees and the unemployed are most likely to enter low paid jobs.

6.1 Earnings transitions

This section uses the method of dividing the earnings distribution into discrete segments, adopted as the first measure of earnings inequality in Section 5.1 which used decile ratios, to measure earnings mobility. This measure of mobility estimates the probability of moving between different sections of the distribution over time. The methodology has been used in a number of previous studies. Some studies have attempted to estimate changes in mobility by computing changes in the share of employees who move between different sections of the distribution or who remain in the same section. Most often these have taken the form of an 'immobility' index, computed as the share of employees who stay in the same portion of the earnings distribution between two time periods. However, there is a serious weakness with this approach. If the distribution of earnings widens and the segments (say quartiles) widen then on average it takes a greater *absolute* change in earnings to move between quartiles. Consequently, if the earnings distribution widens but actual earnings changes remain the same movement between quartiles will fall and measured earnings mobility will fall. However, the merit with adopting this approach is that it provides detailed information on both transitions within the earnings distribution and transition out of the distribution into unemployment and other non-employee states.

Employees are first defined in terms of their position in the earnings distribution in the base year (t) on the basis of earnings quartiles.[15] These employees are then described in terms of their position in the earnings distribution 1 year later (t+1) in relation to their position in year t. In addition, the share of employees with no earnings observation in year t+1 (defined as *Leavers*) is computed and the earnings position of employees who join the distribution in year t+1, but were not present in year t (defined as *Joiners*) is shown. The diagonal elements in the following tables, highlighted in bold, show the percentage of employees who remain in the same quartile of the earnings distribution in two consecutive years. While these employees remain within the same earnings quartile they may well experience a change in their earnings.

The widest group of individuals is included in the following analysis, i.e. all individuals with at least one record of earnings in the NESPD in the 7 year period.

6.1.1 Earnings transitions 1977-1983

Table 6.1 shows the movement between hourly earnings quartiles from 1977 to 1978 and movement into and out of the hourly earnings distribution for all employees and men and women separately. The full set of tables for this period for hourly and weekly earnings can be found in Appendix 4 and 5 respectively.

Employees receiving low rates of hourly pay are more likely to leave the earnings distribution 1 year later than higher paid employees. Nearly 40 per cent of employees in the first quartile (Q1) in 1977 have no earnings observation in 1978 compared with 29 per cent in the fourth quartile (Q4). There appears to be a high degree of earnings persistence among high paid employees. Employees in the highest quartile of the earnings distribution are most likely to remain in the same quartile (61 per cent) than employees further down the earnings distribution (47 per cent in Q1).

Men in the bottom half of the distribution (Q1 and Q2) are more likely to leave the distribution than their female counterparts. The differences between men and women are not so great in the upper half of the distribution; in fact a higher proportion of women in Q4 in 1977 have left the distribution in 1978 than men. Men are more likely to move up the distribution than women, and women are more likely than men to move down the distribution. Women joining predominantly enter the lowest quartile (54 per cent). In contrast 58 per cent of male joiners enter the top half of the earnings distribution.

Table 6.1: Hourly earnings transitions between 1977 and 1978

		1978					
1977		***Q1***	***Q2***	***Q3***	***Q4***	***Leavers***	***Total***
Q1	All	**47.1**	10.8	2.2	0.5	39.4	35,327
	Men	**38.3**	15.0	4.5	1.1	41.1	10,828
	Women	**51.0**	8.9	1.2	0.3	38.6	24,499
Q2	All	6.8	**45.4**	11.9	1.6	34.3	35,359
	Men	4.6	**42.6**	15.3	2.3	35.2	19,755
	Women	9.5	**48.9**	7.5	0.8	33.2	15,604
Q3	All	0.9	10.5	**47.7**	10.0	30.9	35,477
	Men	0.6	9.3	**47.4**	11.5	31.2	27,244
	Women	1.9	14.6	**48.6**	5.0	29.8	8,233
Q4	All	0.3	1.0	9.2	**60.5**	28.9	35,463
	Men	0.2	1.0	8.9	**61.6**	28.3	29,952
	Women	1.1	1.5	10.7	**54.6**	32.2	5,511
Joiners	All	33.6	24.2	21.8	20.5		46,338
	Men	19.2	23.2	28.7	28.9		27,344
	Women	54.3	25.6	11.9	8.3		18,994

Table 6.2: Hourly earnings transitions between 1986 and 1987

		1987						
1986		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Other Leavers***	***Total***
Q1	All	**50.2**	11.9	1.7	0.4	5.2	30.7	33,056
	Men	**43.6**	14.0	2.6	0.7	8.8	30.3	10,558
	Women	**53.3**	10.9	1.2	0.2	3.5	30.8	22,498
Q2	All	5.8	**52.6**	11.4	1.1	3.5	25.5	33,205
	Men	4.7	**51.0**	12.9	1.5	4.1	25.8	17,331
	Women	7.1	**54.4**	9.8	0.7	2.8	25.2	15,874
Q3	All	0.9	7.1	**57.6**	8.8	2.7	22.8	33,309
	Men	0.6	7.2	**57.2**	9.2	2.9	22.8	23,285
	Women	1.7	7.0	**58.6**	7.8	2.1	22.9	10,024
Q4	All	0.4	0.8	6.5	**69.3**	1.8	21.3	33,276
	Men	0.3	0.7	6.7	**70.4**	1.8	20.1	26,485
	Women	0.7	1.1	5.5	**64.9**	1.8	25.9	6,791
Unemployed	All	54.8	27.5	12.8	4.9			4,200
	Men	49.6	29.6	14.8	5.9			2,759
	Women	64.7	23.5	8.8	3.1			1,441
Other joiners	All	34.9	23.9	21.2	20.0			33,851
	Men	21.6	23.5	26.4	28.6			17,982
	Women	50.0	24.3	15.3	10.3			15,869

With a few exceptions these patterns of mobility are replicated for the year-on-year transitions between 1977 and 1983. Earnings progression for women improves over this 7 year period. Women in Q3 in year t are more likely to move up into Q4 in year t+1 by the end of the period. At the beginning of the period women in Q3 are less than half as likely as men to move into Q4 1 year later, but by the end of the period this figure has risen to over three quarters (78 per cent). The share of women joiners entering the top half of the earnings distribution increases from 20 per cent in 1978 to 22 per cent in 1983. There is some evidence that earnings persistence

has increased with a higher percentage of employees remaining in the same quartile 1 year later by the end of the period. This is largely due to a smaller share of leavers and could be explained by a widening of the earnings distribution.

6.1.2 Earnings transitions 1984-1990

From 1984 onwards it is possible to disaggregate leavers into those who are unemployed and claiming benefit from those for whom no further information is available. Joiners can be disaggregated in a similar way to identify those entering from unemployment from those joining from an unknown origin state. Table 6.2 shows the transition matrix between 1986 and 1987, the full set of transition matrices can be found in Appendix 4 and 5.

Men and women in the first quartile in 1986 are more likely to be unemployed or have left the distribution (with no additional information) 1 year later than higher paid employees. Men in Q1 in 1986 are five times more likely to be unemployed in 1987 than are men in Q4 in 1986. This table also highlights the well-known fact that men are more likely to enter claimant unemployment than are women. Similar shares of men and women have no earnings information in 1987 from each of the quartiles in 1986 with the exception of Q4. Just over a quarter of women in Q4 in 1986 either have no earnings observation or are unemployed in 1987. Compared with one fifth of men from Q4 in 1986.

Both men and women joining from unemployment were more likely to enter the lower end of the earnings distribution than joiners were from unknown origins. One half of all men who moved from unemployment in 1986 into the earnings distribution in 1987 were in the first quartile of hourly pay (Q1). The figure for women was even higher at 65 per cent. Men entering from unknown origins are evenly distributed within the earnings distribution while women joining from unknown origin states predominantly entered the first quartile (50 per cent). Throughout this period men are more likely to move up the earnings distribution and women are more likely to move down. However, upward mobility of women continues to improve throughout the period.

6.1.3 Earnings transitions 1991-1997

Table 6.3 shows the transition matrix between 1995 and 1996 between quartiles of hourly pay, unemployment and other states. Comparing these results with those in the earlier periods shows a steadily increasing proportion of employees in the highest quartile who remain in that quartile 1 year later (61 per cent 1977-1978, 70 per cent 1984-1985, 73 per cent 1995-1996). Clearly this

Table 6.3: Hourly earnings transitions between 1995 and 1996

		1996						
1995		*Q1*	*Q2*	*Q3*	*Q4*	*Unemployed*	*Other Leavers*	*Total*
Q1	All	**51.4**	15.5	2.7	0.8	3.0	26.6	35,354
	Men	**47.1**	18.8	3.7	1.1	5.0	24.2	12,452
	Women	**53.8**	13.7	2.2	0.6	1.8	27.8	22,902
Q2	All	7.2	**56.2**	15.3	1.5	2.0	17.8	35,424
	Men	5.8	**55.4**	17.3	1.9	2.6	16.9	17,469
	Women	8.5	**57.0**	13.4	1.0	1.5	18.7	17,955
Q3	All	2.3	6.3	**61.7**	12.2	1.7	15.7	35,471
	Men	1.6	6.1	**62.8**	13.3	1.9	14.3	21,317
	Women	3.4	6.4	**60.2**	10.7	1.4	17.9	14,154
Q4	All	1.0	1.3	5.6	**73.4**	1.5	17.2	35,460
	Men	0.7	1.0	5.3	**75.0**	1.7	16.3	24,413
	Women	1.8	1.9	6.3	**69.7**	1.1	19.2	11,047
Unemployed	All	50.8	28.7	13.6	6.9			2,954
	Men	46.6	29.8	15.4	8.1			2,003
	Women	59.6	26.4	9.7	4.3			951
Other joiners	All	40.0	24.1	18.9	17.0			33,740
	Men	29.1	24.7	22.9	23.2			16,059
	Women	50.0	23.5	15.2	11.3			17,681

figure will be affected by the percentage leaving the distribution each year, which is largely determined by the level of aggregate economic activity. As a percentage of those who remain in the distribution this figure rises from 85 per cent (1977-1978) to 90 per cent (1984-1985, 1995-1996).

In this period while women joining the earnings distribution from unemployment are still predominantly entering the first quartile the share is lower than in the earlier period (1984-1990). Around 65 per cent of women joining the distribution from unemployment in the 1984-1990 period enter the lowest quartile of hourly pay. This figure falls to 60 per cent in the 1991-1997 period.

6.2 Earnings progression of low paid workers

For earnings mobility to reduce earnings inequality low paid workers must be able to improve their relative earnings and move up the distribution. In this section a group of low paid workers are identified (employees in the lowest quartile of the hourly earnings distribution[16]) in the base year of each of the 7 year periods and their subsequent earnings and employment experience is mapped out over the following 6 years. It is necessary to keep in mind that as the earnings distribution widens over each of these period, the extent to which workers in the first quartile move up to higher quartiles is likely to fall. The results presented in this section are in terms of hourly earnings by gender. The results based on weekly earnings can be found in Appendix 6.

6.2.1 Earnings progression of low paid workers 1977-1983

In 1977 a little over 35,000 employees were in the bottom quartile of the earnings distribution. One year later nearly 40 per cent of these employees were not observed in the NESPD (Table 6.4). For this period no further information on these individuals is available. For the 1984-1990 and 1991-1997 periods it is possible to identify those who move into unemployment via the link to the JUVOS dataset. Studies which have used data sources with more information on destination states can provide additional information on the likely destinations of low paid employees. Stewart and Swaffield (1998) use the British Household Panel Study to look at transitions of low paid workers in the first half of the 1990s. They show that for low paid men (low pay is defined as ½ hourly median earnings) one quarter had no earnings observation 1 year later. Approximately one-third of these men were known to be employees but earnings information was missing, 15 per cent had become self-employed, 29 per cent were unemployed[17] and 22 per cent were out of the labour force. For similarly low paid women, 22 per cent had no earnings observation 1 year later, of which 27 per cent were known to be employees but earnings information was missing, 8 per cent had become self-employed, 16 per cent were unemployed and nearly one half (48 per cent) were out of the labour force. While the proportion with missing earnings information is likely to be higher in a household survey, collecting self-reported earnings, than in an administrative data source such as the NESPD and the proportion moving into unemployment and out of the labour force will fluctuate depending on the aggregate level of activity in the economy, this finding does give some clue to the likely destinations of low paid workers who are not observed in the panel 1 year later.

In 1978 just under one half of employees who were low paid in 1977 remain low paid, of those who improved their relative earnings position only 3 per cent had progressed to the top half of the earnings distribution. Tracking low paid workers in 1977 over the next 6 years shows an increasing share with no earnings observation. For those who remain in the earnings distribution very few of these low paid employees experience earnings progression out of the first quartile. By the end of the 7 year period 12 per cent have made it to the second quartile and only 8 per cent have moved into the top half of the earnings distribution. Nearly 80 per cent of the original sample who were also employed in 1983 can be found in the bottom half of the earnings distribution (51 per cent in the bottom quarter).

The bottom two panels of Table 6.4 show the results for males and females separately. The majority of employees in the first quartile are women (70 per cent) and the experience of the few men who are in this quartile is very different from the women. A comparison of the characteristics of men and women in the lowest quartile of the earnings distribution revealed that low paid men are on average younger than low paid women. Approximately half of all men in the first quartile are aged 16-24 years compared with around one quarter of similarly low paid women.

While a similar proportion of these men and women have no earnings observation in subsequent years, a much greater share of the men move up the earnings distribution and move further up. This is undoubtedly due to the younger average age of these low paid men compared with the women and the higher mobility rates associated with this group. In 1983 only 12 per cent of the original sample of low paid men are still in the first quartile compared with one quarter of the women. In addition, 17 per cent of the men made it to the top half of the earnings distribution compared with only 5 per cent of the women.

Table 6.4: Earnings and employment experience of low paid workers in 1977

		1977	*1978*	*1979*	*1980*	*1981*	*1982*	*1983*
All								
	Q1	100	47.1	36.0	29.7	26.2	23.6	20.7
	Q2		10.8	14.2	14.4	13.2	12.7	11.7
	Q3		2.2	3.6	4.9	5.8	6.1	6.3
	Q4		0.5	0.9	1.2	1.4	1.7	2.0
Leavers			39.4	45.3	49.8	53.4	55.9	59.3
Base (100%)		35,327	35,327	35,327	35,327	35,327	35,327	35,327
Males								
	Q1	100	38.3	24.9	17.7	15.7	13.0	12.0
	Q2		15.0	19.8	19.1	17.0	16.2	14.3
	Q3		4.5	8.0	10.3	11.8	12.0	11.8
	Q4		1.1	2.1	2.9	3.2	4.2	4.7
Leavers			41.1	45.2	50.1	52.4	54.6	57.2
Base (100%)		10,828	10,828	10,828	10,828	10,828	10,828	10,828
Females								
	Q1	100	51.0	40.9	35.0	30.8	28.3	24.6
	Q2		8.9	11.7	12.3	11.6	11.1	10.5
	Q3		1.2	1.7	2.6	3.1	3.5	3.9
	Q4		0.3	0.4	0.5	0.7	0.7	0.8
Leavers			38.6	45.3	49.7	53.8	56.5	60.2
Base (100%)		24,499	24,499	24,499	24,499	24,499	24,499	24,499

6.2.2 Earnings progression of low paid workers 1984-1990

From 1984 onwards it is possible, via the link to JUVOS, to calculate the proportion of low paid workers who go on to experience unemployment. The share of low paid workers experiencing unemployment will clearly be affected by the overall state of the labour market, as well as changes in job turnover.

Table 6.5 shows that by 1985 approximately 5 per cent of employees who were in the first quartile of the hourly earnings distribution in 1984 were unemployed and 32 per cent had no earnings observation. Similar to the earlier period (1977-1983) only 9 per cent had moved into the top half of the earnings distribution. Tracking the progress of this group of low paid employees over the full 6 year period shows a steadily increasing share with no earnings observation (52 per cent by 1990) and, consistent with aggregate trends, a falling share in unemployment. While at first glance it may appear that a larger share have moved into the upper half of the earnings distribution than in the earlier period, closer inspection reveals that this is not the case. Greater rates of economic activity in 1990 compared with 1984 result in a greater share of the original sample with an earnings observation in the final year. Similar shares of employees with earnings in the final year are in the bottom half of the earnings distribution in both periods (80 per cent).

Comparing the progression of men and women from the first quartile in 1984 shows that men were approximately twice as likely to experience unemployment than similarly low paid women in the following 6 years. Low paid women were more likely to move into unknown destination states than their male counterparts. Once again we find greater persistence in low pay for women, over one quarter of the women were still in the first quartile 6 years later, compared with only 16 per cent of the men. Men were considerably more likely to move up, and further up, the earnings distribution than women. Approximately 16 per cent of low paid men in 1984 had made it to the top half of the earnings distribution in 1990 (accounting for one third of those with earnings in 1990) compared with only 6 per cent of low paid women (14 per cent of those with earnings in 1990).

Table 6.5: Earnings and employment experience of low paid workers in 1984

		1984	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*
All								
	Q1	100	50.4	40.5	32.8	28.3	24.6	22.6
	Q2		10.7	14.3	15.6	15.4	14.4	13.8
	Q3		1.7	2.8	4.0	5.6	6.4	7.0
	Q4		0.5	0.6	1.0	1.3	1.7	2.2
Unemployed			5.2	6.2	5.7	4.4	3.5	2.7
Other leavers			31.5	35.5	40.9	45.0	49.4	51.7
Base (100%)		32,962	32,962	32,962	32,962	32,962	32,962	32,962
Males								
	Q1	100	41.3	32.5	25.2	20.9	18.2	15.9
	Q2		13.7	17.9	18.4	18.0	16.9	15.3
	Q3		2.8	5.0	7.0	9.5	10.7	11.4
	Q4		0.9	1.4	2.0	2.6	3.2	4.4
Unemployed			8.2	8.9	8.3	6.6	5.4	4.6
Other leavers			33.0	34.4	39.1	42.4	45.7	48.4
Base (100%)		10,243	10,243	10,243	10,243	10,243	10,243	10,243
Females								
	Q1	100	54.5	44.2	36.2	31.6	27.5	25.6
	Q2		9.4	12.7	14.3	14.3	13.3	13.1
	Q3		1.2	1.8	2.7	3.8	4.5	5.0
	Q4		0.4	0.3	0.5	0.7	1.0	1.3
Unemployed			3.8	5.1	4.6	3.5	2.6	1.9
Other leavers			30.8	36.0	41.7	46.2	51.1	53.2
Base (100%)		22,719	22,719	22,719	22,719	22,719	22,719	22,719

Table 6.6: Earnings and employment experience of low paid workers in 1991

		1991	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*
All								
	Q1	100	52.4	41.9	36.1	31.5	27.8	20.3
	Q2		10.0	12.6	13.9	16.0	18.1	21.6
	Q3		1.5	2.1	3.0	4.0	5.5	7.2
	Q4		0.5	0.5	0.7	1.0	1.2	1.5
Unemployed			4.3	5.6	5.0	4.2	3.9	2.9
Other leavers			31.4	37.3	41.4	43.3	43.6	46.6
Base (100%)		35,283	35,283	35,283	35,283	35,283	35,283	35,283
Males								
	Q1	100	48.1	37.9	31.5	26.8	22.7	14.8
	Q2		11.5	13.4	15.5	17.2	19.9	22.2
	Q3		2.2	3.2	4.3	6.1	8.4	10.3
	Q4		0.8	0.8	1.1	1.5	2.0	2.4
Unemployed			7.3	9.8	8.6	7.5	7.0	5.3
Other leavers			30.1	34.9	39.1	40.9	40.1	45.0
Base (100%)		11,993	11,993	11,993	11,993	11,993	11,993	11,993
Females								
	Q1	100	54.6	43.9	38.5	34.0	30.4	23.1
	Q2		9.2	12.1	13.1	15.3	17.1	21.3
	Q3		1.2	1.6	2.2	2.9	4.0	5.6
	Q4		0.3	0.4	0.5	0.7	0.8	1.0
Unemployed			2.7	3.5	3.1	2.5	2.3	1.6
Other leavers			32.1	38.5	42.6	44.6	45.4	47.4
Base (100%)		23,290	23,290	23,290	23,290	23,290	23,290	23,290

6.2.3 Earnings progression of low paid workers 1991-1997

Table 6.6 shows that the results from the earlier periods are largely replicated for the 1991-1997 period. However, there are a number of key differences. A smaller share of men in employment are moving from the first quartile in the base year to the upper half of the earnings distribution 6 years later in the 1991-1997 period (26 per cent) than in the 1984-1990 period (34 per cent) and the 1977-1983 period (39 per cent). How much of this decline is due to the widening of the earnings distribution cannot be assessed with this methodology. A greater share of low paid women remain in employment than in the two earlier periods, increasing by 28 per cent from the 1983 share. This is not all due to improved wider economic circumstances, as although the share also increases for men it is considerably lower (18 per cent). Greater upward mobility out of the first quartile is recorded but there is no significant improvement in progress into the upper half of the earnings distribution. No significant improvement in earnings progression out of the lowest quartile is recorded for low paid men.

End Notes

[15] Earnings quartiles in all of the following analyses are computed across men and women.

[16] There are many definitions of low pay in the literature. The measure used here is on the high side but is used for illustrative purposes only.

[17] This measure of unemployment is based on the ILO definition rather than the claimant count used in the NESPD-JUVOS dataset.

Key Findings:

- men are more likely to move up the earnings distribution than women are and conversely women are more likely to move down the earnings distribution. However, upward mobility of women increases over this 21 year period (1977-1997);
- men and women joining the earnings distribution from unemployment predominantly move into the lowest quartile. Men joining from unknown origin states enter all parts of the distribution while women predominantly enter the lowest quartile;
- men and women are more likely to leave the distribution from the lower half of the distribution, particularly the lowest quartile;
- tracking groups of low paid workers identifies a significant amount of persistence in low pay; around one fifth of employees in the lowest quartile are still there 6 years later, accounting for between 40 and 50 per cent of all those who remain in employment;
- earnings progression has improved for low paid women. Most of the progression is fairly short range with no significant improvement in the progression to the upper half of the earnings distribution; low paid men are less likely to progress to the upper half of the distribution by the end of the period;
- a greater share of low paid women remain in the earnings distribution in 1991-1997 compared with 1977-1983 and 1984-1990. This is not entirely due to improved wider economic conditions as although the figure increases for low paid men, the change for women is considerably higher (18 and 28 per cent respectively).

Seven

THE IMPACT OF MOBILITY ON INEQUALITY: THE LONG RUN VIEW

This chapter documents trends in mobility and its impact on long-term inequality using a number of more sophisticated measures. Transition probability matrices measure the likelihood of employees moving between different sections of the earnings distribution conditional on their original position. While this approach can be used to assess changes in mobility in and out and between different sections of the distribution, it is not able to provide an answer to the question: has earnings mobility mitigated the rise in long-term earnings inequality? To assess the affect of earnings mobility on earnings inequality Shorrock's methodology is used to assess the extent to which inequality is reduced by taking a longer-run view through averaging earnings over a number of years. Time averaged earnings provide a better estimate of longer-term differences in inequality between employees. This approach smoothes out transitory fluctuations in earnings and helps to identify permanent earnings differentials. Four inequality indices are used to help determine in which portion of the earnings distribution mobility has had the greatest impact, as its impact may be uneven. The three 7 year sub-periods are compared to assess whether the extent to which earnings mobility reduces earnings inequality has changed over time. The main findings are:

- the extent to which mobility reduces long-run inequality has fallen since the late 1970s/early 1980s; long-run earnings inequality has increased;
- the fall in mobility, and therefore the rise in long-term inequality, is most notable among prime age male employees.

7.1 Earnings inequality and mobility among 'continuously' employed workers

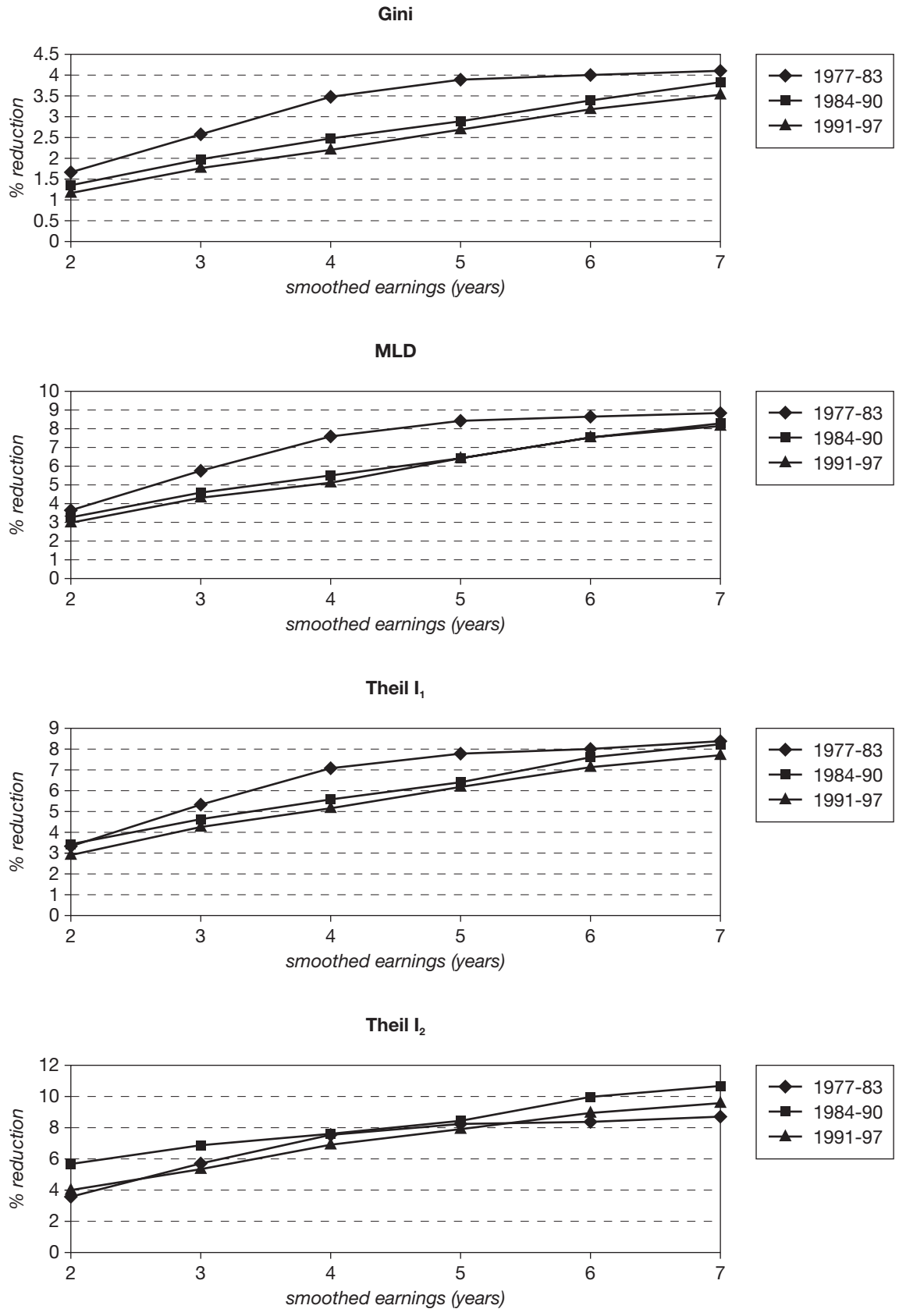
For the sample of 'continuously' employed workers inequality is reduced when earnings are averaged (smoothed) over a number of years for all four measures of inequality. Figure 7.1 shows the percentage reduction in earnings inequality when earnings are smoothed over a number of years. For example, the results for the Gini coefficient show that when earnings are smoothed over 3 years, earnings inequality is reduced by 2.6 per cent for the 1977-1983 cohort, 2 per cent for the 1984-1990 cohort and 1.8 per cent for the 1991-1997 cohort.

Comparison between the three 7 year sub-periods show that inequality is reduced by a smaller percentage in the last two time periods (1984-1990, 1991-1997) than in the first (1977-1983), as the curves for 1984-1990 and 1991-1997 are below the curve for 1977-1983. This finding suggests that mobility is less likely to reduce longer-term differences between workers than in the past, or to put it another way differences in earnings between workers at a point in time are now more indicative of permanent differences between workers than in the past. When Theil I_2 is used as the measure of inequality the results are mixed, mobility is highest in the 1984-1990 period. When earnings are averaged over a number of years this measure records the greatest reduction, suggesting that either outliers are affecting this measure and/or very high earnings have a much larger transitory component.

For the sample to prime age employees (25-49 in the base year) and analysing males and females separately provides more detail than the overall picture. It was shown in Chapter 5 that while inequality was generally lower among prime age employees, inequality increased by more for this group than among all employees. The results for prime age males, the left-hand panel in Figure 7.2, are very similar to those for all employees. The extent to which mobility reduces long-run inequality between prime age males has fallen over time. For example, using the Gini as the measure of inequality and averaging earnings over 5 years reduces the cross-sectional measure of inequality by 4 per cent in the 1977-1983 period, 3 per cent in the 1984-1990 period and 2.6 per cent in the 1991-1997 period. The 1984-1990 curves are below the 1977-1983 curves and the 1991-1997 curves are below the 1984-1990 curves, for all measures of inequality with the exception of Theil I_2. Among prime age males the extent to which mobility reduces lifetime earnings inequality has fallen over time.

For prime age females, the right-hand panel of Figure 7.2, smoothing earnings over a number of years generally reduces inequality by the least between 1991 and 1997 than in the earlier periods, although the results for prime age females are less conclusive than for prime age males and all employees. The Gini shows a clear fall in the extent to which mobility reduces long-term inequality; for example, averaging earnings over 5 years reduces cross-sectional inequality by just over 4 per cent in the 1977-1983 period, 3.3 per cent in the 1984-1990 period and 2.9 per cent in the 1991-1997 period. The other measures of inequality show mixed results. It was shown in Chapter 6 that earnings progression for some women improved over this period. This result is reflected here. However, although earnings progression may have improved this was not enough to mitigate the rise in long-term inequality among continuously employed prime age women.

Figure 7.1: Percentage reduction in inequality from smoothing hourly earnings 1977-1983, 1984-1990, 1991-1997



Source: NESPD 1977-1997

7.2 Inequality and mobility among the economically active

In this section a larger more representative group of individuals is considered by including individuals who were unemployed and claiming benefit (referred to as economically active although it is not possible to identify all individuals who are seeking work or the self-employed). Inequality among this group is referred to as labour market inequality because it is wider than earnings inequality as it includes the experience of unemployment.

Smoothing inequality in hourly earnings and the experience of unemployment among economically active individuals reduces inequality measured at a point in time (Figure 7.3). Consistent with the fact that the MLD is the most sensitive to the experience of unemployment (i.e. periods with no earnings) this measure shows the greatest reduction in inequality when unemployment experience and earnings are smoothed over a number of years.

Comparing the two time periods, 1984-1990 and 1991-1997, there are no perceptible differences between the extent to which smoothing hourly earnings and the experience of unemployment over a number of years reduces inequality. It is unfortunate that we do not have information on unemployment experience for the 1977-1983 period as it is since then that the greatest falls in earnings mobility appear to have occurred. In fact, the relationship between the 1984-1990 and 1991-1997 curves are very similar to those observed for hourly earnings only (Figure 7.1), the main difference is that the reductions in inequality are greater.

7.3 Labour market inequality and mobility among all individuals

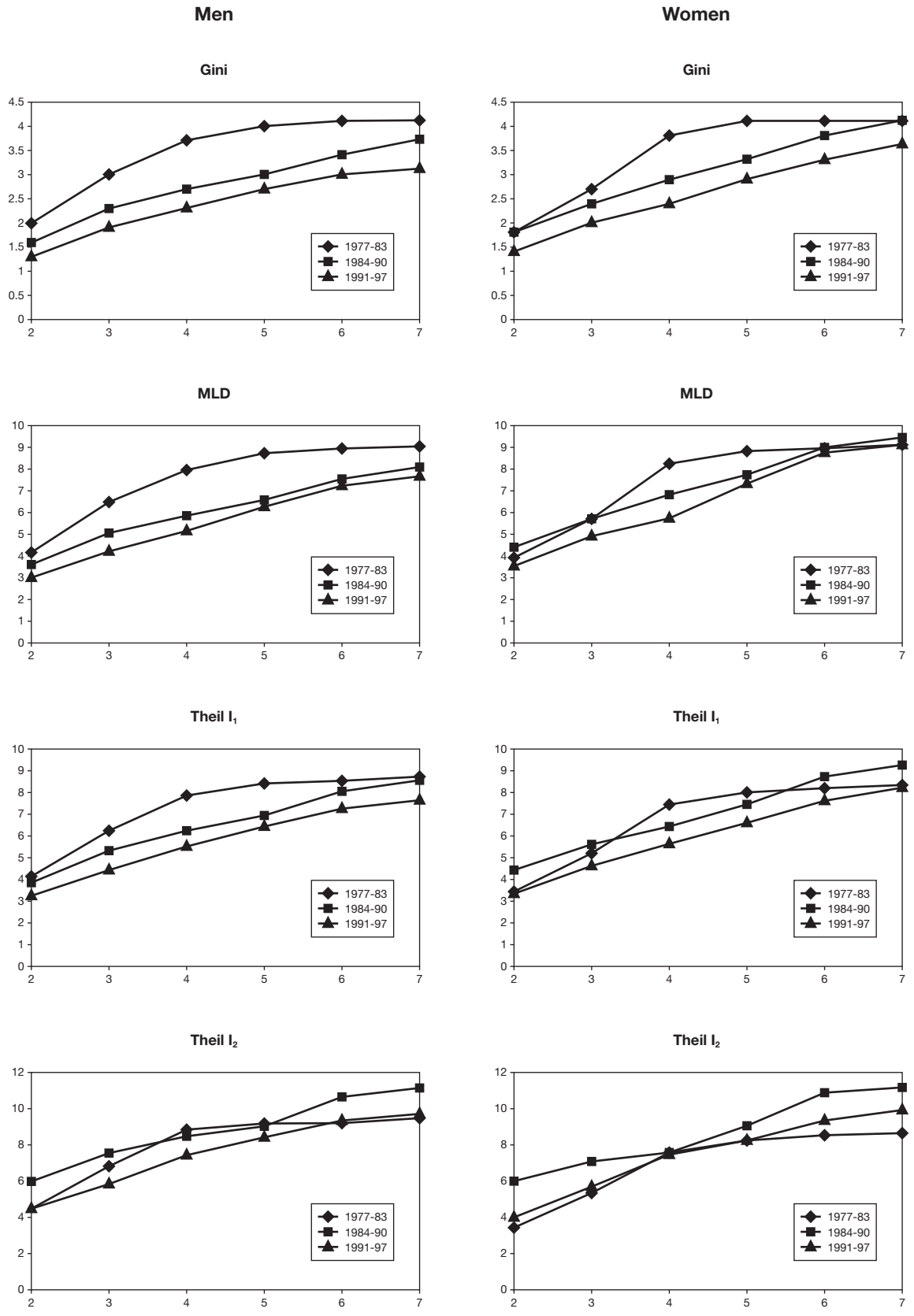
In this section the widest group possible is considered by including all individuals with at least one earnings observation in a 7 year period.

Smoothing hourly earnings and periods out of the labour market (employee experience) reduces labour market inequality recorded in a single year. Figure 7.4 shows the percentage reduction in inequality from averaging over a number of years for prime age men and women. For prime age male employees the extent to which smoothing hourly earnings and experience out of the employee earnings distribution (no earnings) has fallen over time; the 1984-1990 curve is always below the 1977-1983 curve and, with the exception of the MLD measure of inequality, the 1991 curves are below the 1984-1990 curves.

For prime age female employees the extent to which smoothing hourly earnings and experience out of the employee earnings distribution fell between the 1977-1983 period and the 1984-1990 period. There was no clear fall between 1984-1990 and 1991-1997 for prime age female employees.

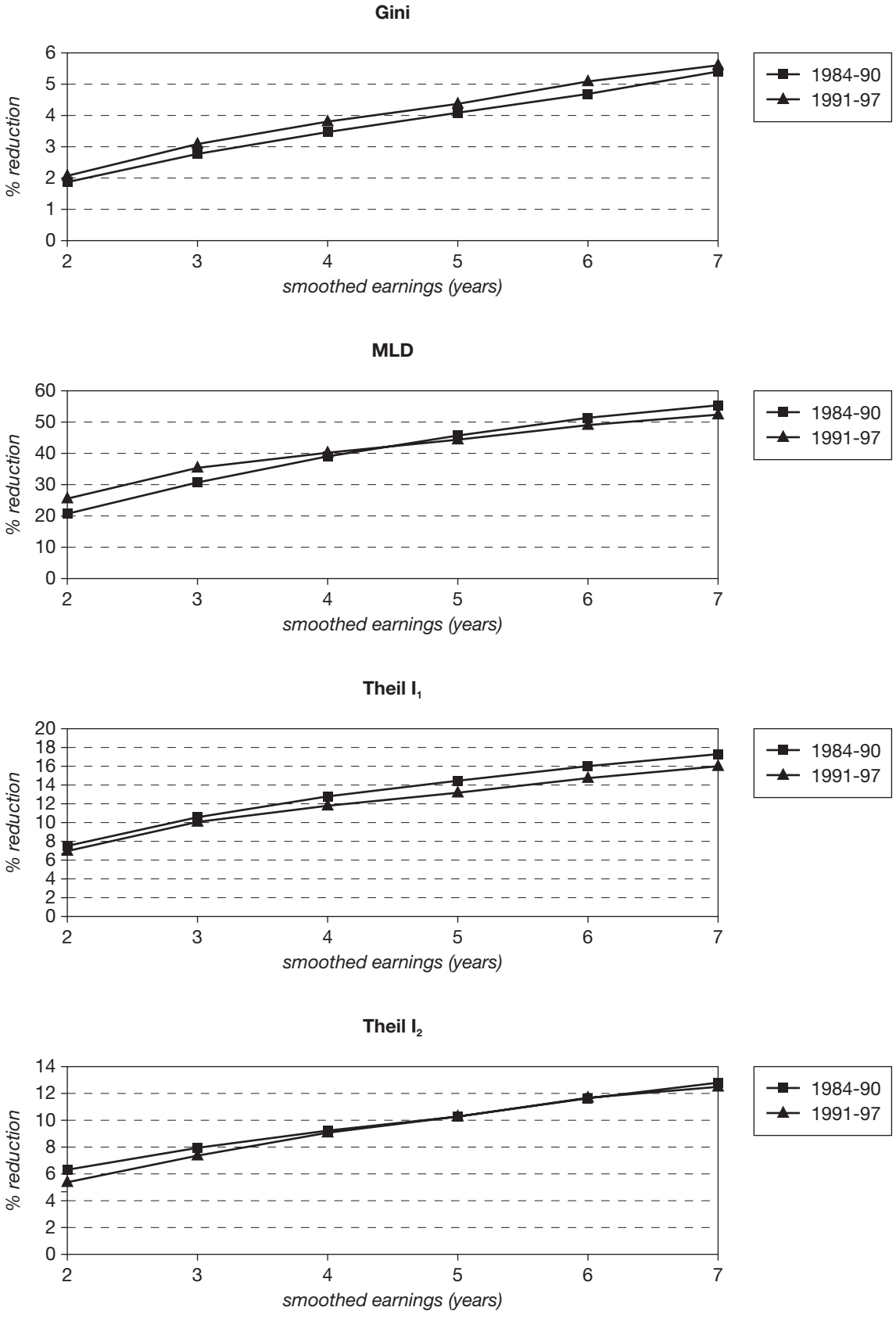
The information contained in these charts suggests that longer-term inequality in hourly earnings and employee experience in the labour market has increased over time.

Figure 7.2: Percentage reduction in inequality from smoothing hourly earnings for prime age employees 1977-1983, 1984-1990, 1991-1997



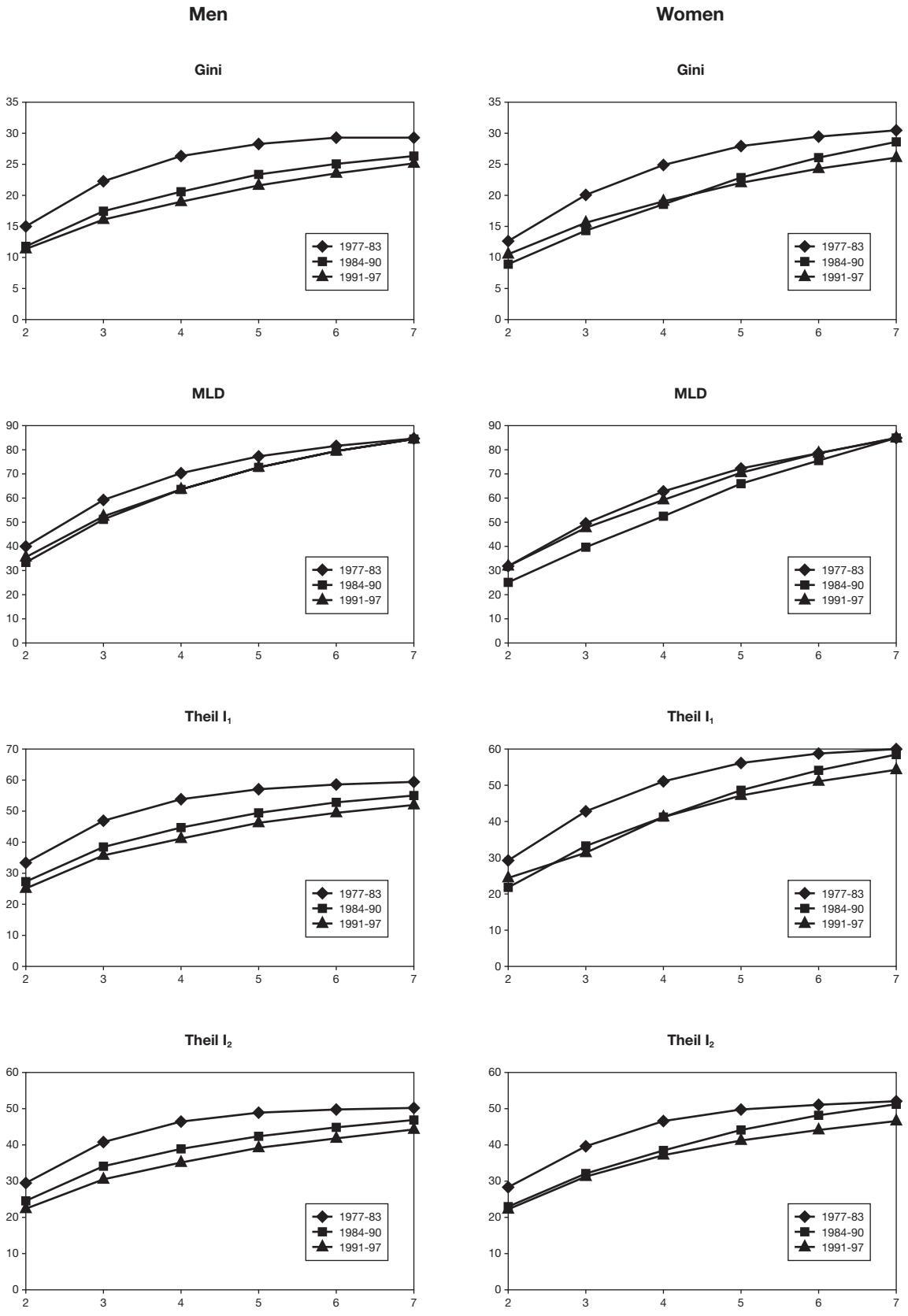
Source: NESPD 1977-1997

Figure 7.3: Percentage reduction in inequality from smoothing hourly earnings and experience of unemployment 1984-1990, 1991-1997



Source: NESPD 1984-1997

Figure 7.4: Percentage reduction in inequality from smoothing hourly earnings and spells out of the earnings distribution for prime age individuals 1977-1983, 1984-1990, 1991-1997



Source: NESPD 1977-1997

Key Findings:

- the extent to which mobility in hourly earnings reduces lifetime earnings inequality has fallen over this 21 year period 1977-1997, with the greatest fall occurring between 1977-1983 and 1984-1990. This result is found for all measures of inequality with the exception of one that is sensitive to changes at the top of the distribution and the result may be due to outliers or the transitory nature of very high earnings;
- the inequality reducing effect of earnings mobility has fallen over time among prime age men (25-49); the results for prime age women are mixed, with only one measure of inequality recording clear falls;
- averaging hourly earnings and no earnings during periods of claimant unemployment over a number of years reduces measures of inequality in a single year, but there is very little change between 1984-1990 and 1991-1997. This is likely to be a combination of changes in the level of claimant unemployment and falling levels of hourly earnings mobility;
- the reduction in inequality through mobility, measured in terms of hourly earnings and experience out of the earnings distribution, has also fallen over this 21 year period (1977-1997) for prime age men and women;
- overall these result suggests that cross-sectional differences in employees' earnings are now more indicative of permanent differences between employees than in the past with non-employment and unemployment unevenly distributed among employees.

Eight
CONCLUDING REMARKS

Earnings inequality rose from the late 1970s to the late 1990s among men and women, full- and part-time employees within all age groups and particularly among prime age workers. Breaking the period down into three 7 year sub-periods (1977-1983, 1984-1990, 1991-1997) shows that the greatest increase in earnings inequality occurred between 1977 and 1983. While earnings inequality is found to be generally lower among prime age workers (25-49 years), the increase in earnings inequality for both men and women has been greater than that found between employees of all age groups.

This rise in cross-sectional earnings dispersion has been accompanied by a rise in lifetime earnings differentials. This may be a *consequence* of the increase in the dispersion of pay. With a wider earnings distribution the absolute change in individuals' earnings over time must also rise if inequality is to be shared equally among workers, i.e. mobility needs to increase for lifetime earnings inequality to remain the same. No change in the rate and range of earnings mobility with a more dispersed distribution of earnings will result in a fall in the extent to which mobility can reduce lifetime earnings inequality. The findings here suggest that mobility actually fell over the period that cross-sectional inequality increased.

If earnings differences are closely tied to skill differences between individuals then mobility will depend on the ease in which skills can be acquired (education, training, work experience) and the extent to which they are innate. If the skills demanded are now more in terms of skills acquired through education and training, which are still largely acquired before entering the labour market or during the early years of labour market entry, earnings differences will remain throughout individuals' working lives and individuals will have different lifetime earnings profiles. Lifetime learning clearly has a key role in reducing lifetime earnings inequality.

The same factors that have driven pay dispersion may also have restricted the ability of the low paid/skilled to obtain better jobs. Changes in the occupational structure of employment point to a 'hollowing out' of the occupational distribution with growth concentrated at the upper and lower ends of the occupation hierarchy (McKnight, 1998). Polarisation in the occupational structure of employment may limit the extent to which individuals can move up the occupation hierarchy if middle-ranking occupations have diminished.

In sum, the evidence suggests that earnings mobility has not ameliorated the secular rise in earnings inequality. In fact, the extent to which earnings mobility reduces long-term differences in earnings appears to have fallen. These findings suggest that earnings inequality has not only risen over the past 2 decades but it has also become entrenched.

REFERENCES

Atkinson, A. B. (1970). 'On the Measurement of Inequality'. *Journal of Economic Theory*, Vol 2.

Bell, D. and R. Ritchie (1993). 'Transitions, Non-Response and Earnings in the New Earnings Survey Panel Dataset.' Programme of Research on the New Earnings Survey Working Paper No. 5, Department of Economics, University of Stirling

Bell, D. (1995). 'Earnings Inequality in Great Britain: Some Additional Evidence'. *Scottish Journal of Political Economy*, Vol 42, No 3, August 1995.

Cowell, F. A. (1995). Measuring Inequality, Second Edition. London: Prentice-Hall/Harvester.

Dickens, R. (1996a). 'The Evolution of Individual Male Earnings in Great Britain: 1975-94', Centre for Economic Performance. LSE, Discussion Paper No. 306, November.

Dickens, R. (1996b). 'Caught in a Trap? Wage Mobility in Great Britain: 1975-94'. Centre for Economic Performance *Mimeo*.

Elias, P. and M. Gregory (1994). *The Changing Structure of Occupations and Earnings in Great Britain 1975-90: an analysis based upon the NES panel Dataset*. Department of Employment Research Series No. 27. London: Department of Employment

Fernie, S. and D. Metcalf (1998). '(Not) Hanging on the Telephone: Payment Systems in the New Sweatshops'. Discussion Paper No. 390, Centre for Economic Performance.

Gittleman, M. and M. Joyce (1996). 'Earnings Mobility and Long-Run Inequality: An Analysis Using Matched CPS Data'. *Industrial Relations*, April, pp 180-196.

Goldin, C. and L. F. Katz (1996). 'Technology, Skill and the Wage Structure: Insights from the Past'. *American Economic Review*, Vol 86, No. 2.

Gosling, A., S. Machin and C. Meghir (1994). 'What Has Happened to Men's Wages since the Mid-1960s?'. *Fiscal Studies*, Vol 15, No 4, pp 63-87.

Gottschalk, P. and R. Moffit (1994). 'The Growth of Earnings Instability in the US Labour Market'. Brookings Papers on Economic Activity, 2, pp 217-272.

Gregory, M. and P. Elias (1994). 'Earnings Transitions of the Low Paid in Britain, 1976-91: A Longitudinal Study'. *International Journal of Manpower*, 15, 170-188.

Katz, L. F., G. W. Loveman and D. G. Blanchflower (1995). 'A Comparison of Changes in the Structure of Wages in Four OECD Countries'. In R. B. Freeman and L. F. Katz (eds) *Differences and Changes in Wage Structures*. Chicago: The University of Chicago Press.

McKnight, A. and P. Elias (1997). 'Data Report on Earnings Mobility and Low-wage Employment for the United Kingdom'. Prepared for the Organisation for Economic Co-operation and Development for the 1997 *Employment Outlook*.

McKnight, A., P. Elias and R. Wilson (1998). *Low-Pay and the National Insurance System: A Statistical Picture*. Manchester: Equal Opportunities Commission. ISBN 1 870358 78 3.

McKnight, A. (1998). 'Low Pay and Government Policy'. *IER Bulletin*. No. 42. ISSN 0954-7932.

Machin, S. (1997). 'The Decline of Labour Market Institutions and the Rise in Wage Inequality in Britain'. *European Economic Review*, 41, pp 647-657.

Machin, S., A. Ryan and J. van Reenen (1996). 'Technology and changes in skill structure: evidence from an international panel of industries'. CEPR Discussion Paper 1434.

Moffit, R. and P. Gottschalk (1995). 'Trends in the Covariance of Earnings in the United States: 1969-1987'. Discussion Paper No. 1001, Institute for Research on Poverty, 1995.

OECD (1996). 'Earnings Inequality, Low Paid Employment and Earnings Mobility'. *OECD Employment Outlook*. Paris, July.

OECD (1997). 'Earnings Mobility: Taking a Longer-Run View'. *OECD Employment Outlook*. Paris, July.

Office for National Statistics (1997). *NESPD Information Pack*. London, HMSO.

Orchard, T. and R. Sefton (1996). 'Earnings data from the Labour Force Survey and the New Earnings Survey'. *Labour Market Trends*. April 1996, pp. 161-174.

Ramos, X. (1999). 'The Covariance Structure of Earnings in Great Britain: 1991-1995'. *ESRC Research Centre on Micro-social Change* Working Paper 99-4, University of Essex.

Rodrik, D. (1997). *Has Globalisation gone too far?* Washington: Institute for International Economics.

Schmitt, J. (1995). 'The Changing Structure of Male Earnings in Britain 1974-1988', in Freeman, R. and L. Katz (eds). *Differences and Changes in Wage Structures*. University of Chicago Press.

Sen, A. K. (1973). *On Economic Inequality*. Oxford: Clarendon Press.

Shorrocks, A. F. (1978). 'Income Inequality and Income Mobility'. *Journal of Economic Theory*, Vol 19, No. 2, pp. 376-393.

Stewart, M. B. and J. K. Swaffield (1997). 'Low-Pay Dynamics and Transition Probabilities'. University of Warwick *mimeo*.

Theil, H. (1967). *Economics and Information Theory*. Amsterdam: North-Holland.

Wood, A. (1994). *North-South Trade, Employment and Inequality: Changing Fortunes in a Skill-Driven World*. Oxford: Clarendon Press.

Wood, A. (1998). 'Globalisation and the Rise in Labour Market Inequalities'. *Economic Journal*. 108, pp 1463-1482.

APPENDIX ONE

A1.1 Attrition and coverage of the NESPD/JUVOS

The loss of information through lack of contact with survey members (attrition) and changes in the coverage of the survey have an impact on measures of inequality and mobility. A change in the process of submitting returns to allow for electronic returns and the increased use of computerised payroll systems, coupled with the direct sampling of large organisations since the early 1980s has led to an increase in coverage of low paid workers in general and those earning below the PAYE threshold in particular. Ignoring this change in coverage could lead to a false impression of the changing pattern of inequality, as an increase in the coverage of low paid workers can lead to an increase in some measures of inequality. Separate analysis of full- and part-time employees gets around the problem to some extent, as the changes in coverage mainly affect part-time workers. As low paid workers have a more tenuous relationship with the labour market, an increase in the share of low paid workers in the sample will lead to increase in perceived levels of attrition (and mobility).

Changes in the definition of unemployment (based on entitlement to unemployment benefits) affects the proportion of the unemployed captured by JUVOS. The more widely used ILO definition of unemployment typically records a greater level of unemployment than the claimant count.

A1.2 Attrition and earnings mobility

In the NESPD attrition cannot be likened to what is typically termed 'panel attrition', in which panel members may be permanently lost to the panel either through loss of contact or withdrawal of their co-operation. Attrition in the NESPD manifests itself as an increase in the likelihood of non-observation of a panel member in subsequent years, rather than as a complete loss of information. Without taking account of this phenomenon, it will appear as an increase in movement into and out of the earnings distribution rather than as a total loss of information from specific individuals. This can arise for a number of reasons, primarily:

- failure to locate a new employer for individuals who change jobs at the time the New Earnings Survey is conducted each year;
- breakdown in data linkage procedures, whereby information on individuals is matched from 1 year to the next;
- movement of individuals into jobs for which no PAYE record is made and which are not captured via payroll accounting systems;
- transition into self-employment.

While there have been a number of studies of attrition in the NESPD (Elias and Gregory, 1994, Bell and Ritchie, 1993) no systematic attempt has been made to investigate these issues in terms of their potential bias that they may impart to our understanding of the changes in earnings mobility over the period spanned by the NESPD. Attrition is a concern in a study of earnings mobility if attrition is non-random because the results will suffer from sample selection bias. In addition, when using transition matrices attrition will lead to an increase in the measure of mobility out of sections of the distribution (quartiles).

The JUVOS link – an annual account of spells of benefit-based unemployment and their duration linked to each individual's earnings record – provides additional information on the economic status of members of the NESPD in years that they have no earnings information. Work carried out by the ONS has shown that, of the males in the NESPD that have missing information in any 1 year (approximately 15 per cent), the unemployment data derived from JUVOS provides information on approximately 5 per cent. For the remaining two thirds of non-respondents in any particular year there exists no information on their labour market status (ONS, 1997). This link also allows the possibility to explore further the possibility that a changing pattern of mobility may be associated with movements into and out of unemployment.

In an attempt to overcome these problems a number of approaches have been adopted to assess the likely bias that attrition and subsequent sample selection can introduce:

1. In the analysis of transition matrices, transitions within the earnings distribution and movements out of the distribution are considered. For years where JUVOS information is available (1984-1997) transitions into unemployment are also recorded. Findings from other studies are used to help quantify the likely destinations of individuals missing from the panel in subsequent years;

2. In the analysis of mobility and the extent to which mobility reduces inequality, inequality and mobility are measured for three groups of individuals. Firstly, inequality among employees who had earnings information within the full 7 year periods; referred to as 'continuously' employed.[18] Secondly, the concept of inequality is widened to include the experience of unemployment and individuals with an earnings observation or appearance in JUVOS for all 7 years of the periods are included. Finally, all individuals who appear at least once in the NESPD for the 7 year periods form the widest group;
3. To assess the extent to which attrition and sample selection leads to a bias in the results the characteristics of the chosen samples are compared with the complete sample characteristics and how any differences may have a bearing on the findings.

A1.3 Technical and analytical issues

The techniques for measuring inequality and mobility adopted were originally devised for the analysis of annual income. There are a number of problems which need to be addressed before applying it to the analysis of earnings inequality and mobility.

1. Income (whether individual or household) is observed irrespective of an individual's labour market status. In the present study, if an individual is unemployed or out of the labour market at the survey date they have no earnings for that period.
2. The NES does not collect information on annual earnings. Earnings information relates to weekly or hourly pay.

To address the first point three groups of individual are examined. First, all employees with no missing earnings observations in the 7 year periods. Second, including individuals who experience unemployment. In this case earnings are set to zero.[19] Third, by widening the sample further to include individuals with at least one earnings observation in the 7 year periods. Finally, on the second point, the measure of pay is assumed to be representative of individuals' relative annual earnings.

A1.4 Attrition and sample selection bias

In the methodology section it was noted that sample selection and attrition might bias the results. In this section the characteristics of the various samples used for inequality and mobility analysis are compared with the population[20] characteristics.

The sample characteristics are described in terms of gender, age groups, full-time/part-time working arrangements, industry and region of workplace. The distributions of these characteristics within the population and the various samples can be found in Table A1.1. The table shows the distribution in the base year with those in the final year for the 1984-1990 period.

This table shows a few differences between the population and the samples. There are fewer women in the samples than in the population which is consistent with the finding that women are more likely to leave the panel (women are known to have a more tenuous link with the labour market). This highlights the importance of analysing earnings inequality and mobility for men and women separately. The samples tend to be older than the population. As younger workers have higher rates of turnover they are less likely to be continuously employed and therefore less likely to appear in the samples. There are no striking differences between the regional distribution of the population and the samples. The samples are more likely to contain full-time employees than the population. This is probably a secondary effect of observing fewer women in the samples. In terms of sectors, the samples contain a smaller proportion of workers in the high turnover sector: distribution, hotels and catering. Comparing the distributions in the two samples ('continuously' employed and economically active ('continuously' employed or present in JUVOS)) shows that widening the sample to include those with experience of unemployment generally improves the distribution of characteristics to those closer to what is observed in the population.

End Notes

[18] These individuals may not be continuously employed because the NESPD only records earning in April of each year, these employees may experience spells out of the labour force between these annual dates.

[19] For technical reasons earnings cannot be set to exactly zero, instead earnings are set to 0.01 and more sensitivity analysis needs to be conducted to assess the effect of choosing a particular value. A problem with this approach is that all spells of unemployment are treated equally. Because we only have annual observations an individual who is unemployed at the survey date whose spell of unemployment lasts for, say, 1 month is treated the same as an individual whose spell of unemployment lasts for, say, 9 months.

[20] The term population is used to describe all individuals in the NESPD (or NESPD/JUVOS) in a particular year within the age group specified. For each of the 7 year periods we select men aged 16 to 58 in the base year and women aged 16 to 53.

Table A1.1: Comparison of population and sample composition

	1984 *All*	*1990* *Continuous*	*Continuous and JUVOS*	*All*	*Continuous*	*Continuous and JUVOS*
Sex						
Males	61	65	65	58	65	65
Females	39	35	35	42	35	35
Age						
16-24 years	23	17	20	7	3	4
25-34 years	26	26	26	30	25	27
35-49 years	38	45	43	41	44	42
50-64 years	13	12	12	22	29	27
Region						
London	16	14	14	15	14	14
South East	17	17	17	18	17	17
East Anglia	3	4	3	3	4	4
South West	7	8	8	8	9	9
West Midlands	10	10	10	10	10	10
East Midlands	7	6	6	7	7	7
Yorkshire & Humberside	9	8	8	9	8	8
North West	12	11	11	11	11	11
North East	6	6	6	5	6	6
Wales	4	5	5	4	5	5
Scotland	10	11	12	9	11	11
Working time						
Full-time	87	90	90	84	91	91
Part-time	13	10	10	16	9	9
Industry						
Agric, forestry & fishing	1	1	1	1	1	1
Energy & water	4	5	5	3	5	5
Mining	5	6	5	5	5	5
Metal, engineering	14	13	13	13	13	13
Other manufacturing	11	8	9	10	8	8
Construction	5	4	4	5	4	4
Distribution hotels & catering	15	10	11	15	10	10
Transport & communications	8	9	9	8	9	9
Financial services	10	11	11	12	12	11
Other services	29	33	32	30	32	31
Base (100%)	**117,072**	**30,570**	**34,554**	**120,870**	**30,570**	**34,554**

APPENDIX TWO

The four inequality indices used are defined as follows:

- The Gini coefficient

$$G = \frac{1}{2N^2\mu}\sum_i\sum_j |\, w_i - w_j \,| \qquad \text{, where } i \neq j$$

- The Mean Log Deviation

$$MLD = \frac{1}{N}\sum_j\left(\log\left(\frac{\mu}{w_j}\right)\right)$$

- Theil I_1

$$I^1 = \frac{1}{N}\sum_j\left(\frac{w_j}{\mu}\right) * \log\left(\frac{w_j}{\mu}\right)$$

- Theil I_2

$$I^2 = \frac{1}{2N}\sum_j\left(\left(\frac{w_j}{\mu}\right)^2 - 1\right)$$

Notes: w = wage, μ = average wage, N individuals are indexed over i and j, log(.) refers to the natural logarithm to base e.

APPENDIX THREE

Table A3.1: Weekly earnings inequality – all employees ('continuously' employed) 1977-1997

	Gini	*MLD*	*Theil* I_1	*Theil* I_2
1977	0.257	0.127	0.111	0.115
1978	0.255	0.124	0.110	0.114
1979	0.256	0.126	0.110	0.115
1980	0.256	0.124	0.111	0.119
1981	0.262	0.129	0.116	0.125
1982	0.262	0.129	0.116	0.124
1983	0.265	0.134	0.119	0.127
1984	0.289	0.163	0.142	0.156
1985	0.283	0.156	0.138	0.154
1986	0.279	0.147	0.133	0.150
1987	0.280	0.149	0.136	0.156
1988	0.283	0.151	0.138	0.159
1989	0.286	0.155	0.143	0.167
1990	0.287	0.157	0.144	0.168
1991	0.309	0.181	0.165	0.194
1992	0.306	0.177	0.162	0.192
1993	0.305	0.175	0.162	0.198
1994	0.307	0.176	0.167	0.217
1995	0.309	0.182	0.169	0.217
1996	0.312	0.184	0.175	0.248
1997	0.315	0.188	0.180	0.249
% change				
1977-83	3.1	5.5	7.2	10.4
1984-90	-0.7	-3.7	1.4	7.7
1991-97	1.9	3.9	9.1	28.4

Table A3.2: Weekly earnings inequality among full-time employees ('continuously' employed) 1977-1997

	Gini	*MLD*	*Theil* I_1	*Theil* I_2
1977	0.217	0.078	0.078	0.086
1978	0.215	0.075	0.077	0.086
1979	0.212	0.073	0.075	0.085
1980	0.216	0.075	0.078	0.089
1981	0.221	0.078	0.081	0.093
1982	0.223	0.080	0.083	0.094
1983	0.226	0.082	0.085	0.097
1984	0.242	0.096	0.099	0.116
1985	0.239	0.093	0.097	0.117
1986	0.237	0.091	0.096	0.116
1987	0.239	0.093	0.099	0.121
1988	0.241	0.094	0.101	0.125
1989	0.245	0.098	0.105	0.132
1990	0.245	0.098	0.105	0.132
1991	0.259	0.109	0.117	0.146
1992	0.257	0.107	0.115	0.147
1993	0.257	0.108	0.117	0.154
1994	0.261	0.111	0.123	0.172
1995	0.261	0.112	0.124	0.173
1996	0.264	0.112	0.128	0.182
1997	0.268	0.114	0.134	0.204
% change				
1977-83	4.1	5.1	9.0	12.8
1984-90	1.2	2.1	6.1	13.8
1991-97	3.5	4.6	14.5	39.7

Table A3.3: Weekly earnings inequality among full-time prime age employees ('continuously' employed) 1977-1997

	Gini		*MLD*		*Theil I_1*		*Theil I_2*	
	Men	***Women***	***Men***	***Women***	***Men***	***Women***	***Men***	***Women***
1977	0.183	0.187	0.053	0.055	0.056	0.056	0.064	0.061
1978	0.187	0.183	0.056	0.053	0.059	0.054	0.068	0.058
1979	0.188	0.177	0.057	0.050	0.060	0.051	0.068	0.054
1980	0.197	0.183	0.062	0.053	0.066	0.054	0.075	0.058
1981	0.206	0.207	0.068	0.068	0.071	0.068	0.081	0.073
1982	0.210	0.201	0.070	0.064	0.073	0.065	0.083	0.069
1983	0.215	0.202	0.074	0.065	0.077	0.065	0.087	0.070
1984	0.212	0.191	0.073	0.058	0.077	0.059	0.091	0.064
1985	0.215	0.191	0.075	0.059	0.080	0.060	0.098	0.067
1986	0.216	0.197	0.076	0.062	0.081	0.063	0.099	0.070
1987	0.222	0.199	0.080	0.063	0.086	0.065	0.106	0.071
1988	0.227	0.210	0.084	0.071	0.091	0.073	0.114	0.083
1989	0.233	0.216	0.089	0.075	0.096	0.076	0.121	0.084
1990	0.235	0.218	0.090	0.077	0.097	0.078	0.123	0.088
1991	0.238	0.221	0.093	0.078	0.101	0.080	0.127	0.090
1992	0.239	0.226	0.094	0.081	0.102	0.083	0.132	0.094
1993	0.243	0.227	0.097	0.082	0.106	0.087	0.140	0.105
1994	0.250	0.232	0.103	0.087	0.115	0.093	0.162	0.119
1995	0.252	0.230	0.106	0.085	0.118	0.089	0.170	0.104
1996	0.258	0.234	0.110	0.088	0.124	0.093	0.180	0.110
1997	0.262	0.238	0.114	0.092	0.131	0.097	0.203	0.120
% change								
1977-83	17.5	8.0	39.6	18.2	37.5	16.1	35.9	14.8
1984-90	10.8	14.1	23.3	32.8	26.0	32.2	35.2	37.5
1991-97	10.1	7.7	22.6	17.9	29.7	21.3	59.8	33.3

Table A3.4: Inequality among the economically active (hourly earnings) 1984-1997

	Gini	*MLD*	*Theil I_1*	*Theil I_2*
1984	0.300	0.403	0.173	0.179
1985	0.293	0.378	0.165	0.171
1986	0.289	0.354	0.159	0.168
1987	0.289	0.346	0.160	0.172
1988	0.288	0.309	0.155	0.173
1989	0.292	0.307	0.160	0.182
1990	0.295	0.318	0.162	0.183
1991	0.295	0.276	0.159	0.185
1992	0.298	0.304	0.163	0.185
1993	0.301	0.330	0.168	0.189
1994	0.303	0.327	0.171	0.199
1995	0.304	0.308	0.170	0.198
1996	0.310	0.334	0.179	0.210
1997	0.311	0.333	0.179	0.213
% change				
1984-90	-1.7%	-21.1%	-6.4%	2.2%
1991-97	5.4%	20.7%	12.6%	15.1%

Table A3.5: Inequality among prime age economically active (hourly earnings) 1984-1997

	Gini		*MLD*		*Theil I_1*		*Theil I_2*	
	Men	*Women*	*Men*	*Women*	*Men*	*Women*	*Men*	*Women*
1984	0.270	0.239	0.357	0.204	0.143	0.108	0.140	0.113
1985	0.274	0.236	0.361	0.196	0.148	0.103	0.150	0.104
1986	0.274	0.241	0.347	0.199	0.145	0.107	0.148	0.109
1987	0.280	0.242	0.351	0.188	0.151	0.106	0.156	0.109
1988	0.281	0.248	0.310	0.186	0.148	0.110	0.162	0.121
1989	0.286	0.259	0.300	0.191	0.153	0.119	0.171	0.130
1990	0.289	0.262	0.308	0.203	0.154	0.120	0.172	0.128
1991	0.282	0.260	0.262	0.172	0.146	0.118	0.167	0.132
1992	0.288	0.266	0.302	0.186	0.154	0.124	0.171	0.139
1993	0.295	0.268	0.340	0.200	0.161	0.127	0.177	0.141
1994	0.300	0.272	0.345	0.197	0.168	0.132	0.189	0.155
1995	0.303	0.274	0.328	0.198	0.168	0.132	0.190	0.148
1996	0.311	0.280	0.364	0.221	0.180	0.139	0.205	0.158
1997	0.314	0.282	0.365	0.217	0.182	0.140	0.208	0.158
% change								
1984-90	7.0	9.6	-13.7	-0.5	7.7	11.1	22.9	13.3
1991-97	11.3	8.5	39.3	26.2	24.7	18.6	24.6	19.7

Table A3.6: Inequality among all individuals (hourly earnings and experience out of the earnings distribution) 1977-1997

	Gini	*MLD*	*Theil* I_1	*Theil* I_2
1977	0.584	1.780	0.687	0.646
1978	0.584	1.824	0.686	0.651
1979	0.583	1.882	0.686	0.641
1980	0.585	1.981	0.692	0.645
1981	0.597	2.080	0.716	0.686
1982	0.604	2.153	0.733	0.711
1983	0.617	2.255	0.764	0.752
1984	0.617	2.236	0.762	0.782
1985	0.620	2.287	0.771	0.791
1986	0.605	2.239	0.734	0.738
1987	0.609	2.281	0.742	0.767
1988	0.596	2.229	0.710	0.743
1989	0.607	2.233	0.736	0.777
1990	0.608	2.378	0.738	0.773
1991	0.596	2.297	0.703	0.728
1992	0.607	2.404	0.731	0.759
1993	0.615	2.466	0.750	0.791
1994	0.612	2.447	0.743	0.795
1995	0.590	2.287	0.685	0.729
1996	0.580	2.213	0.660	0.700
1997	0.610	2.470	0.735	0.789
% change				
1977-83	5.7	26.7	11.2	16.4
1984-90	-1.5	6.4	-3.1	-1.2
1991-97	2.3	7.5	4.6	8.4

Table A3.7: Labour market inequality among prime age employees 1977-1997

	Gini		*MLD*		*Theil I_1*		*Theil I_2*	
	Men	***Women***	***Men***	***Women***	***Men***	***Women***	***Men***	***Women***
1977	0.522	0.606	1.637	1.830	0.566	0.748	0.486	0.702
1978	0.535	0.604	1.729	1.870	0.590	0.747	0.516	0.698
1979	0.539	0.599	1.800	1.904	0.599	0.736	0.519	0.678
1980	0.548	0.595	1.905	1.973	0.614	0.726	0.540	0.671
1981	0.562	0.604	2.001	2.032	0.639	0.738	0.578	0.713
1982	0.570	0.595	2.078	2.037	0.656	0.719	0.601	0.677
1983	0.583	0.596	2.172	2.075	0.685	0.719	0.642	0.676
1984	0.537	0.629	1.941	2.284	0.587	0.803	0.537	0.787
1985	0.556	0.633	2.078	2.332	0.628	0.815	0.583	0.827
1986	0.548	0.623	2.041	2.305	0.607	0.783	0.565	0.755
1987	0.560	0.621	2.108	2.319	0.630	0.777	0.614	0.749
1988	0.552	0.602	2.058	2.233	0.611	0.725	0.613	0.701
1989	0.566	0.609	2.163	2.297	0.639	0.741	0.646	0.734
1990	0.574	0.595	2.242	2.252	0.655	0.707	0.661	0.694
1991	0.524	0.584	1.937	2.241	0.548	0.677	0.531	0.644
1992	0.546	0.593	2.109	2.320	0.592	0.698	0.573	0.672
1993	0.561	0.601	2.219	2.378	0.624	0.717	0.614	0.704
1994	0.564	0.601	2.227	2.376	0.630	0.717	0.634	0.715
1995	0.546	0.575	2.066	2.186	0.585	0.647	0.594	0.627
1996	0.540	0.569	2.016	2.129	0.573	0.632	0.591	0.620
1997	0.579	0.592	2.336	2.329	0.661	0.689	0.687	0.680
% change								
1977-83	11.7	-1.7	32.7	13.4	21.0	-3.9	32.1	-3.7
1984-90	6.9	-5.4	15.5	-1.4	11.6	-12.0	23.1	-11.8
1991-97	10.5	1.4	20.6	-0.1	20.6	1.8	29.4	5.6

APPENDIX FOUR
HOURLY EARNINGS 1977-1983

Transitions between 1977 and 1978

		1978					
1977		***Q1***	***Q2***	***Q3***	***Q4***	***Leavers***	***Total***
Q1	All	**47.1**	10.8	2.2	0.5	39.4	35,327
	Men	**38.3**	15.0	4.5	1.1	41.1	10,828
	Women	**51.0**	8.9	1.2	0.3	38.6	24,499
Q2	All	6.8	**45.4**	11.9	1.6	34.3	35,359
	Men	4.6	**42.6**	15.3	2.3	35.2	19,755
	Women	9.5	**48.9**	7.5	0.8	33.2	15,604
Q3	All	0.9	10.5	**47.7**	10.0	30.9	35,477
	Men	0.6	9.3	**47.4**	11.5	31.2	27,244
	Women	1.9	14.6	**48.6**	5.0	29.8	8,233
Q4	All	0.3	1.0	9.2	**60.5**	28.9	35,463
	Men	0.2	1.0	8.9	**61.6**	28.3	29,952
	Women	1.1	1.5	10.7	**54.6**	32.2	5,511
Joiners	All	33.6	24.2	21.8	20.5		46,338
	Men	19.2	23.2	28.7	28.9		27,344
	Women	54.3	25.6	11.9	8.3		18,994

Transitions between 1978 and 1979

		1979					
1978		***Q1***	***Q2***	***Q3***	***Q4***	***Leavers***	***Total***
Q1	All	**45.6**	12.1	2.0	0.5	39.8	35,060
	Men	**36.4**	17.5	4.0	1.2	40.9	10,560
	Women	**49.6**	9.7	1.1	0.2	39.3	24,500
Q2	All	7.2	**44.4**	12.5	1.6	34.4	35,155
	Men	4.5	**42.0**	16.2	2.4	35.0	19,197
	Women	10.4	**47.4**	7.9	0.7	33.6	15,958
Q3	All	1.2	9.5	**47.3**	9.9	32.2	35,250
	Men	0.8	8.8	**47.1**	11.2	32.1	26,932
	Women	2.4	12.0	**47.7**	5.6	32.3	8,318
Q4	All	0.4	1.1	8.3	**60.4**	29.8	35,251
	Men	0.3	1.0	8.4	**61.1**	29.3	30,051
	Women	1.1	2.0	7.9	**56.4**	32.6	5,200
Joiners	All	33.5	24.3	21.9	20.3		47,616
	Men	18.5	23.0	29.1	29.3		27,793
	Women	54.5	26.1	11.8	7.7		19,823

Transitions between 1979 and 1980

		1980					
1979		***Q1***	***Q2***	***Q3***	***Q4***	***Leavers***	***Total***
Q1	All	**45.3**	12.1	2.2	0.7	39.7	35,009
	Men	**37.5**	15.3	4.1	1.4	41.7	10,152
	Women	**48.5**	10.9	1.4	0.5	38.9	24,857
Q2	All	8.2	**42.1**	13.4	1.7	34.7	35,166
	Men	6.1	**40.7**	15.7	2.1	35.4	18,952
	Women	10.6	**43.7**	10.7	1.2	33.8	16,214
Q3	All	1.3	10.4	**45.1**	11.6	31.7	35,100
	Men	0.8	10.1	**45.2**	11.8	32.1	26,837
	Women	2.7	11.1	**45.0**	10.9	30.4	8,263
Q4	All	0.4	1.3	9.1	**58.9**	30.4	35,192
	Men	0.3	1.2	9.5	**59.2**	29.8	30,103
	Women	1.2	1.6	6.4	**57.2**	33.7	5,089
Joiners	All	32.9	24.8	22.3	20.0		48,087
	Men	18.7	23.7	28.8	28.7		27,801
	Women	52.2	26.2	13.4	8.2		20,286

Transitions between 1980 and 1981

		1981					
1980		***Q1***	***Q2***	***Q3***	***Q4***	***Leavers***	***Total***
Q1	All	**46.8**	11.7	1.8	0.6	39.0	35,122
	Men	**38.8**	15.7	3.1	1.0	41.4	10,480
	Women	**50.2**	10.1	1.3	0.5	38.0	24,642
Q2	All	8.4	**43.6**	12.5	1.2	34.3	35,061
	Men	6.1	**42.7**	13.8	1.5	35.9	18,958
	Women	11.1	**44.7**	10.9	0.8	32.5	16,103
Q3	All	1.2	10.3	**46.9**	9.6	32.0	35,220
	Men	0.8	10.1	**46.7**	9.6	32.7	26,393
	Women	2.3	10.8	**47.6**	9.4	29.9	8,827
Q4	All	0.6	1.4	9.4	**61.0**	27.7	35,249
	Men	0.3	1.2	9.8	**61.1**	27.5	29,480
	Women	1.9	2.0	7.2	**60.2**	28.8	5,769
Joiners	All	32.5	24.7	22.1	20.6		45,468
	Men	19.0	24.0	28.8	28.3		26,398
	Women	51.3	25.8	12.9	10.1		19,070

Transitions between 1981 and 1982

		1982					
1981		***Q1***	***Q2***	***Q3***	***Q4***	***Leavers***	***Total***
Q1	All	**52.1**	10.7	1.3	0.4	35.5	34,806
	Men	**43.1**	15.9	2.4	0.9	37.7	10,556
	Women	**56.0**	8.4	0.8	0.2	34.5	24,250
Q2	All	6.5	**50.4**	11.7	1.1	30.3	34,770
	Men	4.7	**48.5**	13.9	1.5	31.3	19,111
	Women	8.7	**52.8**	8.9	0.6	29.0	15,659
Q3	All	1.0	8.3	**53.7**	8.5	28.5	34,877
	Men	0.7	7.6	**53.3**	9.3	29.0	25.730
	Women	1.9	10.3	**54.8**	6.1	26.9	9,147
Q4	All	0.5	0.8	6.5	**66.9**	25.3	34,892
	Men	0.3	0.7	6.5	**67.4**	25.1	28,428
	Women	1.3	1.6	6.3	**64.6**	26.2	6,464
Joiners	All	33.6	24.8	22.4	19.1		40,089
	Men	19.4	24.4	29.3	26.9		23,072
	Women	52.9	25.5	13.1	8.5		17,017

Transitions between 1982 and 1983

		1983					
1982		***Q1***	***Q2***	***Q3***	***Q4***	***Leavers***	***Total***
Q1	All	**51.7**	9.9	1.4	0.5	36.6	34,413
	Men	**42.9**	13.5	2.4	0.8	40.4	10,203
	Women	**55.4**	8.3	1.0	0.4	35.0	24,210
Q2	All	6.6	**52.2**	10.8	1.1	29.3	34,414
	Men	5.6	**49.7**	12.5	1.5	30.7	18,719
	Women	7.8	**55.3**	8.7	0.7	27.5	15.695
Q3	All	0.9	8.5	**55.3**	8.5	26.7	34,489
	Men	0.7	8.3	**54.6**	9.1	27.3	25,237
	Women	1.7	9.0	**57.3**	7.1	24.9	9,252
Q4	All	0.4	0.9	7.1	**67.2**	24.4	34,496
	Men	0.3	0.7	7.2	**67.5**	24.2	28,162
	Women	0.8	1.4	6.9	**65.9**	25.1	6,334
Joiners	All	35.1	24.4	21.6	19.0		37,587
	Men	21.6	24.0	27.9	26.6		21,339
	Women	52.7	24.9	13.3	9.1		16,248

Transitions between 1984 and 1985

		1985						
1984		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**50.4**	10.7	1.7	0.5	5.2	31.5	32,962
	Men	**41.3**	13.7	2.8	0.9	8.2	33.0	10,243
	Women	**54.5**	9.4	1.2	0.4	3.8	30.8	22,719
Q2	All	5.2	**53.1**	11.6	1.1	3.7	25.3	33,102
	Men	4.1	**50.6**	13.3	1.4	4.4	26.3	17,656
	Women	6.6	**56.0**	9.6	0.7	2.9	24.2	15,446
Q3	All	1.0	6.9	**56.0**	8.8	2.6	24.8	33,129
	Men	0.6	6.5	**55.6**	9.3	2.7	25.3	23,587
	Women	1.9	7.9	**57.0**	7.6	2.1	23.5	9,542
Q4	All	0.5	1.0	5.8	**67.3**	1.7	23.7	33,074
	Men	0.3	0.9	5.7	**67.9**	1.8	23.4	26,735
	Women	1.2	1.5	6.0	**64.9**	1.5	25.0	6,339
Unemployed	All	49.6	28.7	15.1	6.6			3,452
	Men	41.9	31.9	19.2	7.0			2,241
	Women	63.8	22.7	7.4	6.0			1,211
Joiners	All	35.9	23.1	21.5	19.5			31,977
	Men	21.4	22.7	28.3	27.7			17,582
	Women	53.6	23.7	13.2	9.5			14,395

Transitions between 1985 and 1986

		1986						
1985		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**51.3**	11.5	1.7	0.4	5.5	29.7	32,021
	Men	**44.2**	14.3	2.8	0.6	8.7	29.4	9,873
	Women	**54.5**	10.3	1.1	0.2	4.0	29.8	22,148
Q2	All	5.9	**53.6**	11.4	1.1	3.8	24.2	32,102
	Men	4.4	**51.9**	12.7	1.5	4.5	25.0	16,790
	Women	7.5	**55.5**	10.1	0.7	2.9	23.3	15,312
Q3	All	1.1	7.6	**57.4**	9.0	2.9	22.0	32,232
	Men	0.6	7.5	**57.7**	9.5	3.0	21.6	22,675
	Women	2.2	7.8	**56.8**	7.8	2.5	22.9	9,557
Q4	All	0.4	0.7	6.5	**68.8**	1.8	21.7	32,170
	Men	0.2	0.6	6.6	**69.6**	1.9	21.0	25,695
	Women	1.1	1.2	5.9	**65.6**	1.7	24.5	6,475
Unemployed	All	52.2	27.5	14.4	5.9			3,853
	Men	46.8	29.8	17.0	6.4			2,577
	Women	63.2	22.8	8.9	5.1			1,276
Joiners	All	33.7	23.6	21.9	20.8			36,267
	Men	20.0	22.6	28.0	29.5			20,228
	Women	51.0	24.9	14.3	9.8			16,039

Transitions between 1986 and 1987

		1987						
1986		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**50.2**	11.9	1.7	0.4	5.2	30.7	33,056
	Men	**43.6**	14.0	2.6	0.7	8.8	30.3	10,558
	Women	**53.3**	10.9	1.2	0.2	3.5	30.8	22,498
Q2	All	5.8	**52.6**	11.4	1.1	3.5	25.5	33,205
	Men	4.7	**51.0**	12.9	1.5	4.1	25.8	17,331
	Women	7.1	**54.4**	9.8	0.7	2.8	25.2	15,874
Q3	All	0.9	7.1	**57.6**	8.8	2.7	22.8	33,309
	Men	0.6	7.2	**57.2**	9.2	2.9	22.8	23,285
	Women	1.7	7.0	**58.6**	7.8	2.1	22.9	10,024
Q4	All	0.4	0.8	6.5	**69.3**	1.8	21.3	33,276
	Men	0.3	0.7	6.7	**70.4**	1.8	20.1	26,485
	Women	0.7	1.1	5.5	**64.9**	1.8	25.9	6,791
Unemployed	All	54.8	27.5	12.8	4.9			4,200
	Men	49.6	29.6	14.8	5.9			2,759
	Women	64.7	23.5	8.8	3.1			1,441
Joiners	All	34.9	23.9	21.2	20.0			33,851
	Men	21.6	23.5	26.4	28.6			17,982
	Women	50.0	24.3	15.3	10.3			15,869

Transitions between 1987 and 1988

		1988						
1987		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**49.3**	12.1	2.2	0.5	4.5	31.5	33,078
	Men	**42.5**	15.1	3.6	0.9	6.9	31.1	10,878
	Women	**52.6**	10.6	1.5	0.3	3.3	31.8	22,200
Q2	All	6.6	**52.4**	12.0	1.0	2.7	25.3	33,293
	Men	5.3	**51.4**	13.2	1.3	3.2	25.6	17,220
	Women	7.9	**53.5**	10.8	0.7	2.1	24.9	16,073
Q3	All	1.0	7.9	**57.9**	9.7	1.9	21.7	33,409
	Men	0.7	7.8	**58.7**	10.0	2.0	20.8	22,777
	Women	1.6	7.9	**56.2**	9.0	1.7	23.6	10,632
Q4	All	0.4	0.8	6.9	**69.6**	1.3	21.0	33,448
	Men	0.3	0.8	7.1	**70.8**	1.4	19.6	26,413
	Women	0.8	1.0	6.2	**64.8**	1.1	26.1	7,035
Unemployed	All	54.0	27.9	13.0	5.1			4,333
	Men	49.5	29.6	14.7	6.2			2,950
	Women	63.6	24.4	9.5	2.5			1,383
Joiners	All	34.7	24.3	20.8	20.2			39,209
	Men	21.7	24.4	26.4	27.5			20,306
	Women	48.7	24.2	14.8	12.3			18,903

Transitions between 1988 and 1989

		1989						
1988		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**47.6**	11.6	2.0	0.4	3.5	34.8	34,907
	Men	**42.5**	13.9	3.0	0.6	6.6	33.5	11,643
	Women	**50.1**	10.5	1.5	0.3	2.0	35.5	23,264
Q2	All	7.6	**50.5**	11.9	1.1	2.0	26.9	35,073
	Men	6.4	**49.8**	13.2	1.3	2.6	26.7	18,304
	Women	9.0	**51.2**	10.5	0.9	1.3	27.0	16,769
Q3	All	1.2	8.7	**55.6**	9.9	1.3	23.3	35,106
	Men	0.9	8.7	**57.1**	9.4	1.3	22.6	23,705
	Women	1.9	8.8	**52.5**	10.9	1.1	24.7	11,401
Q4	All	0.4	0.8	7.2	**67.9**	0.9	22.8	35,135
	Men	0.4	0.7	7.6	**68.7**	0.9	21.7	27,070
	Women	0.6	1.0	5.6	**65.4**	0.7	26.7	8,065
Unemployed	All	51.1	29.1	13.6	6.3			3,020
	Men	42.6	33.3	16.8	7.4			1,933
	Women	66.1	21.6	8.0	4.2			1,087
Joiners	All	36.3	24.2	20.8	18.8			35,932
	Men	23.9	24.4	26.0	25.7			18,297
	Women	49.1	24.0	15.3	11.6			17,635

Transitions between 1989 and 1990

		1990						
1989		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**49.8**	12.2	1.9	0.5	2.4	33.2	34,435
	Men	**45.4**	14.6	2.8	0.9	3.7	32.5	11,626
	Women	**52.0**	11.0	1.4	0.3	1.7	33.6	22,809
Q2	All	7.0	**52.3**	12.6	1.1	1.8	25.1	34,674
	Men	5.7	**50.9**	14.0	1.4	2.4	25.7	18,102
	Women	8.4	**54.0**	11.1	0.9	1.1	24.6	16,572
Q3	All	1.2	8.3	**57.6**	9.9	1.2	21.7	34,799
	Men	0.9	8.5	**57.8**	10.2	1.4	21.3	23,440
	Women	1.7	8.1	**57.2**	9.5	0.9	22.6	11,359
Q4	All	0.3	0.8	6.7	**69.5**	0.8	21.9	34,814
	Men	0.2	0.7	6.6	**71.0**	0.9	20.5	25,969
	Women	0.6	1.0	6.8	**65.0**	0.5	26.1	8,845
Unemployed	All	50.0	29.2	14.5	6.3			2,036
	Men	42.8	34.0	16.5	6.7			1,339
	Women	63.8	19.9	10.8	5.5			697
Joiners	All	37.5	24.2	20.0	18.3			37,018
	Men	24.9	24.2	25.3	25.5			18,585
	Women	50.1	24.1	14.7	11.0			18,433

Transitions between 1991 and 1992

		1992						
1991		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**52.4**	10.0	1.5	0.5	4.3	31.4	35,283
	Men	**48.1**	11.5	2.2	0.8	7.3	30.1	11,993
	Women	**54.6**	9.2	1.2	0.3	2.7	32.1	23,290
Q2	All	7.3	**56.0**	9.7	0.9	3.4	22.7	35,320
	Men	6.6	**54.8**	10.4	1.2	4.8	22.2	17,787
	Women	8.0	**57.3**	8.9	0.7	2.0	23.2	17,533
Q3	All	1.1	7.6	**60.2**	7.8	2.9	20.3	35,385
	Men	0.9	7.8	**59.6**	8.2	3.6	19.9	22,622
	Women	1.5	7.3	**61.3**	7.3	1.5	21.1	12,763
Q4	All	0.4	0.7	6.3	**69.3**	2.1	21.3	35,358
	Men	0.4	0.6	6.2	**70.1**	2.4	20.3	25,574
	Women	0.5	0.9	6.5	**67.0**	1.2	23.8	9,784
Unemployed	All	47.8	28.8	15.7	7.7			2,016
	Men	43.8	29.4	17.1	9.7			1,291
	Women	54.8	27.9	13.1	4.3			725
Joiners	All	37.1	23.3	20.0	19.6			30,118
	Men	24.7	23.6	25.0	26.7			14,725
	Women	49.0	22.9	15.3	12.8			15,393

Transitions between 1992 and 1993

		1993						
1992		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**52.6**	10.6	1.5	0.4	4.1	30.8	33,751
	Men	**49.6**	11.9	2.3	0.6	6.9	28.7	11,437
	Women	**54.1**	9.9	1.1	0.3	2.7	31.9	22,314
Q2	All	5.6	**56.8**	10.3	0.9	3.5	22.9	33,820
	Men	4.9	**54.8**	11.2	1.1	4.9	23.1	16,888
	Women	6.4	**58.7**	9.4	0.6	2.0	22.8	16,932
Q3	All	1.1	6.6	**60.9**	8.1	3.0	20.3	33,832
	Men	0.8	6.7	**60.4**	8.7	3.5	19.9	21,097
	Women	1.7	6.4	**61.8**	7.1	2.0	21.0	12,735
Q4	All	0.4	0.8	5.6	**69.5**	2.5	21.3	33,816
	Men	0.3	0.7	5.5	**70.6**	2.9	20.0	24,156
	Women	0.5	1.0	5.7	**66.8**	1.4	24.5	9,660
Unemployed	All	50.7	27.7	14.6	7.0			2,519
	Men	46.0	29.2	16.3	8.5			1,653
	Women	59.6	24.9	11.2	4.3			866
Joiners	All	37.4	23.0	19.6	20.0			30,242
	Men	26.0	23.0	24.0	27.0			14,759
	Women	48.3	22.9	15.4	13.3			15,483

Transitions between 1993 and 1994

		1994						
1993		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**54.0**	10.5	1.5	0.4	3.3	30.3	32,755
	Men	**50.6**	12.9	2.0	0.6	5.4	28.6	11,339
	Women	**55.8**	9.3	1.3	0.3	2.2	31.1	21,416
Q2	All	5.8	**59.1**	11.1	0.8	2.4	20.8	32,898
	Men	5.0	**57.6**	12.6	0.9	3.5	20.4	16,068
	Women	6.5	**60.4**	9.7	0.8	1.4	21.2	16,830
Q3	All	1.1	6.2	**62.9**	8.4	2.4	19.1	32,783
	Men	0.8	6.2	**63.0**	9.0	2.9	18.1	20,034
	Women	1.5	6.3	**62.7**	7.4	1.5	20.7	12,749
Q4	All	0.4	0.7	5.4	**72.0**	1.7	19.7	32,904
	Men	0.4	0.5	5.4	**74.0**	2.1	17.7	23,276
	Women	0.5	0.9	5.5	**67.4**	1.0	24.7	9,628
Unemployed	All	49.1	27.8	15.6	7.6			3,084
	Men	44.1	29.1	17.8	9.0			2,065
	Women	59.4	25.0	11.0	4.6			1,019
Joiners	All	37.3	23.1	19.8	19.8			30,571
	Men	25.3	24.4	23.6	26.7			14,777
	Women	48.6	21.9	16.2	13.3			15,794

Transitions between 1994 and 1995

		1995						
1994		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**53.9**	12.1	2.0	0.6	3.0	28.4	33,008
	Men	**49.8**	14.9	2.7	0.9	4.7	27.0	11,439
	Women	**56.2**	10.6	1.5	0.4	2.1	29.2	21,569
Q2	All	6.6	**59.3**	11.3	1.2	2.0	19.7	33,065
	Men	5.4	**58.0**	13.2	1.4	2.6	19.4	16,294
	Women	7.7	**60.4**	9.5	1.0	1.3	20.0	16,771
Q3	All	1.7	7.9	**63.6**	8.1	1.7	17.0	33,084
	Men	1.3	8.0	**64.0**	8.8	1.9	16.0	19,982
	Women	2.4	7.7	**62.9**	7.1	1.3	18.4	13,102
Q4	All	0.6	0.9	7.2	**72.5**	1.4	17.4	33,108
	Men	0.4	0.7	6.9	**74.0**	1.6	16.4	23,344
	Women	1.2	1.2	8.2	**68.8**	0.9	19.7	9,764
Unemployed	All	48.5	28.2	15.7	7.6			3,215
	Men	44.7	29.2	17.7	8.5			2,199
	Women	56.7	26.2	11.5	5.6			1,016
Joiners	All	36.0	22.2	19.8	22.0			36,140
	Men	26.1	22.4	23.4	28.0			17,376
	Women	45.2	22.0	16.4	16.4			18,764

Transitions between 1995 and 1996

		1996						
1995		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**51.4**	15.5	2.7	0.8	3.0	26.6	35,354
	Men	**47.1**	18.8	3.7	1.1	5.0	24.2	12,452
	Women	**53.8**	13.7	2.2	0.6	1.8	27.8	22,902
Q2	All	7.2	**56.2**	15.3	1.5	2.0	17.8	35,424
	Men	5.8	**55.4**	17.3	1.9	2.6	16.9	17,469
	Women	8.5	**57.0**	13.4	1.0	1.5	18.7	17,955
Q3	All	2.3	6.3	**61.7**	12.2	1.7	15.7	35,471
	Men	1.6	6.1	**62.8**	13.3	1.9	14.3	21,317
	Women	3.4	6.4	**60.2**	10.7	1.4	17.9	14,154
Q4	All	1.0	1.3	5.6	**73.4**	1.5	17.2	35,460
	Men	0.7	1.0	5.3	**75.0**	1.7	16.3	24,413
	Women	1.8	1.9	6.3	**69.7**	1.1	19.2	11,047
Unemployed	All	50.8	28.7	13.6	6.9			2,954
	Men	46.6	29.8	15.4	8.1			2,003
	Women	59.6	26.4	9.7	4.3			951
Joiners	All	40.0	24.1	18.9	17.0			33,740
	Men	29.1	24.7	22.9	23.2			16,059
	Women	50.0	23.5	15.2	11.3			17,681

Transitions between 1996 and 1997

		1997						
1996		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**41.8**	23.8	3.1	1.0	1.9	28.5	36,917
	Men	**35.8**	26.1	4.0	1.3	3.2	29.6	13,003
	Women	**45.0**	22.5	2.6	0.8	1.2	27.9	23,914
Q2	All	8.9	**51.0**	18.5	1.3	1.2	19.2	37,038
	Men	7.8	**48.6**	20.4	1.6	1.6	20.0	18,141
	Women	9.8	**53.3**	16.7	1.0	0.8	18.4	18,897
Q3	All	5.5	5.1	**59.0**	12.4	0.9	17.1	37,076
	Men	5.0	4.9	**59.5**	12.9	1.1	16.6	22,170
	Women	6.2	5.3	**58.3**	11.7	0.6	17.9	14,906
Q4	All	3.5	0.9	5.2	**72.2**	0.7	17.4	37,090
	Men	2.8	0.8	5.1	**73.3**	0.8	17.2	25,504
	Women	5.0	1.2	5.6	**69.8**	0.5	17.9	11,586
Unemployed	All	47.2	32.4	14.2	6.2			2,828
	Men	43.5	33.1	16.1	7.3			1,879
	Women	54.6	31.1	10.4	3.9			949
Joiners	All	44.4	21.6	17.4	16.7			32,084
	Men	36.0	20.6	20.2	23.2			14,356
	Women	51.3	22.3	15.0	11.4			17,728

APPENDIX FIVE
WEEKLY EARNINGS 1977-1983

Transitions between 1977 and 1978

		1978					
1977		***Q1***	***Q2***	***Q3***	***Q4***	***Leavers***	***Total***
Q1	All	**54.3**	10.6	2.3	0.9	31.9	42,158
	Men	**34.2**	18.3	7.4	3.7	36.4	9,277
	Women	**59.9**	8.4	0.8	0.2	30.6	32,881
Q2	All	6.4	**50.3**	13.7	2.9	26.8	42,042
	Men	3.7	**43.4**	19.8	5.0	28.1	21,742
	Women	9.3	**57.6**	7.1	0.5	25.5	20,300
Q3	All	2.0	11.3	**49.0**	15.2	22.5	42,269
	Men	1.9	10.1	**48.1**	17.2	22.7	34,889
	Women	2.5	16.9	**52.9**	5.9	21.7	7,380
Q4	All	1.0	2.2	13.9	**62.0**	20.8	42,334
	Men	0.9	2.2	13.8	**62.2**	20.8	38,573
	Women	2.0	2.6	15.0	**60.1**	20.2	3,761
Joiners	All	35.3	25.2	20.9	18.6		43,634
	Men	16.6	23.9	29.8	29.6		25,368
	Women	61.2	27.0	8.5	3.3		18,266

Transitions between 1978 and 1979

		1979					
1978		***Q1***	***Q2***	***Q3***	***Q4***	***Leavers***	***Total***
Q1	All	**52.4**	11.8	2.2	1.0	32.6	42,238
	Men	**32.2**	18.7	7.4	4.2	37.4	9,194
	Women	**58.0**	9.9	0.7	0.1	31.3	33,044
Q2	All	6.5	**49.3**	14.2	2.9	27.1	42,304
	Men	4.1	**42.1**	20.5	5.1	28.1	21,578
	Women	9.0	**56.9**	7.5	0.5	26.1	20,726
Q3	All	2.1	10.4	**48.3**	15.7	23.6	42,442
	Men	1.9	9.3	**47.3**	17.9	23.5	34,692
	Women	2.8	15.2	**52.8**	5.5	23.8	7,750
Q4	All	1.0	2.3	13.8	**61.4**	21.5	42,413
	Men	0.9	2.2	13.3	**61.9**	21.6	38,959
	Women	1.5	2.9	18.9	**56.2**	20.5	3,454
Joiners	All	36.2	24.9	20.6	18.3		44,434
	Men	17.2	23.0	29.6	30.2		25,117
	Women	60.9	27.3	8.9	2.8		19,317

Transitions between 1979 and 1980

		1980					
1979		*Q1*	*Q2*	*Q3*	*Q4*	*Leavers*	*Total*
Q1	All	**52.1**	11.1	2.4	1.1	33.4	42,259
	Men	**31.0**	18.1	7.7	4.1	39.1	9,203
	Women	**58.0**	9.1	0.9	0.3	31.8	33,056
Q2	All	7.6	**47.6**	14.2	2.9	27.7	42,291
	Men	4.5	**42.0**	19.6	5.1	28.8	20,681
	Women	10.6	**52.9**	9.1	0.9	26.6	21,610
Q3	All	1.9	12.0	**46.3**	16.5	23.3	42,419
	Men	1.6	11.4	**45.5**	18.0	23.5	34,151
	Women	3.1	14.6	**49.3**	10.3	22.7	8,268
Q4	All	0.9	2.7	15.3	**59.7**	21.4	42,481
	Men	0.9	2.7	15.3	**59.7**	21.4	39,413
	Women	1.4	2.9	15.2	**58.9**	21.6	3,068
Joiners	All	35.2	25.3	20.7	18.9		44,684
	Men	16.6	23.6	29.2	30.7		25,419
	Women	59.7	27.5	9.5	3.3		19,265

Transitions between 1980 and 1981

		1981					
1980		*Q1*	*Q2*	*Q3*	*Q4*	*Leavers*	*Total*
Q1	All	**54.6**	11.3	2.2	0.9	31.0	42,146
	Men	**33.2**	19.7	6.7	3.1	37.3	8,898
	Women	**60.3**	9.1	1.0	0.3	29.3	33,248
Q2	All	7.7	**48.3**	16.1	2.3	25.6	42,325
	Men	4.8	**44.2**	20.1	3.7	27.2	21,298
	Women	10.6	**52.5**	12.1	0.8	24.0	21,027
Q3	All	1.8	13.2	**46.0**	17.5	21.5	42,378
	Men	1.6	13.0	**46.7**	17.0	21.7	33,734
	Women	2.8	14.0	**43.4**	19.2	20.6	8,644
Q4	All	1.0	2.9	15.7	**61.6**	18.7	42,466
	Men	0.9	2.9	16.1	**61.5**	18.7	38,898
	Women	2.1	3.3	12.2	**62.8**	19.6	3,568
Joiners	All	35.5	25.0	20.8	18.7		43,058
	Men	17.3	23.8	29.3	29.5		24,433
	Women	59.3	26.6	9.5	4.6		18,625

Transitions between 1981 and 1982

		1982					
1981		*Q1*	*Q2*	*Q3*	*Q4*	*Leavers*	*Total*
Q1	All	**58.6**	10.0	1.9	0.8	28.8	42,733
	Men	**37.4**	18.4	6.1	3.0	35.1	9,089
	Women	**64.3**	7.7	0.7	0.2	27.1	33,644
Q2	All	6.5	**54.6**	12.9	2.3	23.7	42,824
	Men	4.1	**48.8**	18.1	3.8	25.1	22,492
	Women	9.1	**61.0**	7.1	0.6	22.2	20,332
Q3	All	1.7	11.2	**54.0**	13.0	20.1	42,887
	Men	1.4	10.7	**52.9**	14.9	20.2	34,046
	Women	3.2	13.3	**58.4**	5.7	19.5	8,841
Q4	All	0.8	1.9	12.9	**67.3**	17.1	42,956
	Men	0.7	1.8	12.7	**67.8**	17.1	37,927
	Women	1.9	2.3	14.9	**63.6**	17.2	5,029
Joiners	All	37.6	25.0	19.8	17.6		33,213
	Men	18.6	24.8	28.1	28.5		18,222
	Women	60.8	25.3	9.6	4.3		14,991

Transitions between 1982 and 1983

		1983					
1982		*Q1*	*Q2*	*Q3*	*Q4*	*Leavers*	*Total*
Q1	All	**57.7**	9.8	1.9	0.7	29.9	41,412
	Men	**37.6**	16.4	5.7	2.7	37.6	8,441
	Women	**62.9**	8.1	0.9	0.2	28.0	32,971
Q2	All	6.6	**55.1**	13.2	2.1	23.1	41,551
	Men	4.8	**49.7**	17.6	3.4	24.5	21,480
	Women	8.5	**60.9**	8.4	0.7	21.5	20,071
Q3	All	1.8	10.2	**55.4**	13.5	19.2	41,612
	Men	1.6	10.0	**53.9**	15.0	19.5	32,558
	Women	2.3	10.7	**60.8**	8.2	18.0	9,054
Q4	All	0.9	2.0	11.8	**68.1**	17.1	41,632
	Men	0.8	1.9	12.2	**67.9**	17.1	37,089
	Women	1.3	2.8	8.6	**70.6**	16.8	4,543
Joiners	All	38.8	25.8	19.2	16.3		32,018
	Men	20.1	26.3	27.1	26.5		17,448
	Women	61.1	25.1	9.7	4.1		14,570

Transitions between 1984 and 1985

		1985						
1984		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**55.8**	11.4	2.3	1.0	4.8	24.7	39,449
	Men	**33.5**	18.5	6.9	3.5	9.4	28.3	8,614
	Women	**62.0**	9.4	1.1	0.3	3.5	23.7	30,835
Q2	All	6.1	**55.1**	13.7	2.5	4.3	18.3	39,566
	Men	4.1	**48.8**	18.5	4.1	5.4	19.0	20,025
	Women	8.2	**61.5**	8.8	0.8	3.2	17.5	19,541
Q3	All	1.8	9.1	**55.2**	14.6	2.7	16.6	39,634
	Men	1.6	8.9	**52.9**	16.8	2.9	16.9	30,027
	Women	2.6	9.5	**62.4**	7.6	2.1	15.9	9,607
Q4	All	0.9	2.0	12.1	**67.5**	1.9	15.7	39,650
	Men	0.8	2.0	11.7	**68.0**	1.9	15.7	35,187
	Women	1.9	2.5	15.2	**63.4**	1.4	15.7	4,463
Unemployed	All	44.7	32.0	16.3	7.1			4,211
	Men	33.2	35.1	21.7	9.9			2,747
	Women	66.3	26.0	6.1	1.6			1,464
Joiners	All	40.6	24.1	18.5	16.7			27,562
	Men	21.2	23.6	26.6	28.7			14,180
	Women	61.2	24.7	10.1	4.0			13,382

Transitions between 1985 and 1986

		1986						
1985		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**56.0**	11.8	2.3	0.8	5.2	24.0	38,610
	Men	**35.1**	18.4	6.6	2.8	10.5	26.5	8,388
	Women	**61.8**	9.9	1.1	0.2	3.7	23.3	30,222
Q2	All	6.2	**55.7**	13.7	2.1	4.5	17.8	38,666
	Men	4.0	**50.6**	18.1	3.7	5.4	18.2	19,045
	Women	8.2	**60.6**	9.5	0.6	3.6	17.5	19,621
Q3	All	1.7	9.7	**56.1**	14.5	2.8	15.1	38,791
	Men	1.3	9.9	**54.7**	16.2	3.1	14.9	28,635
	Women	2.6	9.4	**60.1**	10.0	2.2	15.7	10,156
Q4	All	0.8	1.9	12.0	**68.9**	2.0	14.4	38,798
	Men	0.6	1.8	12.3	**69.1**	2.0	14.2	34,440
	Women	2.0	2.8	9.6	**67.7**	1.7	16.2	4,358
Unemployed	All	48.7	29.7	14.9	6.6			4,632
	Men	38.6	33.6	18.6	9.2			3,081
	Women	68.7	22.0	7.6	1.7			1,551
Joiners	All	38.3	23.7	19.8	18.3			31,587
	Men	19.3	22.3	27.8	30.5			16,756
	Women	59.7	25.2	10.7	4.4			14,831

Transitions between 1986 and 1987

		1987						
1986		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**55.4**	12.1	2.1	0.7	5.1	24.6	39,276
	Men	**34.2**	19.2	5.5	2.5	11.0	27.5	8,737
	Women	**61.5**	10.0	1.1	0.2	3.4	23.7	30,539
Q2	All	5.8	**55.5**	14.3	2.1	3.9	18.4	39,455
	Men	3.8	**50.4**	18.7	3.5	4.8	18.8	19,403
	Women	7.8	**60.4**	10.1	0.8	3.1	17.9	20,052
Q3	All	1.5	9.6	**56.5**	14.4	2.7	15.2	39,544
	Men	1.3	9.4	**55.0**	16.4	3.0	14.8	29,127
	Women	2.2	10.1	**60.7**	8.8	2.0	16.3	10,417
Q4	All	0.7	1.8	11.7	**69.9**	2.0	13.8	39,588
	Men	0.7	1.7	11.9	**70.1**	2.1	13.4	34,757
	Women	1.2	2.3	10.3	**68.5**	1.4	16.3	4,831
Unemployed	All	51.1	29.7	14.2	5.1			5,119
	Men	41.1	33.1	18.6	7.2			3,335
	Women	69.7	23.2	6.1	1.1			1,784
Joiners	All	39.1	23.7	19.3	17.8			31,364
	Men	20.1	23.0	26.5	30.4			15,502
	Women	57.6	24.4	12.3	5.6			15,862

Transitions between 1987 and 1988

		1988						
1987		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**54.9**	12.6	2.3	0.8	4.5	25.0	39,824
	Men	**34.2**	19.1	6.0	2.6	9.7	28.4	8,817
	Women	**60.7**	10.7	1.2	0.2	3.0	24.1	31,007
Q2	All	6.8	**54.7**	15.3	2.1	3.0	18.0	40,107
	Men	4.1	**50.1**	20.0	3.6	3.7	18.5	19,480
	Women	9.3	**59.1**	10.9	0.8	2.3	17.6	20,627
Q3	All	1.9	10.1	**55.8**	15.8	1.8	14.6	40,249
	Men	1.4	10.2	**55.5**	17.0	1.9	14.0	28,998
	Women	3.0	9.7	**56.8**	12.9	1.4	16.1	11,251
Q4	All	0.7	1.7	12.2	**71.0**	1.4	12.9	40,346
	Men	0.6	1.6	12.6	**71.1**	1.5	12.6	34,999
	Women	1.6	1.9	9.5	**70.6**	1.1	15.2	5,347
Unemployed	All	47.8	30.6	14.9	6.7			5,272
	Men	38.0	33.5	19.2	9.3			3,592
	Women	68.7	24.4	5.8	1.1			1,680
Joiners	All	39.3	24.9	19.7	16.1			34,915
	Men	20.4	24.8	27.6	27.2			17,208
	Women	57.7	25.1	12.0	5.2			17,707

Transitions between 1988 and 1989

		1989						
1988		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**52.8**	11.4	2.2	0.7	3.3	29.6	41,853
	Men	**33.8**	17.5	5.3	1.9	8.5	33.1	9,308
	Women	**58.2**	9.7	1.3	0.3	1.9	28.7	32,545
Q2	All	7.6	**53.2**	14.5	2.1	2.3	20.3	42,024
	Men	5.0	**49.7**	18.3	3.3	3.1	20.7	20,465
	Women	10.1	**56.6**	11.0	0.8	1.6	19.9	21,559
Q3	All	1.9	10.6	**54.5**	14.7	1.3	16.9	42,114
	Men	1.6	10.6	**54.1**	16.1	1.4	16.1	30,356
	Women	2.8	10.7	**55.5**	11.0	1.0	19.0	11,758
Q4	All	0.9	1.8	11.7	**68.9**	0.8	15.9	42,159
	Men	0.8	1.7	12.2	**69.2**	0.9	15.2	35,743
	Women	1.5	2.4	8.9	**67.3**	0.6	19.3	6,416
Unemployed	All	41.8	33.7	17.1	7.4			3,676
	Men	27.2	38.9	23.2	10.7			2,368
	Women	68.3	24.4	6.0	1.3			1,308
Joiners	All	41.0	24.5	19.0	15.5			31,354
	Men	21.9	24.8	26.8	26.5			14,952
	Women	58.4	24.2	11.9	5.5			16,402

Transitions between 1989 and 1990

		1990						
1989		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**55.6**	12.2	2.2	0.9	2.2	27.0	40,884
	Men	**37.4**	18.8	5.8	3.0	4.3	30.7	8,856
	Women	**60.6**	10.4	1.2	0.3	1.6	26.0	32,028
Q2	All	7.5	**54.7**	14.9	2.2	2.1	18.6	41,296
	Men	5.1	**50.3**	19.2	3.5	3.0	18.9	20,247
	Women	9.7	**59.0**	10.8	0.9	1.3	18.3	21,049
Q3	All	1.9	11.3	**56.5**	14.2	1.4	14.8	41,473
	Men	1.5	11.1	**55.7**	16.0	1.7	14.1	29,573
	Women	2.8	11.8	**58.5**	9.7	0.8	16.3	11,900
Q4	All	0.7	1.8	12.2	**71.0**	0.9	13.4	41,497
	Men	0.6	1.7	12.4	**71.5**	1.0	12.8	34,690
	Women	1.5	2.2	10.9	**68.4**	0.6	16.5	6,807
Unemployed	All	41.6	35.2	16.8	6.3			2,500
	Men	28.6	41.4	21.7	8.3			1,667
	Women	67.7	22.9	7.1	2.3			833
Joiners	All	40.9	24.3	18.5	16.3			34,823
	Men	21.6	24.6	26.2	27.5			16,627
	Women	58.5	24.0	11.4	6.1			18,196

Transitions between 1991 and 1992

		1992						
1991		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**57.6**	10.6	2.2	0.9	3.4	25.3	43,300
	Men	**40.5**	14.9	5.1	2.6	7.8	29.1	9,259
	Women	**62.2**	9.5	1.4	0.4	2.3	24.2	34,041
Q2	All	7.9	**57.3**	13.0	1.6	4.1	16.1	43,385
	Men	5.1	**53.0**	16.8	2.5	6.1	16.5	20,152
	Women	10.4	**61.0**	9.7	0.8	2.4	15.8	23,233
Q3	All	2.4	10.4	**58.5**	12.5	3.1	13.1	43,402
	Men	1.8	10.4	**57.5**	13.8	3.8	12.8	29,798
	Women	3.7	10.4	**60.8**	9.6	1.6	13.7	13,604
Q4	All	1.3	1.7	10.5	**71.2**	2.3	13.0	43,444
	Men	1.0	1.6	10.9	**71.0**	2.5	13.0	34,856
	Women	2.5	2.0	8.7	**72.2**	1.3	13.2	8,588
Unemployed	All	35.6	37.4	18.9	8.1			2,618
	Men	26.1	39.4	23.3	11.2			1,705
	Women	53.2	33.7	10.6	2.4			913
Joiners	All	41.7	23.7	18.6	15.9			26,037
	Men	23.1	24.0	26.2	26.6			12,237
	Women	58.2	23.5	11.9	6.4			13,800

Transitions between 1992 and 1993

		1993						
1992		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**56.9**	10.6	2.2	1.0	3.4	26.0	41,747
	Men	**39.9**	15.6	4.9	2.8	7.5	29.4	8,930
	Women	**61.5**	9.2	1.4	0.5	2.2	25.1	32,817
Q2	All	7.3	**57.8**	13.0	1.7	4.1	16.1	41,849
	Men	4.7	**52.8**	16.8	2.7	6.1	16.8	19,318
	Women	9.5	**62.0**	9.8	0.8	2.4	15.5	22,531
Q3	All	2.2	9.5	**58.8**	12.2	3.3	14.0	41,890
	Men	1.6	9.6	**57.4**	13.8	3.9	13.7	28,391
	Women	3.5	9.5	**61.7**	8.8	1.9	14.6	13,499
Q4	All	1.3	1.3	9.6	**71.3**	2.5	14.0	41,829
	Men	1.1	1.2	10.1	**71.2**	2.7	13.6	33,068
	Women	2.2	1.7	7.4	**71.7**	1.3	15.7	8,761
Unemployed	All	39.0	35.4	18.2	7.5			3,240
	Men	28.9	38.0	23.2	10.0			2,125
	Women	58.1	30.5	8.7	2.7			1,115
Joiners	All	42.3	23.5	18.4	15.8			24,639
	Men	23.4	24.2	26.2	26.2			11,151
	Women	58.0	23.0	11.9	7.1			13,488

Transitions between 1993 and 1994

		1994						
1993		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**59.0**	10.8	1.9	1.0	2.9	24.4	39,957
	Men	**41.8**	16.1	4.3	2.8	6.5	28.5	8,523
	Women	**63.7**	9.4	1.3	0.5	1.9	23.2	31,434
Q2	All	7.3	**60.4**	13.6	1.4	2.9	14.3	40,090
	Men	4.5	**56.1**	18.1	2.3	4.3	14.6	18,225
	Women	9.6	**64.0**	9.8	0.7	1.8	14.1	21,865
Q3	All	2.1	8.9	**61.7**	12.7	2.5	12.2	40,109
	Men	1.5	8.7	**60.4**	14.4	3.0	11.9	26,762
	Women	3.2	9.4	**64.2**	9.1	1.4	12.8	13,347
Q4	All	1.1	1.4	9.4	**74.5**	1.9	11.8	40,164
	Men	0.8	1.3	9.7	**74.6**	2.2	11.4	31,352
	Women	2.0	1.7	8.1	**73.9**	0.9	13.4	8,812
Unemployed	All	38.2	34.8	19.5	7.5			3,997
	Men	27.9	37.5	24.6	10.0			2,682
	Women	59.2	29.3	9.0	2.5			1,315
Joiners	All	41.3	24.1	18.6	16.0			26,787
	Men	22.8	25.6	25.3	26.3			12,234
	Women	56.9	22.8	12.9	7.4			14,553

Transitions between 1994 and 1995

		1995						
1994		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**56.8**	11.5	2.2	0.8	2.7	26.0	40,368
	Men	**40.7**	15.9	4.8	2.1	5.6	30.9	8,580
	Women	**61.1**	10.3	1.5	0.5	1.9	24.6	31,788
Q2	All	7.7	**58.4**	14.0	1.7	2.5	15.8	40,485
	Men	4.8	**53.5**	18.8	2.7	3.7	16.6	18,450
	Women	10.2	**62.4**	9.9	0.8	1.5	15.1	22,035
Q3	All	2.5	9.3	**60.0**	13.1	1.8	13.2	40,487
	Men	1.7	9.2	**58.8**	15.3	2.1	12.9	26,657
	Women	4.1	9.6	**62.2**	9.0	1.3	13.8	13,830
Q4	All	1.4	1.5	9.5	**72.9**	1.4	13.3	40,546
	Men	1.0	1.4	9.9	**73.0**	1.6	13.1	31,406
	Women	2.9	1.7	8.2	**72.2**	0.8	14.2	9,140
Unemployed	All	38.3	35.8	18.2	7.7			3,695
	Men	28.8	38.5	22.6	10.1			2,529
	Women	59.1	29.8	8.7	2.5			1,166
Joiners	All	42.9	23.6	18.3	15.2			24,795
	Men	25.6	24.9	24.9	24.5			11,241
	Women	57.3	22.5	12.8	7.4			13,554

Transitions between 1995 and 1996

		1996						
1995		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**55.8**	10.6	3.3	2.0	2.6	25.6	39,716
	Men	**40.2**	15.5	6.2	4.0	5.7	28.5	8,747
	Women	**60.3**	9.3	2.5	1.5	1.7	24.7	30,969
Q2	All	9.9	**56.7**	12.4	2.0	2.6	16.4	39,836
	Men	6.1	**53.4**	16.5	3.0	3.6	17.3	17,907
	Women	13.0	**59.3**	9.1	1.1	1.8	15.7	21,929
Q3	All	2.1	11.4	**59.0**	12.3	1.8	13.4	39,877
	Men	1.3	10.9	**58.2**	14.4	2.1	13.1	26,031
	Women	3.4	12.5	**60.4**	8.4	1.3	13.9	13,846
Q4	All	0.9	1.7	10.7	**71.9**	1.5	13.2	39,906
	Men	0.7	1.6	11.1	**72.1**	1.7	12.8	30,705
	Women	1.5	2.3	9.4	**71.3**	1.1	14.4	9,201
Unemployed	All	38.8	36.7	16.7	7.8			3,105
	Men	28.2	40.9	21.0	9.9			2,098
	Women	61.1	28.1	7.5	3.3			1,007
Joiners	All	40.2	24.1	19.2	16.4			28,088
	Men	23.6	25.5	25.5	25.4			13,192
	Women	55.0	22.9	13.7	8.5			14,896

Transitions between 1996 and 1997

		1997						
1996		***Q1***	***Q2***	***Q3***	***Q4***	***Unemployed***	***Leavers***	***Total***
Q1	All	**54.8**	12.3	2.0	0.7	1.7	28.5	39,832
	Men	**38.9**	17.4	4.3	1.9	3.5	33.9	8,888
	Women	**59.4**	10.8	1.3	0.3	1.1	27.0	30,944
Q2	All	7.3	**54.9**	14.1	1.6	1.4	20.6	39,957
	Men	4.4	**50.6**	18.0	2.4	2.1	22.4	18,452
	Women	9.8	**58.6**	10.8	0.9	0.8	19.1	21,505
Q3	All	2.6	9.0	**56.9**	13.0	1.0	17.6	39,985
	Men	1.5	8.5	**56.6**	15.0	1.2	17.3	25,868
	Women	4.6	9.8	**57.5**	9.3	0.6	18.2	14,117
Q4	All	1.8	1.4	8.9	**69.3**	0.8	17.8	40,051
	Men	1.0	1.2	9.3	**70.4**	0.8	17.3	30,334
	Women	4.3	2.2	7.8	**65.9**	0.5	19.2	9,717
Unemployed	All	40.0	36.5	17.2	6.2			2,705
	Men	29.6	40.8	21.5	8.1			1,821
	Women	61.5	27.7	8.4	2.4			884
Joiners	All	41.6	23.9	18.9	15.6			24,243
	Men	24.7	25.1	25.0	25.1			11,230
	Women	56.2	22.9	13.5	7.4			13,013

APPENDIX 6

Weekly earnings – progression of low paid workers in 1977

		1977	*1978*	*1979*	*1980*	*1981*	*1982*	*1983*
All								
	Q1	100	54.3	43.3	37.1	34.0	30.7	27.0
	Q2		10.6	13.6	13.4	13.0	12.2	11.2
	Q3		2.3	3.4	4.2	5.0	5.1	5.5
	Q4		0.9	1.3	1.7	1.7	2.0	2.1
Leavers			31.9	38.4	43.6	46.3	50.0	54.3
Base (100%)		42,158	42,158	42,158	42,158	42,158	42,158	42,158
Males								
	Q1	100	34.2	21.2	13.7	11.4	9.3	7.5
	Q2		18.3	20.9	18.8	18.0	15.6	13.4
	Q3		7.4	10.7	13.3	14.8	14.9	14.4
	Q4		3.7	5.3	6.3	6.2	7.4	7.6
Leavers			36.4	41.8	47.9	49.6	52.8	57.1
Base (100%)		9,277	9,277	9,277	9,277	9,277	9,277	9,277
Females								
	Q1	100	59.9	49.5	43.7	40.4	36.7	32.5
	Q2		8.4	11.5	11.9	11.6	11.2	10.6
	Q3		0.8	1.3	1.6	2.2	2.3	2.9
	Q4		0.2	0.2	0.4	0.5	0.5	0.5
Leavers			30.6	37.5	42.4	45.3	49.3	53.5
Base (100%)		32,881	32,881	32,881	32,881	32,881	32,881	32,881

Weekly earnings – progression of low paid workers in 1984

		1984	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*
All								
	Q1	100	55.8	45.8	38.5	34.0	30.1	27.8
	Q2		11.4	14.1	15.6	15.7	14.6	14.4
	Q3		2.3	3.2	4.2	5.6	6.3	6.9
	Q4		1.0	1.2	1.4	1.8	2.2	2.6
Unemployed			4.8	5.5	5.1	3.7	2.8	2.3
Leavers			24.7	30.3	35.2	39.2	44.0	46.0
Base (100%)		39,449	39,449	39,449	39,449	39,449	39,449	39,449
Males								
	Q1	100	33.5	23.5	16.5	13.2	10.4	9.2
	Q2		18.5	21.3	21.7	19.6	17.4	15.7
	Q3		6.9	9.4	11.1	14.5	15.0	15.8
	Q4		3.5	4.2	5.0	6.1	7.1	7.9
Unemployed			9.4	9.8	9.4	7.0	5.9	5.1
Leavers			28.3	31.8	36.2	39.6	44.2	46.3
Base (100%)		8,614	8,614	8,614	8,614	8,614	8,614	8,614
Females								
	Q1	100	62.0	52.0	44.7	39.8	35.6	33.0
	Q2		9.4	12.1	13.9	14.7	13.8	14.1
	Q3		1.1	1.5	2.2	3.1	3.9	4.4
	Q4		0.3	0.3	0.4	0.6	0.8	1.1
Unemployed			3.5	4.3	3.8	2.8	2.0	1.6
Leavers			23.7	29.9	34.9	39.1	44.0	45.9
Base (100%)		30,835	30,835	30,835	30,835	30,835	30,835	30,835

Weekly earnings – progression of low paid workers in 1991

		1991	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*
All								
	Q1	100	57.6	45.8	39.6	33.9	30.5	26.1
	Q2		10.6	13.0	14.2	14.7	13.7	13.6
	Q3		2.2	2.7	3.7	4.4	5.2	5.2
	Q4		0.9	1.0	1.2	1.5	2.0	1.9
Unemployed			3.4	4.3	3.7	3.3	3.1	2.2
Leavers			25.3	33.2	37.6	42.3	45.5	51.0
Base (100%)		43,300	43,300	43,300	43,300	43,300	43,300	43,300
Males								
	Q1	100	40.5	27.7	20.7	15.7	13.3	9.8
	Q2		14.9	17.6	18.0	16.9	16.1	14.5
	Q3		5.1	5.7	8.1	9.3	10.4	10.4
	Q4		2.6	2.8	3.1	3.8	4.4	4.8
Unemployed			7.8	9.8	8.5	7.8	7.4	5.5
Leavers			29.1	36.4	41.6	46.6	48.3	54.9
Base (100%)		9,259	9,259	9,259	9,259	9,259	9,259	9,259
Females								
	Q1	100	62.2	50.7	44.8	38.8	35.2	30.5
	Q2		9.5	11.8	13.1	14.1	13.0	13.4
	Q3		1.4	1.9	2.5	3.0	3.7	3.7
	Q4		0.4	0.5	0.7	0.8	1.4	1.1
Unemployed			2.3	2.8	2.5	2.1	1.9	1.4
Leavers			24.2	32.3	36.5	41.1	44.7	50.0
Base (100%)		34,041	34,041	34,041	34,041	34,041	34,041	34,041