Department of Social Security

Research Report No 132

Earnings Top-up Evaluation: Employers' Reactions

Part One
Surveys of Employers

Stephen Lissenburgh

Part Two
Econometric Analysis

Chris Hasluck and Anne Green

A report of research carried out by the Policy Studies Institute (PSI) and the Institute for Employment Research, University of Warwick, as part of the evaluation of the Earnings Top-up Pilots, on behalf of the Department of Social Security

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Part One

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PREFACE

Earnings Top-up (ETU) was an in-work benefit available to low paid workers without children. ETU was piloted from October 1996 to October 1999 in eight areas across Britain. This volume is part of a set of seven final reports from the evaluation of the ETU pilot. (Baseline statistics were published in 1999, in DSS Research Report No. 95, and interim evaluation findings were published in March 2000, DSS Research Reports Nos. 112 and 113).

The evaluation was conducted by researchers at the Policy Studies Institute (PSI), the Centre for Research in Social Policy (CRSP) at Loughborough University and the Institute for Employment Research (IER) at the University of Warwick. Outline details of the evaluation are provided in this report. Further information on the evaluation can be found in the six other final reports from the ETU evaluation:

Earnings Top-up Evaluation: The Synthesis Report (Marsh, A., 2001, Department of Social Security Research Report No. 135). This report draws together the main results of the evaluation in one volume. The aim of this report is to provide a relatively short and non-technical overview of the evaluation's conclusions drawn from all strands of the evaluation. It is intended that this will help readers identify the sources to which they can turn for fuller information on the evaluation.

Earnings Top-up Evaluation: Employers' Reactions (Lissenburgh, S., Hasluck, C and Green A., 2001, Department of Social Security Research Report No. 132). This report is in two parts. The first presents findings from the surveys with employers carried out by PSI during the ETU pilot. It explores employer's experiences of ETU focusing on wage effects and hours worked. The second part is econometric analysis, undertaken by IER, which considers the effects of ETU on employers' behaviour and the recruitment process.

Earnings Top-up Evaluation: Effects on Low Paid Workers (Marsh, A., Stephenson, A., Dorsett, R and Elias, P., 2001, Department of Social Security Research Report No. 134). This report is in two parts. The first section, by PSI, presents findings of the surveys conducted with low paid workers and ETU recipients throughout the pilot. It explores the characteristics of these workers and the effect that ETU had on their lives and examines the reasons for non take-up of ETU among eligible workers. The second part, by IER, analyses the same data to explore the wider labour market and potential long-term effects of ETU.

Earnings Top-up Evaluation: Qualitative Evidence (Heaver, C. Roberts, S. Stafford, B. and Vincent, J. 2001, Department of Social Security Research Report No. 133). This report presents the findings of qualitative research conducted by CRSP as part of the evaluation of ETU. The report has three parts focusing on ex-recipients of ETU, self-employed recipients and unsuccessful ETU applicants.

Earnings Top-up Evaluation: Staff Views (Vincent J., Heaver, C., Roberts, S. and Stafford, B., 2001, Department of Social Security In-house Research Report No. 74). This report presents the findings of the staff panels drawn from the eight pilot areas, and from central administrative/ processing staff from the Benefits Agency and Employment Service staff over the three years of the pilot. The report focuses on staff's views of ETU and the way in which it operated within the pilot areas. It also considers changes over time from the beginning of the pilot to its end in 1999.

Earnings Top-up Evaluation: Labour Market Conditions (Green, A. 2001, Department of Social Security In-house Research Report No. 75) This report, by IER, draws out the contrasts and similarities in labour market conditions across local areas included in the ETU pilot.

Previously published research in the ETU series include:

Low Paid Work in Britain (Marsh, A., Callender, C., Finlayson, L., Ford, R., Green, A and White, M., 1999, Department of Social Security Research Report No. 95). This report presents the findings from the first surveys conducted prior to the introduction of Earnings Top-up, with employers low paid workers and medium term unemployed people. Baseline data on the characteristics of these groups are presented, including health and education, wage expectations, earnings, wage setting behaviour and recruitment. Preliminary information on the labour market profiles of the evaluation areas is also included.

The First Effects of Earnings Top-up (Finlayson, L., Ford, R., Marsh, A., Smith, A., and White, M., 1999, Department of Social Security Research Report No. 112). This report presents the findings from surveys conducted in 1997, almost one year after the introduction of ETU with employers, low paid workers, medium term unemployed people and ETU recipients. The report presents interim analysis of the first effects of ETU over this period.

Piloting Change (Vincent, J., Abbott, D., Heaver, C., Maguire, S., Miles, A., Stafford, D., 1999, Department of Social Security Research Report No. 113). This report presents the interim findings from three components of the ETU qualitative research: two group discussions with the Employment Service and Benefits Agency staff; face-to-face interviews with ETU recipients; and telephone interviews with employers.

This report consists of two parts, both of which provide crucial evidence that informs the conclusions of the evaluation of ETU:

Part One, by **Stephen Lissenburgh** contains the findings from the surveys with employers carried out by PSI during the ETU pilot. This explores employers' experiences of ETU, focusing on wage effects and hours worked.

Part Two, by **Chris Hasluck** and **Anne Green** contains econometric analysis, carried out by IER. This outlines the effects of ETU on employers' behaviour and the recruitment process.

SUMMARY

Part One - Surveys of Employers

1 Introduction

Earnings Top-up (ETU) was introduced in October 1996 in eight areas of the country for a three-year pilot period. It was an in-work benefit for people without dependent children. There were two different rates of benefit (Scheme A and Scheme B) and it was available to employed and self-employed people who worked at 16 or more hours per week in jobs lasting at least five weeks. It was paid at a fixed rate for a period of 26 weeks and the maximum amount of benefit payable was reduced by 70 pence for each pound above the threshold. The two main objectives of ETU were to improve the incentive for unemployed people to take low-paid work of 16 or more hours a week and to help low-paid workers to avoid unemployment by raising their incomes relative to out-of-work support.

The programme of evaluative research was designed to compare eight test areas with four more areas chosen as 'control areas' at different points over the three-year period. The evaluation of ETU included field surveys of low-paid workers, unemployed people, ETU recipients and employers together with ongoing analysis of official administrative statistics, studies of local labour market conditions, and in-depth interviews with key participants. The focus here is on one part of the evaluation: the surveys of employers. The initial sample was interviewed in summer 1996 and again in summer 1997. In 1999, employers who had been interviewed in both 1996 and 1997 were re-interviewed. These employers constitute a 'panel' from whom data was obtained at three points in time. The 1999 survey also interviewed a cross-section of employers with the same characteristics as the initial sample interviewed in 1996. This report discusses the panel sample and also compares the 1996 and 1999 cross-section surveys.

The main objective of the employers' strand of the ETU pilot evaluation was to assess the impact of the benefit on employers' wage-setting and labour recruitment behaviour. It was possible that employers would become aware of ETU and adjust their behaviour as a consequence. They might have been expected to target their recruitment on those eligible for the benefit at the expense of existing and prospective non-eligible employees (*a substitution effect*) or to have held down or even reduced their wage offers (*a wage effect*) in response to the new benefit. However, it was more likely that any effect would come via the operation of the labour market at the local level. If ETU attracted a greater number of people into the labour market at lower wages then according to the

theory of labour supply this increase in the supply of labour would lead to a reduction in market wage offers and an expansion in employment, other things being equal.

If employers' behaviour was affected by the introduction of ETU, then a number of outcomes might therefore be expected, notably:

- *Lower wages* - this is most likely to manifest itself as a moderation in the rate of increase in wage offers in the pilot areas (Schemes A and B) compared with the Control areas, particularly in the semi-skilled/unskilled and clerical/sales job groups and within low-paid employment.
- *Higher employment rates* - this is likely to be seen in a willingness of employers to accommodate (potential) employees who might qualify for the new benefit, for instance, by adjusting their hours of work. This might also be seen in a greater proportion of employees working 16 hours per week or more in 1999 compared with 1996 in the pilot areas but not the control areas.
- *New jobs* - recruitment, particularly at low hourly rates of pay, might also be expected to have increased in response to ETU. Some employees may have been able to enter the labour market at wage offers lower than they would otherwise have accepted in the absence of ETU. In addition, employers may have been able to create new jobs as a result of ETU, thereby opening up new lines of profit for their enterprise, and be more able to recruit to 'hard-to-fill' vacancies as a result of the new benefit.
- *Employment policy* - ETU might also be expected to have had some effect on employers' levels of awareness and experience of in-work benefits.

2 Main characteristics of the employers in 1999

Type of industry and sector

As in 1996, most establishments were in the private sector (82 per cent). A quarter of the employers (27 per cent) were in distribution industries, while 14 per cent were in hotel and catering and 12 per cent were in manufacturing. The majority of establishments (61 per cent) were independent, in that they did not form part of a larger organisation, while a quarter (27 per cent) were branches of a larger organisation and the remaining 12 per cent were the Head Office of a larger group (Section 2.1).

The workforce

Employers were asked in detail about employment in three relatively low-paying groups:

- semi-skilled and unskilled employees;
- skilled and craft employees;
- clerical and sales employees.

Employers in the hotel and catering industries had a predominantly semi-skilled/unskilled workforce (57 per cent). Those in agriculture, mining or construction had the highest proportion of skilled/craft employees

(41 per cent), while employers in distribution and public administration each had a high proportion of their workforce made up of clerical/sales employees (41 per cent) (Section 2.2).

Wages

Whether ETU had any effect on wage offers would depend partly on the way in which pay levels are set and the influences on this. More than half of the employers interviewed in 1999 (55 per cent) said 'the pay individuals are willing to work for' influenced their wage-setting behaviour; four out of ten (42 per cent) mentioned 'the pay offered by other local employers' and 'national agreements and national pay trends'; and a similar proportion (38 per cent) said 'the availability or scarcity of labour' had some influence on the rates of pay they offered to employees. With the exception of 'national agreements and national pay trends', these most commonly mentioned influences on levels of pay offered by employers could allow ETU to have an effect through the workings of the local labour market (Section 2.3).

Another factor that could influence the potential for ETU to have a 'wage effect' is the extent to which employers have wage policy autonomy. Overall, eight out of ten employers (79 per cent) had local autonomy to determine pay levels (Section 2.3).

Recruitment

The ability of ETU to have an effect on recruitment through a 'substitution effect', whereby employers may target their recruitment on those eligible for the benefit at the expense of existing non-eligible employees, would depend partly on employers' autonomy in recruitment procedures. Overall, eight out of ten employers (80 per cent) had local autonomy in their recruitment procedures (Section 2.4).

3 Changes since 1996 – a descriptive analysis

Workforce and recruitment

Among the job groups where ETU would be expected to have its greatest effect – semi/unskilled and clerical/sales jobs – there was mixed evidence regarding employment effects among the panel sample of employers. Levels of semi/unskilled employment were maintained between 1996 and 1999 in the pilot areas but fell substantially in the Control areas, a difference consistent with an ETU effect. However, clerical/sales employment grew more strongly in Control than in pilot areas, contrary to expectation (Section 3.1).

It was also expected that ETU may have an effect on labour turnover. Recruitment would be expected to increase at the lower end of the wage distribution in response to ETU and some employees may find they are able to stay in jobs longer because of the new benefit, thereby reducing termination of employment. Termination rates in semi/unskilled employment were indeed lower in the ETU pilot than in the Control areas in 1999. Whereas termination rates in this job group were 42 per cent in Control areas, they were 29 per cent in Scheme B areas and 26 per cent in Scheme A areas. Contrary to expectation, however, recruitment rates were also lower for semi/unskilled employment in the

pilot areas, running at 35 per cent in both Scheme A and Scheme B areas compared with 47 per cent in the Control areas (Section 3.1).

Hours of work

Entitlement to ETU begins at 16 hours per week and there is an extra credit available to those who work for 30 or more hours per week. It might be expected, therefore, that employers in ETU areas would experience an increase in the proportion of their employees working 16 to 29 hours per week or 30 hours or more per week, rather than 1 to 15 hours per week, compared to employers in the Control areas. The only clear evidence to support this contention related to maintenance of full-time working in Scheme A areas, compared to Scheme B and Control areas. In both Scheme B and Control areas the proportion of semi/unskilled employees who worked 30 hours or more per week fell quite sharply from 1996 to 1999, a decline from 63 per cent to 54 per cent in Scheme B areas and from 65 per cent to 52 per cent in Control areas. No such decline took place in Scheme A areas, however, so that by 1999 the proportion of semi/unskilled employees who worked full-time in these areas (61 per cent) was higher than in Scheme B and Control areas (Section 3.2).

Pay and the extent of low pay

The introduction of ETU was expected to constrain wage growth among recent low-paid recruits in the pilot relative to the Control areas. Overall, the average starting wage of employers' most recent low-paid recruit increased from £3.18 per hour in 1996 to £3.47 in 1999. This wage growth was more limited in Scheme A areas than elsewhere, rising from £3.24 per hour to £3.39 (an increase of 5 per cent), compared with wage growth of 11 and 12 per cent respectively in Scheme B and Control areas. As expected, the starting wage paid to employers' most recent low-paid recruit was heavily influenced by the National Minimum Wage, introduced in April 1999. Four out of 10 employers (38 per cent) who recruited someone at £4 per hour or below in the past year in 1999 did so at the adult minimum wage of £3.60 per hour (Table 3.19). This proportion did not vary by evaluation area, but Scheme A employers were more likely than those in other areas to pay their low-paid recruits less than £3.60 per hour and less likely to pay them more than £3.60 per hour (29 per cent, as against 41 per cent in Control areas). These findings are suggestive of an ETU 'wage effect' for low-paid recruits in Scheme A areas (Section 3.3).

Social security benefits

There was a high level of general awareness of in-work benefits among the employers interviewed but less than a third (32 per cent) reported actual experience of their lower paid employees being entitled to in-work benefits (Section 3.4).

Awareness of ETU increased between 1996 and 1999, especially in Scheme B areas. However, only six per cent of employers in the pilot areas interviewed in 1999 reported any actual experience of ETU. Knowledge of the eligibility criteria for ETU was low even among those who said they had heard of ETU and was no higher than it had been in 1997 (Section 3.4).

4 Assessing the impact of ETU – multivariate analyses

Multivariate analyses, which control systematically for differences between employers, were carried out to provide a robust test of ETU's impact on wages and employment.

Change in hourly wages of semi-skilled/unskilled and clerical/sales employees

ETU had no impact on the change in wages of semi-skilled/unskilled employees between 1996 and 1999, nor on the change in wages of clerical/sales employees between 1996 and 1999. Where employers had become *aware* of ETU by 1999, however, whereas they had not been aware in 1996, this was associated with the payment of lower wage increases to clerical/sales employees. This suggests that where employers show increased awareness of ETU, the benefit is more likely to restrain wage growth (Section 4.1).

Change in the proportion of low-paid semi/unskilled and clerical/sales employment

If ETU had exerted a 'wage effect' this should be manifested in an increase in the proportion of low-paid employment within the semi/unskilled and clerical/sales job groups in the pilot relative to the Control areas. ETU had no effect on the change between 1996 and 1999 in the proportion of semi/unskilled employees who were low-paid. Increased *awareness* of ETU, however, was again associated with a change consistent with theoretical expectations - where employers were aware of ETU in 1999 whereas they had not been in 1996, this was associated with an increase in the proportion of low-paid employment within the semi-skilled/unskilled job group (Section 4.2).

ETU also had no effect on the change in the proportion of low-paid clerical/sales employment between 1996 and 1999. Increased awareness was again associated, however, with an increase in the proportion of low-wage employment, although in this case it was increased awareness of in-work benefits in general rather than ETU in particular that was important (Section 4.2).

Change in hourly wages of most recent low-paid recruit

The change in hourly wage offers to the most recent low-paid recruit between 1996 and 1999 was subject to an ETU effect. After controlling for other variables influencing wage change, employers located in Scheme B areas reported slower wage growth than was the case in Control areas. This is the type of effect ETU would be expected to have if the benefit was making low-paid work more attractive for eligible employees. There was no such effect in Scheme A areas. Awareness of ETU and in-work benefits in general was also associated with slower wage growth, albeit not strongly. If employers were aware of ETU in 1999 having not been in 1996, hourly wage offers to the most recent low-paid recruit rose more slowly than was otherwise the case. The same was true if employers became aware of in-work benefits in general during the course of the evaluation period (Section 4.3).

5 Survey of employers 1999: conclusions

The survey of employers set out to assess the impact of ETU on employers' behaviour. A number of outcomes following the introduction of the new benefit were expected: lower wages, higher employment rates and the creation of new jobs; a change in employment policy; and an increase in awareness of in-work benefits.

Employment and new jobs

Among the job groups where ETU would be expected to have its greatest effect – semi/unskilled and clerical/sales jobs – there was mixed evidence regarding employment effects among the panel sample of employers. Levels of semi/unskilled employment were maintained between 1996 and 1999 in the pilot areas but fell substantially in the Control areas, a difference consistent with an ETU effect. However, clerical/sales employment grew more strongly in Control than in pilot areas, contrary to expectation. There was no evidence that recruitment difficulties had eased following the introduction of ETU.

Employment policy

Awareness of in-work benefits was high, although less than a third of employers reported any actual experience of these benefits. Awareness of ETU rose between 1996 and 1999, especially in Scheme B areas, though only six per cent of employers in the pilot areas reported any experience of ETU by 1999.

Wages

Of the three most common influences on the levels of pay offered by employers, two of them - the pay individuals are willing to accept and the pay offered by other local employers - give considerable scope for an ETU 'wage effect'. No such effect emerged clearly from the descriptive analysis, however, which instead produced a lot of conflicting evidence. For example, while among the panel sample of employers wages grew more slowly for semi/unskilled and clerical/sales workers between 1996 and 1999 in Scheme B areas than in Scheme A or Control areas, the average proportion of each job group earning £4 per hour or below in 1999 did not vary by evaluation area. The one area in which the descriptive evidence was a little more consistent was in relation to recent low-paid recruits. Thus, analysis of the cross-section surveys showed that recent low-paid recruits were paid more in 1999 than equivalent workers in 1996 in all areas, but this wage growth was slower in Scheme A areas than in Scheme B or Control areas and, among the panel sample, the average pay of recent low-paid recruits rose more quickly between 1996 and 1999 in Control areas than in pilot areas.

The multivariate modelling produced limited evidence of an ETU effect on wages. There was no evidence of an ETU effect on change in hourly wages of clerical/sales and semi/unskilled employees between 1996 and 1999, nor on the change in the proportion of employees in these job groups who were low-paid. But in relation to the change in wages of the most recent low-paid recruit a clear ETU 'wage effect' did emerge, albeit only in relation to Scheme B areas, where wage growth was slower for recent low-paid recruits than in Control areas.

Part Two - Econometric Analysis

This report examines the wider labour market impact of the Earnings Top-up (ETU) pilot programme in terms of the impact of the in-work benefit on the recruitment of low-paid workers. The report summarises the results of research concerned with the possible impact of ETU on ability of employers to recruit workers to vacant, low-paid jobs.

As an example of an in-work benefit (a welfare benefit paid to people who are in paid work), ETU has two main objectives. First, to increase the incomes of low-paid workers. Second, to strengthen the incentive to take low-paid jobs. By shifting the balance away from out-of-work income towards in-work income, an impact on employment could be expected. However, increased competition for low-paid jobs or overt actions by employers could negate such gains and the overall impact of ETU on employment levels remains uncertain and is a central concern for any evaluation of ETU.

The research drew upon data from two sources. These were, first, the time series of vacancies notified to the Employment Service (ES) in the ETU pilot and Control areas. Second, the research examined survey data relating to recruitment collected from employers as part of the evaluation of ETU. The analysis proceeded in the following stages:

- A consideration of the scope for ETU employment effects.
- An examination of ES notified vacancies.
- An analysis of employers' recruitment of low-paid workers.
- A conclusion.

A number of different analytical methods were used, including inspection of time series, descriptive statistical analysis and, finally, some multivariate analysis.

Analysis of ES data on vacancies revealed no clear evidence of ETU having had an impact on either the structure of vacancies or the time taken to fill vacancies in the Scheme A and Scheme B areas, relative to the Control areas or to Great Britain. The evidence derived from surveys of employers was more mixed. The data suggested that ETU may have increased both employment and recruitment in Scheme A areas while the share of low-paid skilled employment increased in Scheme B areas (the area in which the higher of the two ETU benefits was paid). Despite this, the evidence relating to vacancy durations provided only weak, if any, support for an ETU effect. Nonetheless, the analysis of recruitment suggested that employers who had not recruited low-paid workers in 1996 (before ETU) were more likely to have recruited a low-paid worker in 1997 (after ETU) if they were 'aware' of in-work benefits.

Department of Social Security

Research Report No 132

Earnings Top-up Evaluation: Employers' Reactions

Part One • Surveys of Employers

Stephen Lissenburgh

1 INTRODUCTION

1.1 Overview

This chapter provides a brief outline of the Earnings Top-up (ETU) pilot evaluation and the part played by the survey of employers.

ETU was introduced in October 1996 in eight areas of the country for a three-year pilot period. It was an in-work benefit for people without dependent children. The two main objectives of ETU were to improve the incentive for unemployed people to take low-paid work of 16 or more hours a week and to help low-paid workers to avoid unemployment by raising their incomes relative to out-of-work support.

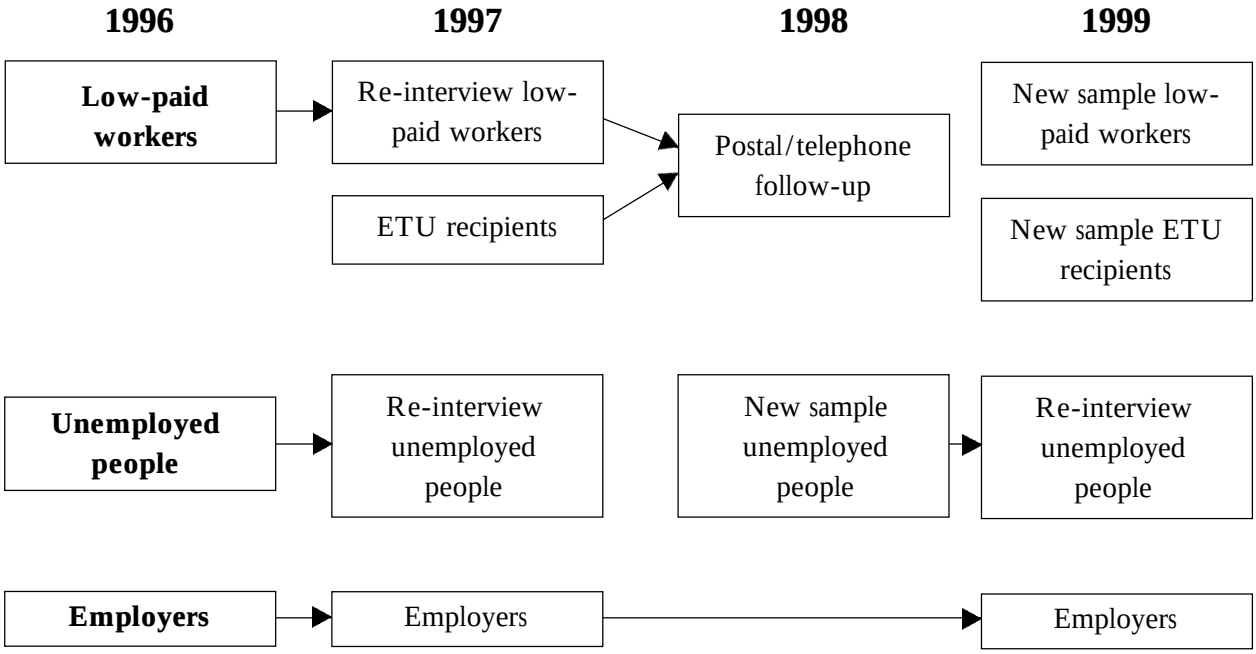
1.2 The ETU evaluation

The programme of evaluative research was designed to compare eight test areas with four more areas chosen as control areas of corresponding type at different points over the three year period. The areas were selected because they had high levels of unemployment, a high number of job vacancies and a high proportion of low-paid vacancies and so were areas where ETU was expected to have the most impact. Four types of labour markets were also selected: major urban areas, large towns, seaside areas, and rural areas.

The two main target groups for ETU were existing low-paid workers and unemployed people. For the first group, ETU may have encouraged them to remain in work rather than returning to unemployment, whereas for unemployed people ETU could have allowed them to consider a job that paid less than they would normally have accepted. If people were more able to accept low-paid work then this could, in turn, have impacted on the decisions employers made about recruitment and wages. The evaluation of the effects of ETU therefore included corresponding field surveys of low-paid workers and unemployed people. Alongside these were similar field surveys of ETU recipients and telephone surveys of employers (Figure 1.1). The evaluation programme also included analysis of official administrative statistics, studies of local labour market conditions, and in-depth interviews with key participants.

The focus in this report is on just one part of the evaluation: the surveys of employers (Figure 1.1).

Figure 1.1 ETU evaluation surveys



The main objective of the employers strand of the Earnings Top-up (ETU) pilot evaluation is to assess the impact of the benefit on employers' wage-setting and labour recruitment behaviour. It is possible that employers may become aware of ETU and adjust their behaviour as a consequence. They may target their recruitment on those eligible for the benefit at the expense of existing and prospective non-eligible employees (*a substitution effect*) or they may hold down or even reduce their wage offers (*a wage effect*) in response to the new benefit. However, it is more likely that any effect will come via the operation of the labour market at the local level. If ETU attracts a greater number of people into the labour market at lower wages then according to the theory of labour supply (Polachek and Siebert, 1993) this increase in the supply of labour would lead to a reduction in market wage offers and an expansion in employment, other things being equal.

This has an important implication – employers need not be aware of ETU for it to have an effect on their wage offers or other conditions of employment. They would simply respond to changed labour market conditions and lower their wage offers in order to remain competitive and avoid *displacement effects* whereby better-paying employers are forced into unprofitability[1].

[1] The potential reduction in wages of ETU employers may improve their competitive position compared with higher-wage employers who are not directly affected by ETU. The resulting job losses in higher-wage employers would represent the *displacement* effects of ETU.

If employers' behaviour has been affected by the introduction of ETU, then a number of outcomes might therefore be expected, notably:

- *Lower wages* - this is most likely to manifest itself as a moderation in the rate of increase in wage offers in the pilot areas (Schemes A and B) compared with the Control areas, particularly in the semi-skilled/ unskilled and clerical/sales job groups and within low-paid employment.
- *Higher employment rates* - this is likely to be seen in a willingness of employers to accommodate (potential) employees who might qualify for the new benefit, for instance, by adjusting their hours of work. This might also be seen in a greater proportion of employees working 16 hours per week or more in 1999 compared with 1996 in the pilot areas but not the Control areas.
- *New jobs* - recruitment, particularly at low hourly rates of pay, might also be expected to have increased in response to ETU. Some employees may be able to enter the labour market at wage offers lower than they would otherwise have accepted in the absence of ETU. In addition, employers may be able to create new jobs as a result of ETU, thereby opening up new lines of profit for their enterprise, and be more able to recruit to 'hard-to-fill' vacancies as a result of the new benefit.
- *Employment policy* - ETU might also be expected to have had some effect on employers' levels of awareness and experience of in-work benefits.

1.3 The samples

A sample of 2400 employers was interviewed in the summer of 1996 prior to the introduction of ETU in October of that year. The sample was drawn from the British Telecommunications 'Connections in Business' database. The survey consisted of telephone interviews with employers in the 12 ETU evaluation areas – approximately 200 in each area. The sample design was stratified to ensure the inclusion of large employers (200 or more employees) and over-sampled employers in traditionally low-paying areas of work. A self-completion 'jobs factsheet' was sent in advance of the interview which enabled employers to prepare some factual information. The overall response rate from the 1996 survey of employers was 78 per cent of those contacted (Appendix Table A.1).

Approximately one year later, an attempt was made to re-interview the 2400 employers who participated in the 1996 survey. Interviews were achieved with 1490 of these employers in the 1997 survey. For the 1999 survey, an attempt was made to re-interview employers who had been interviewed in both 1996 and 1997. This proved possible in 808 cases. These re-interviewed employers are referred to as the 'panel sample'. They were spread quite evenly across the 12 evaluation areas, with about 70 employers in each. The 1999 survey also involved interviews with a new sample of employers from the evaluation areas. This sample was drawn from the same source and in accordance with the same principles

as were used for the 1996 survey. A further 1592 employers[2] were interviewed as part of this survey, so that the total number of interviews carried out in 1999 was 2400. The overall response rate from the 1999 survey of employers was 68 per cent of those contacted (Appendix, Table A.1).

1.4 Weighting

The survey of employers covered all industries but care was taken to obtain a sufficient number of interviews in those industries within which lower levels of pay are known to predominate. If ETU has had any effect on employers, then it is likely to have had its most pronounced impact in these traditionally low-paid industries. The survey was also structured to provide an adequate representation of large as well as small establishments. Weights were constructed to allow an analysis of the overall workforce and employment in three job groups (employment basis) as well as upon the employing unit (establishment basis). All tables presented in this report are based on weighted data. The weight applied and hence the unit of analysis is shown at the bottom of each table and is made clear in the text where necessary.

1.5 The analyses

The survey of employers aims to investigate change in wage and employment flows over the evaluation period and to explore how these changes may be affected by employers' perspectives of the benefit system, and in particular ETU. The design of the ETU evaluation is such that if ETU does have any effect on employers' behaviour then these differences can be detected by comparing employers' pre-ETU position with their situation after the introduction of ETU, and by comparing employers in the pilot areas (Scheme A and B areas) with employers in the Control areas. The panel sample is particularly well-suited to the analysis of changes over the course of the evaluation period, while examination of the 1996 and 1999 cross-section surveys enables comparison of representative snapshots of employers in the pre- and post-ETU periods.

The remainder of this report is structured as follows. First, there is a descriptive account of the employers in the 1999 sample, including their wage and recruitment policies. Then, the 1999 cross-section survey of employers is compared, principally with the 1996 baseline survey (Marsh, Callender, Finlayson, Ford, Green and White (1999), but also to a lesser degree with the 1997 cross-section survey (Finlayson, Ford, Marsh, Smith and White (2000). The experiences of the panel sample are also explored to investigate any changes over the course of the evaluation period. Here, the focus is on four key issues: workforce and recruitment; hours of work; pay and the extent of low pay; and social security benefits, especially ETU. Multivariate analysis is then conducted to determine the net impact of ETU. Finally, the report draws on findings from the employers' survey to build a picture of the effects of ETU on employers' behaviour.

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[2] Inspection of the samples revealed that 35 members of the panel sample were also sampled in 1999. These were in addition to the 1592 employers interviewed for the first time in 1999, so the total size of the 1999 cross-sectional sample was 1627.

2.1 Type of industry and sector

The majority of establishments (82 per cent) were in the private sector. This varied by size of establishment and type of industry. For example, 11 per cent of employers with two to four employees reported being in the public sector compared with a fifth (20 per cent) of those with five or more employees.

The industrial distribution of the employers surveyed in 1999 is shown in Table 2.1. A quarter of the sample (27 per cent) was located in distribution industries. A further 14 per cent were in hotel and catering and 12 per cent were in manufacturing. Fewer employers were in the predominantly public sector industries, especially public administration (only one per cent of establishments).

Table 2.1 Industrial distribution in 1999 by ETU area

Column percentages

	Scheme A	Scheme B	Control	All areas
Agriculture/mining/construction	5	9	5	7
Manufacturing/power/water	15	10	12	12
Distribution	27	29	24	27
Hotel/catering	16	12	13	14
Transport/communications	6	3	4	5
Finance/business services	8	9	10	9
Public adminstration	2	*	1	1
Education	6	7	9	7
Health/social services	7	9	11	9
Other services	9	11	11	10
Unweighted base	519	539	569	1627

Weight: establishment

Sixty-one per cent of the establishments interviewed in 1999 were independent establishments, in that they did not form part of a larger organisation. A quarter of employers (27 per cent) were branches of a larger organisation, while the remaining 12 per cent were the Head Office of a larger group (Table 2.2). A slightly greater proportion of employers in the ETU control areas were independent establishments (65 per cent) compared with employers in the pilot areas, especially Scheme A (57 per cent).

Table 2.2 Type of organisation in 1999 by ETU area

Column percentages

	Scheme A	Scheme B	Control	All areas
Independent	57	62	65	61
Head Office	14	11	11	12
Branch	29	28	25	27
Unweighted base	519	539	569	1627

Weight: establishment

Employers in rural and seaside areas were less likely to form part of a larger organisation compared with employers in urban areas. For example, two-thirds of employers in the rural and seaside areas reported being independent establishments compared with half (51 per cent) in the major urban areas. Smaller establishments were also less likely to form part of a larger organisation - 73 per cent of the smallest employers (two to four employees) were independent establishments, compared with 35 per cent of the medium-sized employers (50-99 employees) and 15 per cent of the largest employers (200 or more employees). Four out of every 10 of the largest employers were the Head Office of a larger organisation. The type of organisation also varied by industry. Not surprisingly, the great majority of public administration employers (81 per cent) formed part of a larger organisation, while employers in the agriculture/mining/construction industries were the most likely to be independent enterprises (87 per cent).

2.2 The workforce

2.2.1 Number of employees

Table 2.3 shows the size of employer by the ETU area in which they were located.[3] There was little variation in the size distribution of employers by area.

Table 2.3 Size of employer in 1999 by ETU area

Column percentages

	Scheme A	Scheme B	Control	All areas
2-4 employees	27	25	25	26
5-10	34	35	31	33
11-24	21	22	23	22
25-49	10	10	11	10
50-99	5	4	6	5
100-199	2	2	3	2
200 or more	2	1	2	2
Unweighted base	519	539	568	1626

Weight: establishment

[3] Despite the sampling strategy adopted, fewer small employers were interviewed than the underlying population determined from the Census of Employment would have suggested. Thus, the sample was weighted to take into account the size of the employer.

Independent establishments had smaller workforces, on average, than employers who formed part of a larger organisation. The former employed an average of 31 workers (unweighted) compared with 62 employees in branches of larger organisations and 111 employees in Head Offices. Employers in 'other services' employed the fewest number of people (22 on average), while those in public administration employed the greatest number (281).

2.2.2 Job groups

Employers were asked in detail about employment in three relatively low-paying job groups:

- Semi-skilled and unskilled employees.
- Skilled and craft employees.
- Clerical and sales employees.

Variations in the proportion of employees within each of these job groups occurred most significantly in relation to industry, as shown by Table 2.4. Employers in the hotel and catering industries had a predominantly semi-skilled/unskilled workforce (57 per cent). The agriculture/mining/construction grouping had the highest proportion of skilled/craft employees (41 per cent), while employers in distribution and public administration each had a high proportion of their workforce made up of clerical/sales employees (41 per cent).

Table 2.4 Average proportion of total employment in each job group in 1999

*Row percentages**

	Semi and Unskilled	Skilled and Craft	Clerical and Sales	Unweighted base
Agriculture/mining/construction	23	41	13	87
Manufacturing/power/water	30	35	16	200
Distribution	21	17	41	325
Hotel/catering	57	13	8	325
Transport/communications	23	23	35	56
Finance/business services	9	25	34	115
Public administration	15	20	41	22
Education	22	21	14	142
Health/social services	36	23	21	146
Other services	35	28	14	208
All industries	29	23	24	1626

Weight: establishment

* The row percentages do not sum to 100 per cent since total employment includes other groups of workers (professional, managers etc.)

Employers were also asked how many people they employed in professional or technical jobs, or as senior administrators, supervisors and managers. These job groups were not seen as relevant to the ETU evaluation since their incumbents are rarely low paid. However, it

appeared that some employers had not included this group of workers in their total employment calculations. As was the case in 1997, additional questions were added to the 1999 survey to try to adjust for this discrepancy. If the sum of those employed in the four job groups (semi/unskilled; skilled/craft; clerical/sales; professional/technical) did not add up to the total employment figures reported by the employer, then the employer had the chance to adjust their initial calculations. There was also a follow-up question to check that employers had not missed out their technical workers or managers from their figures altogether. Table 2.5 shows how the total employment figures can be adjusted in this way. On average, this adjustment made little difference to total employment reported by employers, though it did in a number of cases. To allow valid comparability between the 1996, 1997 and 1999 surveys, calculations are therefore based on the unadjusted figures, unless otherwise stated.[4]

Table 2.5 Total employment in 1999

Number of employees

	Unadjusted	Adjusted
Weighted		
Mean	24.60	24.75
Median	9.00	9.00
Unweighted		
Mean	51.15	51.29
Median	17.00	18.00
Unweighted base	1627	1627

Weight: establishment

2.3 Wages

2.3.1 Factors influencing pay levels

One of the primary objectives of the ETU pilot evaluation is to assess the 'wage effect' of the benefit. The way in which pay levels are set and the influences on this could partly determine, therefore, whether ETU has any effect on wage offers.

Employers were asked about a range of influences on the levels of pay offered in their establishment (Table 2.6). More than half (55 per cent) said it was '*the pay individuals are willing to work for*' that influenced their wage-setting behaviour. If ETU allows sufficient numbers of people to lower their reservation wage (the lowest wage for which they will work), then there could be a knock-on effect in the rates of pay offered by employers. If individuals are willing to work for less, then employers may correspondingly reduce their wage offers, even if they are themselves unaware of ETU.

[4] The fact that calculations were based on unadjusted figures does not impact on the robustness of the analyses because the adjustments were so small.

Table 2.6 Factors influencing levels of pay in 1999 by ETU

Column percentages

	Scheme A	Scheme B	Control	All areas
The pay individuals are willing to work for	59	53	54	55
Pay offered by other local employers	50	38	40	42
National agreements and national pay trends	46	39	42	42
The availability or scarcity of labour	41	35	36	38
Your own local negotiations with trade unions	10	6	13	9
None of these/No answer	12	16	17	15
Unweighted base	519	539	569	1627

Weight: establishment

The second most influential influences on levels of pay were *'the pay offered by other local employers'* and *'national agreements and national pay trends'*, both of which were mentioned by four out of 10 employers (42 per cent). In the case of the former, employers again need not be aware of ETU for it to have an effect on their wage-setting strategies - they may simply respond to the behaviour of other employers in their local labour market. The importance of national agreements and pay trends, however, is less likely to lead to an ETU 'wage effect'. As it is only available in eight areas, ETU is unlikely to have any effect on national pay trends, while national agreements may act to prevent the wage reductions necessary for an ETU 'wage effect'. Particularly salient in this regard is of course the National Minimum Wage (NMW), which was introduced about six months before the 1999 survey.[5]

Another way that ETU could have an effect on wage offers, however, is by influencing the supply of labour. Four out of 10 employers (38 per cent) said that *'the availability or scarcity of labour'* had some influence on the rates of pay they offered to employees. ETU may encourage more people into the labour market by enabling them to accept lower wage offers than would be the case without it.[6]

The most notable difference in pay determinants reported by employers in ETU pilot and control areas related to the pay offered by other local employers (Table 2.6). This was mentioned by half the employers in Scheme A areas (50 per cent) but by only four out of 10 employers in Scheme B and Control areas (38 and 40 per cent respectively). Employers

[5] The NMW was introduced in April 1999, while the survey was carried out from August to November 1999. The introduction of the NMW probably explains why more employers in 1999 than in 1997 mentioned 'national agreements and national pay trends' as important influences on their wage-setting behaviour (42 per cent against 36).

[6] The remaining factor said to influence employers' pay levels, their '*own local negotiations with trade unions*', was mentioned by only one in 10 employers (9 per cent).

in the seaside areas were most likely to report that the pay offered by other local employers influenced their wage offers (48 per cent) and to say that the availability or scarcity of labour was a factor (43 per cent).

The factors most likely to influence employers' pay levels also varied considerably by size of establishment. Smaller establishments were more influenced by the pay individuals are willing to accept compared with larger establishments. For example, 58 per cent of smaller employers (two to 10 employees) said their wage offers were influenced in this way compared with a third (35 per cent) of larger employers (100 or more employees). Conversely, larger employers were more influenced by the pay offered by other local employers and local trade union negotiations compared with smaller establishments. Just over half (54 per cent) of employers with 200 or more employees said that the pay offered by other local employers influenced their pay, compared to less than four out of 10 employers (37 per cent) with fewer than five employees. Even more strikingly, just under half (47 per cent) of these large employers (200 or more employees) mentioned local trade union negotiations as an important factor, compared with only one in 20 (5 per cent) of employers with two to 10 employees.

Differences in pay determinants also emerged when the public and private sectors were compared. Six out of 10 employers (58 per cent) in the private sector said that the pay individuals are willing to work for influenced their wage offers compared with four out of 10 employers (39 per cent) in the public sector. Similarly, four out of 10 private sector employers (41 per cent) said the availability or scarcity of labour was important, compared with under a quarter (23 per cent) of those in the public sector. Public sector employers were more likely than private sector employers to be influenced by national agreements and national pay trends (65 versus 37 per cent) and local trade union negotiations (23 versus six per cent).

The influence of size and sector of employers on pay determinants is reflected in the relationship between industry and the factors influencing wage offers. Public sector employers in public administration were the most likely to follow national agreements and pay trends (91 per cent), while their public sector counterparts in education were the least likely to base their wage offers on the pay individuals are willing to accept (25 per cent). Conversely, employers in mainly private sector agriculture/ mining/construction industries were the most likely to say they were influenced by the pay individuals are willing to work for (73 per cent), while their private sector counterparts in finance/business services were the least likely to follow national pay trends and agreements (25 per cent).

This discussion of pay determinants suggests there is quite considerable scope for ETU to have a 'wage effect'. Of the three most common

influences on levels of pay offered by employers, two of them - the pay individuals are willing to work for and the pay offered by other local employers - could allow ETU to have an effect through the workings of the local labour market. The same can be said for the fourth most common influence, the availability or scarcity of labour. However, it is also apparent that the ability of ETU to have an effect on the pay offered by employers is dependent on size of the employer, the sector within which it operates and its industrial group.

2.3.2 Wage policy autonomy

Another factor that could influence the potential for ETU to have a 'wage effect' is the extent to which employers have wage policy autonomy (Table 2.7). This is a factor unique to the comparison-area design of the ETU pilot evaluation since in a national implementation of ETU, Head Offices would be faced with the same considerations as local branches.

Table 2.7 Wage policy autonomy in 1999 by ETU area

Column percentages

	All	Branch	Scheme A	Scheme B	Control
Independent	61	-	57	62	65
Head Office	12	-	14	11	11
Branch – pay rates decided by management locally	5	20	6	6	4
Branch – pay rates agreed between Head Office and local management	4	14	5	2	4
Branch – follow Head Office procedure	18	66	18	19	16
Unweighted base	1613	525	515	534	564

Weight: establishment

More than six out of 10 (61 per cent) of the employers interviewed in 1999 were independent establishments in that they did not form part of a larger organisation. They would, therefore, have independence in their wage-setting behaviour. Likewise, one in 10 employers (12 per cent) were Head Office branches so they would determine the wage levels offered in their own establishment. The remaining quarter of employers (27 per cent) were branches of larger organisations. Two-thirds of them (66 per cent) had to follow Head Office procedure in relation to the wages offered to new employees (Table 2.7). Twenty per cent of branches determined their wage offers locally and a further 14 per cent negotiated their levels of pay with Head Office.

Overall, therefore, eight out of 10 employers (79 per cent) had local autonomy to determine pay levels. There would be scope, therefore, for ETU to have an effect on the levels of pay offered in these establishments.

Just under a fifth of employers (18 per cent) had to follow Head Offices' procedures in pay determination, which would mitigate against an ETU 'wage effect' in the evaluation period, though perhaps not following a national introduction of the benefit.

As was seen in Section 2.1, the type of area in which the employer was located, the size of the employer and their industry group were all associated with the independence of the establishment. Employers in rural and seaside areas were the most likely to be independent enterprises and therefore most likely to have local autonomy over their wage-setting. Conversely, employers in urban areas were the most likely to have to follow Head Office wage-setting procedures. There were no differences between the ETU pilot and Control areas with regard to their degree of wage policy autonomy (Table 2.7).

Smaller establishments were more likely to be independent concerns than larger employers and just one in 10 (11 per cent) with two to four employees had to follow Head Office wage-setting procedures. This compares with over a quarter (27 per cent) of medium-sized employers (50-99 employees). The largest employers were the most likely to themselves be the Head Office branches of larger organisations, so had greater independence in pay determination than some of the medium-sized employers. Public administration employers had the least local autonomy in wage-setting, with 53 per cent having to follow Head Office procedures in this respect.

This analysis would suggest, therefore, that small private sector establishments based in rural and seaside areas would have the greatest capacity to reduce their wage offers in response to ETU. The wage offers of these employers were more likely to be influenced by the pay individuals were willing to accept. Also, these employers were more likely to have autonomy to set pay locally. On the other hand, the wages offered in larger public sector establishments located in urban areas would be the least likely to be affected by the introduction of ETU.

2.4 Recruitment

The 12 areas included in the ETU pilot evaluation were selected partly because they had above average unemployment and a high proportion of low-wage occupations. In addition to the potential wage effect following the introduction of ETU, another possible outcome is the potential effect ETU may have on employment. If ETU allows some people to lower their reservation wages and enter the labour market at wages they would otherwise not have considered, then this may help to overcome recruitment difficulties. ETU may also have an effect on recruitment through a 'substitution effect', whereby employers may target their recruitment on those eligible for the benefit at the expense of existing non-eligible employees.

2.4.1 *Recruitment policy autonomy*

The capacity of ETU to effect recruitment via a 'substitution effect' is partly dependent on employers' autonomy in recruitment procedures (Table 2.8).

Table 2.8 Recruitment policy autonomy in 1999 by ETU area

Column percentages

	All	Branch	Scheme A	Scheme B	Control
Independent	61	-	58	62	65
Head Office	12	-	14	11	11
Branch – procedure decided by management locally	6	24	7	6	6
Branch – procedure agreed between Head Office and local management	4	16	5	4	4
Branch – follow Head Office procedure	16	60	16	17	15
Unweighted base	1616	528	518	538	566

Weight: establishment

Sixty per cent of branches of larger organisations had to follow Head Office recruitment procedures. A quarter (24 per cent) of branch establishments could decide their recruitment procedure locally, while one in six (16 per cent) negotiated their procedure with Head Office. Overall, this means that eight out of 10 employers (80 per cent) had local autonomy in their recruitment procedures, a proportion that showed no significant variation across ETU pilot and Control areas.

2.5 The employers in 1999: summary

The ETU Survey of Employers covered all industries and the sampling procedure adopted ensured that an adequate representation of employers in the traditionally low-paying industries, who are of particular interest to the ETU evaluation, were included in the sample. Small establishments with under five employees were under-represented in the sample, which was adjusted for in the weighting procedure.

The majority of employers (82 per cent) were in the private sector. Sixty-one per cent of those interviewed in 1999 were independent establishments, in that they did not form part of a larger organisation, a quarter were the branches of a larger organisation, while the remaining 12 per cent were the Head Office of a larger group.

Variations in the proportion of employees within each job group occurred most significantly in relation to industry. Employers in the hotel and catering industries had a predominantly semi-skilled/unskilled workforce,

for example, while employers in distribution and public administration each had a high proportion of their workforce made up of clerical/sales employees.

Of the three most common influences on levels of pay offered by employers, two of them - the pay individuals are willing to work for and the pay offered by other local employers - could allow ETU to have an effect through the workings of the local labour market. The same can be said for the fourth most common influence, the availability or scarcity of labour. The analysis showed that the potential for employers to reduce wages in response to the new benefit would depend on their size, sector and industry. During the three-year period of the pilot, any potential 'wage effect' would also depend on the autonomy of the individual employer to set pay locally. Eight out of 10 employers had local autonomy in this respect, again giving scope for a 'wage effect' in response to ETU.

The analysis suggests that small private sector establishments based in rural and seaside areas would have the greatest capacity to reduce their wage offers in response to ETU. Conversely, the wages offered in larger public sector establishments located in urban areas would be the least likely to be affected by the introduction of ETU.

3 CHANGES SINCE 1996 – A DESCRIPTIVE ANALYSIS

This chapter compares the 1999 cross-section survey of employers with the 1996 cross-section survey, and follows the experiences of the panel during the study period.

3.1 Workforce and recruitment

3.1.1 Size of employer

Table 3.1 compares the distribution of the size of the employers in the 1996 and 1999 surveys. There is little variation across most size categories, except that the 1996 survey has a greater proportion of employers with two to four employees, whereas the 1999 survey has more in the five to ten employees category. This is a result of the change in sampling strategy described in Chapter 1. A more substantial difference occurs in relation to the mean number of employees where, on an unweighted basis, the figure declines from 67 in 1996 to 51 in 1999.

Table 3.1 Size of employer in 1996 and 1999

Column percentages

	1996	**1999**
2-4 employees	29	26
5-10	30	33
11-24	22	22
25-49	10	10
50-99	5	5
100-199	2	2
200 or more	1	2
Unweighted mean	67	51
Unweighted median	16	17
Unweighted base	2398	1626

Weight: establishment

The left-to-right diagonal in Table 3.2 shows that just over half of the panel sample of employers remained within the same size band (two-thirds for the largest employers) between 1996 and 1999 and most of the movement was confined to either the size category above or below.

Table 3.2 Change in size of employer – panel sample

Column percentages

	Size in 1999						
	2-4	**5-10**	**11-24**	**25-49**	**50-99**	**100-199**	**200 or more**
Size in 1996							
2-4	55	19	5	2	2		
5-10	34	60	25	5	3	2	3
11-12	7	17	55	29	6	5	9
25-49	1	2	13	50	16	2	2
50-99		1	1	11	56	25	3
100-199	1	1	1	4	18	53	18
200 or more	1	1	1			14	65
Unweighted base	76	169	203	123	110	59	66

Table 3.3 takes a more detailed look at the panel sample for the different size categories. As a percentage of their size in 1996, smaller employers saw the greatest expansion of their workforce by the time of their third interview. Only the largest employers (200 or more employees) contracted in size, on average. Table 3.4 also focuses on the panel sample, but looks at the mean differences in employment for each of the three main job groups identified earlier. Among the job groups where ETU would be expected to have its greatest effect - semi/unskilled and clerical/sales - there is mixed evidence regarding employment effects. Levels of semi-skilled and unskilled employment are maintained in the pilot areas, while falling substantially in the Control areas. In contrast, clerical and sales employment shows better growth in the Control than in the pilot areas, on average.

Table 3.3 Mean number of employees in 1996 and 1999 - panel sample

Mean number of employees

	Mean in 1996	**Mean in 1999**
Size band in 1996		
2-4 employees	3	8
5-10	8	15
11-24	16	32
25-49	34	40
50-99	68	101
100-199	135	183
200 or more	476	391
Unweighted base	808	808

No weight applied

Table 3.4 Mean differences in size of employer within each job group by ETU area - panel sample

Mean differences

	Scheme A	Scheme B	Control	All areas
Total employment	+	+3	-3	+
Semi/unskilled employment	+	+	-4	-1
Skilled/craft employment	-3	-3	-7	-4
Clerical/sales employment	-2	+1	+3	+1
Unweighted base	239	270	265	774

No weight applied.

Thirty-four employers with unreliable data on total employment were excluded from these analyses

3.1.2 Turnover

As was suggested earlier, it may be expected that ETU would have an effect on labour turnover. Recruitment would be expected to increase at the lower end of the wage distribution in response to ETU and some employees may find they are able to stay in jobs longer because of the new benefit, thereby reducing termination of employment. Table 3.5 compares turnover of employment in 1996 and 1999 within each of the three job groups. Recruitment and termination rates were highest in both years amongst semi/unskilled workers. Recruitment rates were considerably lower for semi/unskilled and clerical/sales employees in 1999 compared with 1996, but termination rates showed no such tendency to change.

Table 3.5 Recruitment and termination of employment - all employers

(as percentage of total employment in each year)

Mean percentages

	Semi-/unskilled		Skilled/Craft		Clerical/Sales	
	1996	1999	1996	1999	1996	1999
Recruitment	48	39	26	26	31	16
Termination	31	32	15	16	17	14
Unweighted bases	1706	1181	1511	986	1646	1102

Weight: employment in each job group

Termination rates in semi/unskilled employment were indeed lower in the ETU pilot than in the Control areas in 1999 (Table 3.6). Whereas termination rates in this job group were 42 per cent in Control areas, they were 29 per cent in Scheme B areas and 26 per cent in Scheme A areas. Contrary to expectation, however, recruitment rates were also lower for semi/unskilled employment in the pilot areas, running at 35 per cent in both Scheme A and Scheme B areas compared with 47 per cent in the Control areas.

Table 3.6 Recruitment and termination of employment by ETU area in 1999

Mean percentages

	Unweighted base	Scheme A		Scheme B		Control	
		Recruitment	Termination	Recruitment	Termination	Recruitment	Termination
Semi/unskilled	1181	35	26	35	29	47	42
Skilled/craft	986	20	12	22	17	35	19
Clerical/sales	1102	17	14	18	15	15	12

About one in six employers in 1999 (17 per cent) reported a rapid turnover of employees such that they had some jobs which they had to fill several times a year. Mostly this was in semi-skilled/unskilled jobs (74 per cent) and less so within craft/skilled jobs (18 per cent) and clerical/sales jobs (15 per cent). A somewhat greater proportion of employers in Scheme B areas said they had a high turnover of employment in some jobs (20 per cent) than in Scheme A and Control areas (15 per cent in each).

A higher proportion of employers based in seaside areas said they had a rapid turnover of jobs (21 per cent), compared especially to major urban areas (13 per cent). Rapid turnover was also related to size of establishment, with the proportion of employers who said they had to fill some jobs several times a year varying from eight per cent in the smallest establishments (two to four employees) to 32 per cent in medium-sized establishments (25-99 employees). A third of employers (37 per cent) in hotel and catering industries reported rapid turnover in some job groups, compared with only nine per cent in agriculture/mining/construction.

3.1.3 Recruitment difficulties

On the basis of self-reporting, twenty-six per cent of all employers in 1999 said that they had experienced difficulties in recruiting over the past year, a similar proportion to 1996. Among the panel sample, 41 per cent of those who reported recruitment difficulties in 1996 were continuing to incur such problems three years later. Fourteen per cent of these employers were experiencing recruitment difficulties in 1999 whereas they had not in 1996.

Among the panel sample, employers in the pilot areas were slightly less likely to report recruitment difficulties in 1999 - 24 per cent in each compared with 29 per cent in the Control areas. However, there was no evidence among the panel sample that ETU had eased recruitment difficulties in the pilot areas compared with the Control areas (Table 3.7) - 16 per cent of employers in the Control areas said they no longer experienced recruitment difficulties by 1999, compared with 19 per cent in Scheme A areas and 14 per cent in Scheme B areas.[7]

[7] An investigation was carried out as to whether the reporting of recruitment problems in the 1996 survey was associated with non-response to the 1997 and 1999 surveys, but no clear findings emerged from this investigation.

Table 3.7 Recruitment difficulties by ETU area - panel sample

Column percentages

	Scheme A	Scheme B	Control	All areas
Both 1996 and 1999	11	12	11	11
1996 only	19	14	16	16
1999 only	13	12	18	14
Neither 1996 nor 1999	58	63	55	59
Unweighted base	253	281	274	808

Employers located in seaside areas reported the greatest difficulties in recruitment in 1999 (32 per cent), whereas those in major urban areas were least likely to have difficulties (19 per cent). Recruitment difficulties were also related to size of establishment, with the proportion of employers who were reporting problems varying from 17 per cent in the smallest establishments (two to four employees) to 35 per cent in medium-sized establishments (50-99 employees). A third of employers (36 per cent) in health and social services reported recruitment difficulties, compared with only three per cent in public administration.

The job groups to which employers experienced most difficulties recruiting were the same in 1999 as they were in 1996. A quarter of employers in 1999 reported some difficulties recruiting clerical/sales staff (29 per cent) but had more problems recruiting semi-skilled/unskilled workers (43 per cent) and skilled/craft workers (45 per cent).

3.2 Hours of work

Entitlement to ETU begins at 16 hours per week and there is an extra credit available to those who work for 30 or more hours per week. Table 3.8 shows the typical weekly hours of work reported by employers for their employees in the three main job groups. In both 1996 and 1999, full-time semi/unskilled employees and clerical/sales workers averaged 37 hours per week and skilled/craft workers averaged 38 hours per week.

Table 3.8 Hours of work by job type

Column percentages

	Semi-/unskilled		Skilled/Craft		Clerical/Sales	
	1996	1999	1996	1999	1996	1999
1 to 15 hours per week	18	23	4	5	15	15
16 to 29 hours per week	17	22	8	10	17	24
30 or more hours per week	65	58	88	84	68	61
	100	100	100	100	100	100
Mean number of hours per week (full-time)	37	37	38	38	37	37
Median number of hours per week (full-time)	39	39	39	38	38	38
Unweighted base	1616	1171	1480	973	1591	1089

Weight: employment in each job group

There is modest evidence of a shift into the 16-29 hours per week category amongst semi-skilled/unskilled employees and clerical/sales workers between 1996 and 1999. The proportion of semi-skilled/unskilled employees working these hours rose from 17 per cent in 1996 to 22 per cent in 1999, while the equivalent proportions for clerical/sales workers rose from 17 per cent to 24 per cent. Over the same period, these job groups experienced a decline in the proportion of employees working 30 or more hours per week, from 65 per cent to 58 per cent in the case of semi-skilled/unskilled employees and from 68 per cent to 61 per cent in the case of clerical/sales employees.

Tables 3.9 and 3.10 show the distribution of weekly working hours in the three job groups in 1996 and 1999 by ETU area. There was some quite marked variation in the weekly hours worked by employees by ETU area.

Among semi-skilled/unskilled employees, there was an increase in part-time working in Scheme B and Control areas between 1996 and 1999 and an associated decline in the proportion of employees working full-time. In Scheme B areas, the growth in part-time working was most pronounced in the 16-29 hours category, which saw an increase from 18 per cent in 1996 to 23 per cent in 1999. Growth of a similar order occurred in the 16-29 hours category in Control areas, but these areas saw more pronounced growth in the 1-15 hours category, where the proportion of employees rose from 17 per cent in 1996 to 25 per cent in 1999. In both Scheme B and Control areas the proportion of semi/unskilled employees who worked 30 hours or more per week fell quite

sharply from 1996 to 1999, a decline from 63 per cent to 54 per cent in Scheme B areas and from 65 per cent to 52 per cent in Control areas. No such decline took place in Scheme A areas, so that by 1999 the proportion of semi/unskilled employees who worked full-time in these areas (61 per cent) was higher than in Scheme B and Control areas.

The proportion of employees working 30 hours or more per week also declined in Control areas in the case of clerical/sales employees, from 71 per cent in 1996 to 58 per cent in 1999. This was due mainly to a shift into the 16-29 hours category, which increased in these areas from 15 per cent of clerical/sales employees in 1996 to 26 per cent in 1999. The pattern of working hours for clerical/sales employees in pilot areas did not change to any great degree during the evaluation period and the proportion of such employees working 30 hours or more per week was greater in Scheme A than in Control areas (66 versus 58 per cent).

Table 3.9 Hours of work in each job group by ETU area in 1996[8]

Column percentages

	Semi/unskilled			Skilled/craft			Clerical/sales		
	A	B	C	A	B	C	A	B	C
1-15 hours	20	19	17	7	5	4	13	16	14
16-29 hours	19	18	19	10	11	7	17	21	15
30+ hours	61	63	65	84	84	89	69	64	71
Unweighted base	535	564	586	477	506	518	539	544	556

Weight: employment in each job group

Table 3.10 Hours of work in each job group by ETU area in 1999

Column percentages

	Semi/unskilled			Skilled/craft			Clerical/sales		
	A	B	C	A	B	C	A	B	C
1-15 hours	20	22	25	4	7	5	14	14	17
16-29 hours	19	23	23	11	11	9	19	25	26
30+ hours	61	54	52	85	82	86	66	60	58
Unweighted base	372	403	396	332	321	320	343	362	384

Weight: employment in each job group

Overall, therefore, the change in the pattern of weekly working hours in each job group between 1996 and 1999 that could most readily be interpreted as evidence of an 'ETU effect' is the maintenance of the proportion of semi/unskilled employees and clerical/sales employees who worked 30 hours or more per week in Scheme A areas.

[8] In the column titles for Tables 3.9 and 3.10, A refers to Scheme A areas, B refers to Scheme B areas and C refers to Control areas.

3.3 Pay and the extent of low pay

Pay is one of the key elements of the ETU pilot evaluation because eligibility for ETU depends on an individual's net weekly income and almost all workers within the scope of ETU will rely solely on wages for their income, over and above their entitlement to other income-tested benefits such as Housing Benefit.

3.3.1 Average gross hourly pay

The average gross hourly pay levels reported by employers varied by job group. Semi/unskilled workers were paid the least in 1999 at £4.67 per hour. Clerical/sales employees earned £5.35 per hour, while skilled/craft workers were paid the most at £6.60 per hour (Table 3.11). Semi/unskilled and clerical/sales workers were paid more on average than they had been in 1996, while craft/skilled workers were paid less.

Table 3.11 Average gross wage per hour by job group

	1996	Base	1999	Base
Semi/unskilled	£4.20	1521	£4.67	955
Skilled/craft	£6.74	1290	£6.60	706
Clerical/sales	£5.07	1328	£5.35	714

Weight: employment in each job group

As well as between job group, there was also variation in average hourly wages by ETU area (Table 3.12). Semi/unskilled workers in all three areas were paid more in 1999, on average, than equivalent workers in 1996, but there was faster wage growth for this job group in pilot than in Control areas. Whereas the average pay of semi-skilled/unskilled workers rose by 14 per cent in pilot areas during the evaluation period, it rose by only six per cent in Control areas.

Skilled/craft workers were paid less, on average, in 1999 than equivalent workers in 1996 in all the evaluation areas. On the other hand, clerical/sales employees in Scheme A and Control areas were paid more in 1999, on average, while these types of workers in Scheme B areas were paid about the same as they had been in 1996. Semi/unskilled workers in Control areas were paid the least in 1999 (£4.46 per hour) while skilled/craft workers in Scheme A areas were paid the most in 1999 (£6.92 per hour), on average.

Among those groups of workers upon whom ETU would be expected to have its greatest effect, therefore, there is little evidence of an ETU 'wage effect' in the pilot areas compared with the Control areas between 1996 and 1999. Indeed, semi/unskilled workers experienced more substantial wage growth, on average, in the pilot as compared to the Control areas. The lack of average wage growth among clerical/sales employees in Scheme B areas is the only finding that might be construed an ETU 'wage effect'.

Table 3.12 Average gross wage per hour in each job group by ETU area

	Scheme A		Scheme B		Control	
	1996	1999	1996	1999	1996	1999
Semi/unskilled	£4.23	£4.81	£4.15	£4.71	£4.21	£4.46
Skilled/craft	£6.93	£6.92	£6.51	£6.24	£6.74	£6.54
Clerical/sales	£5.16	£5.73	£4.90	£4.89	£5.16	£5.52

Weight: employment in each job group

Employees in smaller establishments tended to be paid less per hour than those working for larger employers, although the relationship was not linear. Taken together, however, job group and size of establishment led to quite large differences in hourly rates of pay. For example, skilled/craft employees working in establishments with 200 or more employees earned the most in 1999 at £7.78 per hour, while semi/unskilled employees in establishments with 11-24 employees earned the least, on average, at £4.06 per hour.

Average wages per hour also varied quite appreciably within each job group by type of industry. In 1996, workers in the hotel/catering industry earned the least per hour compared with equivalent employees in other industries for all types of workers. The position in 1999 was only slightly altered - hotels/catering had the lowest pay, on average, for semi/unskilled workers at £3.75 per hour and for skilled/craft employees at £4.40 per hour, but the distribution industries had the lowest pay for clerical/sales workers, at £4.41 per hour on average.

Table 3.13 shows the mean differences in hourly wages (meaning the average of 1999 wage minus 1996 wage) within each job group for the panel sample. If ETU has had a 'wage effect', then employers in the pilot areas should have seen a smaller rate of increase in wage offers, or even a decrease in wage offers, since 1996 compared with employers in the Control areas. There is some evidence consistent with this for semi-skilled and unskilled workers, especially in Scheme B areas, where these workers experienced an increase in average pay of £0.24 per hour (five per cent) from 1996 to 1999, compared with £0.50 (12 per cent) in Scheme A areas and £0.65 (16 per cent) in Control areas. Clerical/sales workers also experienced more limited wage growth in Scheme B areas than elsewhere - their average pay rose by £0.17 per hour (4 per cent) between 1996 and 1999, compared with £1.05 (21 per cent) in Scheme A areas and £0.58 (12 per cent) in Control areas. This suggestive evidence notwithstanding, the independent effect of ETU on wage offers has to be explored in more detail using multivariate techniques, holding all other influences on wage offers constant in the analysis, to determine with greater robustness whether ETU has had any impact on wage offers (see Chapter 4).

Table 3.13 Mean differences in wage per hour by ETU area – panel sample[9]

Mean difference

	Semi/unskilled			Skilled/craft			Clerical/sales		
	A	B	C	A	B	C	A	B	C
Mean difference	£0.50	£0.24	£0.65	£0.46	£0.73	£0.06	£1.05	£0.17	£0.58
Unweighted base	159	162	165	111	132	140	116	134	148

Weight: employment in each job group

3.3.2 Low-paid employment

Even within the semi-skilled/unskilled group, the one most characterised by low pay, an average of about £4 per hour (around £160 per week) would leave most workers well above the levels of entitlement for ETU, unless they worked very short hours. But there was quite a wide distribution of pay around this average, so attention was focused on the proportion of workers paid £4 per hour or *below*.[10]

Semi/unskilled workers were the most likely to earn £4 per hour or below, while only a negligible proportion of craft/skilled workers did so. Overall, a third (35 per cent) of semi/unskilled employees earned £4 per hour or below in 1999, as did one in ten clerical/sales workers (13 per cent), but only one per cent of skilled/craft workers. The overall proportion of semi/unskilled employment earning £4 per hour or below fell from 51 per cent in 1996 to 35 per cent in 1999.

The proportion of employees paid £4 per hour or below varied by ETU area within each job group (Table 3.14). In 1996, a higher proportion of semi/unskilled employment in ETU Scheme B areas was low-paid (56 per cent) compared with employees in Scheme A and Control areas (47 and 51 per cent, respectively), but this was no longer the case by 1999, when the proportion of semi/unskilled employment that was low-paid had fallen to 32 per cent, a lower proportion than in the other evaluation areas. The proportion of clerical/sales employment that was low-paid did not vary a great deal by evaluation area, but Scheme A areas had the highest proportion of low-paid employment in this job group in 1996 (31 per cent) and Scheme B areas did so in 1999 (16 per cent). Low-paid employment was least common among craft/skilled workers in 1996 and barely existed outside Scheme A areas by 1999.

Overall, therefore, the average proportion of employment in each job group earning £4 per hour or below did not vary by evaluation area in such a way as to provide evidence of an ETU 'wage effect'.

[9] In the column titles for Tables 3.13 and 3.14, A refers to Scheme A areas, B refers to Scheme B areas and C refers to Control areas.

[10] £4 per hour was taken as the operational definition of 'low pay' because this enabled us to ask employers questions relating to 'those earning £4 per hour or below' without requiring employers to think about more precise and complicated definitions.

Table 3.14 Average proportion of employment in each job group earning £4 per hour or below by ETU area

Cell percentages

	Semi/unskilled			Skilled/craft			Clerical/sales		
	A	B	C	A	B	C	A	B	C
1996	47	56	51	11	20	10	31	27	26
1999	35	32	38	12	6	6	12	16	11

The highest proportions of employees paid at a rate of £4 per hour or below, corresponding to some extent with the pattern of variation in average hourly rates examined earlier, were found in hotel and catering industries in the case of skilled/craft employees (34 per cent paid £4 per hour or below) and clerical/sales employees (51 per cent), but in other services in the case of semi/unskilled employees (71 per cent).

Examining the proportion of employees paid at a rate of £4 per hour or below on an establishment basis reveals that the underlying distribution of employers is bi-modal, in the sense that most employers either had no employees in each job group who they paid at a rate of £4 per hour or below, or the majority of their employees (75 per cent or more) were paid at this rate (Table 3.15). For example, just under half of employers in 1999 (46 per cent) said they paid none of their semi/unskilled workers at a rate of £4 per hour or below, whereas four out of 10 employers (43 per cent) paid over three-quarters of their semi/unskilled workforce at this rate. Similarly, eight out of 10 employers (78 per cent) paid none of their skilled/craft employees a rate of £4 per hour or below while one in 10 (13 per cent) paid the majority of their skilled/craft workforce (75 per cent or more) at this rate. The overall distribution of low-paid employment was quite similar in 1996 and 1999, although the proportion of employers paying none of their employees at a rate of £4 per hour or below increased in each job group between 1996 and 1999, while the proportion paying the majority of their workforce low pay declined in each job group between these years.

Table 3.15 Distribution of low-paid employment within each job group

Column percentages

	Semi-/unskilled		Skilled/Craft		Clerical/Sales	
	1996	1999	1996	1999	1996	1999
Employment at £4/hour or below						
0	30	46	71	78	56	70
1-24	3	3	2	3	5	4
25-49	4	4	4	3	4	3
50-74	6	5	4	3	5	3
75 or more	58	43	19	13	31	21
Unweighted base	1705	1171	1511	973	1646	1089

Weight: establishment

3.3.3 *Most recent low-paid recruit*

The introduction of ETU may affect low-paid employment in a number of ways. The benefit may affect recruitment at the lower end of the wage distribution, it may affect the wages offered to new recruits, or other aspects of their conditions of employment, such as their hours of work. The survey of employers therefore asked specifically about recent recruitment of workers paid at a rate of £4 per hour or below (about £160 per week). Overall, the proportion of employers recruiting at these wage levels fell significantly between 1996 and 1999. Of those who had recruited in the last 12 months, six out of 10 employers (61 per cent) in 1996 said they had recruited someone at a rate of £4 per hour or below, while only four out of 10 employers (42 per cent) in 1999 reported they had done so (Table 3.16).

Where employers had recruited at £4 per hour or below in the last 12 months, the majority (63 per cent) had recruited a similar number of workers in this wage band as they had in the previous year, while 18 per cent of employers said their recruitment at these wages had increased over this period.

Table 3.16 Percentage of employers who had recruited someone at £4 per hour or below in past year

Cell percentages

	1996	Base	1999	Base
Scheme A	59	423	39	182
Scheme B	64	470	46	211
Control	61	467	42	210
All areas	61	1360	42	603

Weight: establishment

Table 3.17 looks at low-paid recruitment among the panel sample. Just under half of these employers (46 per cent) had recruited someone at a rate of £4 per hour or below in both 1996 and 1999 but this proportion did not vary a great deal across evaluation area. Similarly, there was very little difference between areas in the proportion of employers who had newly recruited at these wages in 1999 only. Again, this would suggest that ETU had no effect on employers' recruitment in the pilot areas during the evaluation period.

Table 3.17 Low-paid recruitment by ETU area – panel sample

Column percentages

	Scheme A	Scheme B	Control	All areas
Recruitment at £4 per hour or below in ...				
Both 1996 and 1999	42	48	47	46
1996 only	25	22	26	24
1999 only	8	4	8	7
Neither 1996 nor 1999	25	26	19	24
Unweighted base	192	218	218	628

The largest employers (200 employees or more) were the least likely to have recruited someone at £4 per hour or below in 1999, with only 18 per cent saying they had done so among employers who had carried out some recruitment. This compares with almost half (47 per cent) of employers with 11-24 employees. Employers in the hotel/catering industries were the most likely to have carried out recent low-paid recruitment, with 69 per cent having employed someone at £4 per hour or less over the past year, followed by other services (54 per cent) and distribution (50 per cent). The industry groupings least likely to have carried out recent low-paid recruitment were public administration (15 per cent) and education (11 per cent).

The average starting wage of employers' most recent low-paid recruit increased from £3.18 per hour in 1996 to £3.47 in 1999 (Table 3.18). This wage growth was more limited in Scheme A areas than elsewhere, rising from £3.24 per hour to £3.39 (an increase of five per cent), compared with wage growth of 11 and 12 per cent respectively in Scheme B and Control areas. As expected, the starting wage paid to employers' most recent low-paid recruit was heavily influenced by the National Minimum Wage, introduced in April 1999. Four out of 10 employers (38 per cent) who recruited someone at £4 per hour or below in the past year in 1999 did so at the adult minimum wage of £3.60 per hour (Table 3.19). This proportion did not vary by evaluation area, but Scheme A employers were more likely than those in other areas to pay their low-paid recruits less than £3.60 per hour and less likely to pay them more than £3.60 per hour (29 per cent, as against 41 per cent in Control areas). These findings are suggestive of an ETU 'wage effect' for low-paid recruits in Scheme A areas.

Table 3.18 Mean hourly starting wage of most recent recruit earning £4 per hour or below

	1996		1999	
	Scheme A	**Scheme B**	**Control**	**All areas**
Scheme A	£3.24	397	£3.39	175
Scheme B	£3.15	446	£3.49	196
Control	£3.16	432	£3.53	198
All areas	£3.18	1275	£3.47	569

Weight: establishment

Table 3.19 Mean hourly starting wage of most recent recruit earning £4 per hour or below (grouped) by ETU area in 1999

Column percentages

	Scheme A	Scheme B	Control	All areas
Less than £3.60 per hour	33	25	24	27
£3.60 per hour	39	39	35	38
More than £3.60 per hour	29	36	41	35
Unweighted base	175	196	198	569

Table 3.20 shows the mean differences between 1996 and 1999 in the wages offered to the most recent low-paid recruits among the panel sample. On average, new recruits were paid more in 1999 than equivalent workers in the previous year in all areas. The mean differences were somewhat larger in Control than in pilot areas, providing further suggestive evidence of an ETU 'wage effect'.

Table 3.20 Mean differences in wage offers to most recent low-paid recruits by ETU area - panel sample

Mean difference

	Scheme A	Scheme B	Control	All areas
Mean difference	£0.35	£0.37	£0.41	£0.38
Unweighted base	83	113	105	300

Weight: establishment

3.4 Social security benefits

Another of the aims of the ETU survey of employers is to determine employers' level of awareness and experience of social security benefits, especially ETU.

3.4.1 Awareness of specific benefits

There was an extremely high level of awareness of particular social security benefits among employers in 1999 (Table 3.21). Nearly all of them said they had heard of Family Credit (96 per cent), Housing Benefit (95 per cent) and Council Tax Benefit (87 per cent) and eight out of 10 said they had heard of Disability Working Allowance (81 per cent). As levels of awareness had also been high in 1996, there was little scope for them to increase over the course of the evaluation period.

Table 3.21 Awareness of social security benefits

Column percentages, multiple response

	1996	1999
Family Credit	95	96
Housing Benefit	97	95
Council Tax Benefit	87	87
Disability Working Allowance	75	87
None of these/no answer	1	2
Unweighted base	2400	1627

Weight: establishment

3.4.2 Awareness of in-work benefits

Employers were asked specifically if they were '*generally aware if (in-work) benefits are available to lower-paid workers*'? Most of them said they were aware of the availability of in-work benefits and this level of awareness rose from 76 per cent in 1996 to 84 per cent in 1999 (Table 3.22). Levels of awareness were slightly higher in pilot compared with Control areas.

Table 3.22 Awareness of in-work benefits by ETU area

(percentage who said they had heard of in-work benefits)

Cell percentages

	1996	Base	1999	Base
Scheme A	77	626	85	451
Scheme B	74	620	85	464
Control	79	647	81	466
All areas	76	1893	84	1381

Weight: establishment

3.4.3 Awareness of ETU

The proportion of employers who said they had heard of ETU increased substantially from a third (33 per cent) in 1996 to over half (53 per cent) by 1999 (Table 3.23). The biggest increase in awareness was recorded in Scheme B areas, where it doubled from 30 per cent in 1996 to 63 per cent in 1999. Awareness of ETU also increased considerably in Scheme A areas, from 32 to 53 per cent over the course of the evaluation period. These increases in awareness were, not surprisingly, greater than those recorded in Control areas, but even these saw an increase from 35 per cent in 1996 to 43 per cent in 1999.

Table 3.23 Awareness of ETU by area

(percentage who said they had heard of ETU)

Cell percentages

	1996	Base	1999	Base
Scheme A	32	258	53	269
Scheme B	30	251	63	347
Control	35	277	43	241
All areas	33	786	53	857

Table 3.24 shows that, among those employers who were aware of ETU in 1999, four out of 10 (38 per cent) had first heard of it through informal channels ('other people'). This method was particularly important in pilot areas, where the 'other people' concerned were most commonly employees. About a quarter (26 per cent) of those employers who were aware of ETU had first heard of it through a news item, usually a newspaper/magazine article or TV news. This method was particularly important in Control areas, where the scope to learn about ETU through informal channels was of course more limited. Targeted advertising was less effective, with only a fifth of employers (19 per cent) first hearing of ETU through this method. Amongst methods of advertising, newspapers and magazines were more effective than posters or radio advertisements.[11]

Table 3.24 How employers heard of ETU in 1999 by ETU area

(all who said they had heard of ETU)

Column percentages

	Scheme A	Scheme B	Control
Advert	20	20	18
Other people	38	43	31
News item	25	24	30
Other	9	5	7
Don't know	7	9	14
Unweighted base	269	347	241

Weight: establishment

While awareness of ETU increased during the course of the evaluation period, knowledge of the eligibility criteria for ETU remained at quite a low level. Less than a fifth of employers in the pilot areas who had heard of ETU (16 per cent in Scheme A areas and 19 per cent in Scheme B areas) said they would be able to advise their employees on the number of hours they would need to work to be eligible for ETU (Table 3.25).

[11] The fact that 18 per cent of those employers in the Control sample who were aware of ETU in 1999 claimed to have first heard of it through adverts, when no such advertising was carried out in Control areas, means we must be cautious before attaching particular weight to these findings.

About the same proportion felt able to offer advice on whether or not an employee would be eligible for ETU if they had dependent children and slightly less said they would be able to offer advice to their employees on the maximum they could earn and remain eligible for ETU. Overall, more than three-quarters of those employees in pilot areas who had heard of ETU (79 per cent in Scheme A areas and 77 per cent in Scheme B areas) said they would not be able to advise their employees on any of the eligibility criteria and the proportion in Control areas was higher still. This level of knowledge of the eligibility criteria for ETU is no higher than it was in 1997.

Table 3.25 Advice on eligibility for ETU

(percentage of employers who were aware of ETU who could also advise their employees on the following eligibility criteria)

Column percentages, multiple response

	Scheme A	Scheme B	Control
Hours	16	19	15
Earnings	16	15	15
Children	18	17	13
None of these	79	77	82
Unweighted base	269	347	241

Weight: establishment

3.4.4 Experience of social security benefits

Overall, a third of employers (32 per cent) said they had experience of their lower-paid workers being entitled to social security benefits in 1999 (Table 3.26). This was slightly higher than had been the case in 1996. The level of experience of social security benefits in 1999 did not vary by ETU area.

Table 3.26 Experience of in-work benefits by ETU area

(percentage who said they had experience of in-work benefits)

Cell percentages

	1996	Base	1999	Base
Scheme A	29	276	33	194
Scheme B	28	288	30	202
Control	32	311	34	227
All areas	30	875	32	623

Weight: establishment

Medium-sized establishments reported greater experience of in-work benefits than smaller employers. For example, 46 per cent of employers with 25-49 employees reported experience of in-work benefits, compared with 22 per cent of the smallest employers (two to four employees). The level of experience of in-work benefits also varied by industry. Employers in public administration reported the most experience of these benefits

(53 per cent) while those in agriculture/mining/construction reported the least (18 per cent).

Of those employers who reported experience of their lower-paid workers being entitled to in-work benefits, most (73 per cent) said they had experience of Family Credit (Table 3.27). This amounted to nearly a quarter (23 per cent) of all employers.

Table 3.27 Experience of social security benefits in 1999

Column percentages, multiple response

	All employers	Those with experience of in-work benefits
Family Credit	23	73
Housing Benefit	15	47
Council Tax Benefit	8	26
Disability Working Allowance	3	10
Don't know	3	10
No experience	69	N/A
Unweighted base	1627	623

3.4.5 Experience of ETU

Overall, just five per cent of employers interviewed in 1999 reported experience of ETU (89 cases in total) - four per cent in Scheme A and eight per cent in Scheme B (Table 3.28). Two per cent of employers in the Control areas mistakenly reported experience of ETU (only 12 cases in total)[12]. A quarter of those employers in Scheme B areas (27 per cent) who reported experience of in-work benefits also reported experience of ETU.

Table 3.28 Percentage of employers reporting experience of ETU in 1999 by ETU area

Cell percentages

	All employers	Base	Those with experience of in-work benefits	Base
Scheme A	4	22	13	22
Scheme B	8	55	27	55
Control	2	12	5	12
All	5	89	15	89

Weight: establishment

[12] The fact that some employers in Control areas mistakenly reported experience of ETU raises the possibility, of course, that some employers in Scheme A and Scheme B areas were also mistaken.

The relatively greater experience of ETU in Scheme B areas is underlined by the variations in reported experience of ETU across the eight pilot areas. For example, 10 per cent of employers in Sunderland and Doncaster said they had experience of ETU, as did nine per cent in Bournemouth. Thus, the three areas with the highest reported experience of ETU were all in Scheme B. It should also be pointed out however that the fourth Scheme B area, Perth, shared with Southend the distinction of having the lowest reported level of experience of ETU, at only three per cent of employers.

3.4.6 Summary of awareness and experience of social security benefits

Table 3.29 summarises employers' levels of awareness and experience of social security benefits, especially with regards to ETU. General awareness of in-work benefits rose between 1996 and 1999. Nearly a quarter of employers in 1996 (23 per cent) said they had not heard of in-work benefits, falling to a sixth (16 per cent) in 1999. The proportion saying they had experience of in-work benefits, however, rose only marginally in the evaluation period - from 30 to 32 per cent. There was little variation in the reported levels of awareness of in-work benefits by ETU area in either year.

Awareness of ETU also rose quite substantially between 1996 and 1999. Two-thirds of employers (67 per cent) said they were not aware of ETU in 1996, but this had fallen to less than a half (47 per cent) by 1999. The change in levels of awareness was most marked in ETU Scheme B areas, where lack of awareness halved from 70 to 37 per cent. As with in-work benefits as a whole, however, this greater awareness of ETU was not accompanied by a large increase in experience of the benefit, which rose from four per cent of employers in 1997 to five per cent in 1999, nor by an increase in knowledge.

Table 3.29 Summary - awareness and experience of social security benefits and ETU by ETU area[13]

Column percentages

	1996			1999			1996	1999
	A	B	C	A	B	C	All	All
In-work benefits								
Not aware	22	25	21	15	15	19	23	16
Aware, no experience	49	47	47	52	55	47	48	52
Experience	29	28	32	33	30	34	30	32
Earnings Top-up								
Not aware	68	70	65	47	37	57	67	47
Aware, no experience	32	30	35	49	55	41	33	48
Experience	N/A	N/A	N/A	4	8	2	N/A	5
Unweighted base	792	802	806	519	539	569	2400	1627

[13] In the column titles for Table 3.29, A refers to Scheme A areas, B refers to Scheme B areas and C refers to Control areas.

3.5 Changes since 1996: summary of the descriptive analysis

The preceding analysis has provided a descriptive account of the key changes in the characteristics and behaviour of employers during the ETU evaluation period.

3.5.1 Workforce and recruitment

Among the job groups where ETU would be expected to have its greatest effect - semi/unskilled and clerical/sales jobs - there was mixed evidence regarding employment effects among the panel sample of employers. Levels of semi/unskilled employment were maintained between 1996 and 1999 in the pilot areas but fell substantially in the Control areas, a difference consistent with an ETU effect. However, clerical/sales employment grew more strongly in Control than in pilot areas, contrary to expectation.

The findings on rates of recruitment and termination also provided mixed evidence on ETU effects. As expected, termination rates in semi/unskilled employment were lower in the ETU pilot than in the Control areas in 1999. Contrary to expectation however, recruitment rates in this job group were lower in the pilot areas compared with the Control areas.

There was no evidence that ETU had eased recruitment difficulties among the panel sample of employers in the pilot areas compared with the Control areas between 1996 and 1999.

3.5.2 Hours of work

A greater proportion of semi/unskilled employees and clerical/sales employees worked 30 hours or more per week in Scheme A areas in 1999, compared especially with the equivalent workers in Control areas. This difference was not apparent in 1996.

3.5.3 Pay and the extent of low pay

The descriptive analysis produced quite a lot of conflicting evidence with regards to an ETU 'wage effect'.

Semi/unskilled workers in the pilot areas were paid 14 per cent more on average in 1999 than in 1996, whereas these types of workers in the Control areas were paid only six per cent more. However, there was no wage growth among clerical/sales employees in Scheme B areas in the evaluation period, whereas these types of workers experienced wage growth in Scheme A and Control areas.

Among the panel sample of employers, wages grew more slowly for semi/unskilled and clerical/sales workers between 1996 and 1999 in Scheme B areas than in Scheme A or Control areas.

The underlying distribution of low-paid employment among employers was bi-modal: either they had no employees in each job group who they paid at a rate of £4 per hour or below or the majority of their employees were paid at this rate.

The average proportion of each job group earning £4 per hour or below in 1999 did not vary by evaluation area in such a way as to provide evidence of an ETU 'wage effect'.

Among the panel sample, there was very little difference between areas in the proportion of employees who had newly recruited at wages of £4 per hour or below in 1999 only.

On average, recent low-paid recruits were paid more in 1999 than equivalent workers in 1996 in all areas, but this wage growth was slower in Scheme A areas than in Scheme B or Control areas.

Among the panel sample of employers, the average pay of recent low-paid recruits rose more quickly between 1996 and 1999 in Control areas than in pilot areas.

3.5.4 Social security benefits

There was a high level of general awareness of in-work benefits among the employers interviewed but less than a third (32 per cent) reported actual experience of their lower paid employees being entitled to in-work benefits.

Awareness of ETU increased between 1996 and 1999, especially in Scheme B areas. However, only six per cent of employers in the pilot areas interviewed in 1999 reported any actual experience of ETU. Knowledge of the eligibility criteria for ETU was low even among those who said they had heard of ETU and was no higher than it had been in 1997.

4 ASSESSING THE IMPACT OF ETU – MULTIVARIATE ANALYSES

The descriptive analyses outlined above have offered some evidence of an ETU effect, albeit one which does not appear consistently. Multivariate analyses, which control more systematically for differences between employers, provide a more robust test of whether ETU has affected pay or employment in the hypothesised manner.

Multivariate analyses were restricted to the panel sample, because we had data for these employers relating both to the time before the introduction of ETU (1996) and the end of the evaluation period, when any changes in outcomes or behaviour brought about by ETU could be assumed to be maximised (1999). The multivariate analyses examine differences between the values of certain key variables in 1996 and 1999 and estimate the extent to which these differences can be explained by ETU. They involve, therefore, the construction of 'difference models'.

Changes associated with the introduction of ETU are most likely to be seen in establishments where there is already a high proportion of low-waged work and considerable labour turnover. Any change in wage offers would also be more likely for new rather than existing jobs. The potential for ETU to impact on wage offers might therefore have an effect on the proportion of low-paid employment within particular job groups. Given that entitlement to ETU begins at 16 hours per week and that there is an extra credit available to those who work for 30 hours or more per week, it might also be expected that ETU would encourage a greater proportion of employees to work these hours than was the case before the benefit's introduction.

Based on these assumptions, multivariate analyses were undertaken to explore in detail five areas where ETU might have been expected to have an impact:

- Change in hourly wages.
- Change in the percentage of low-paid employment.
- Change in hourly wages of the most recent low-paid recruit.
- Change in weekly working hours.
- Change in the speed and difficulty of recruitment.

In the case of each area of analysis, difference models were constructed using Ordinary Least Squares (OLS) regression. It was possible to use OLS because in each case we had a continuous measure of the dependent variable requiring explanation (for example, change in wages between 1996 and 1999). The technique involves estimating the extent to which variation in the dependent variable is associated with variation in a number

of explanatory variables that are included in the model. The technique is able to identify the *independent* impact of each of the explanatory (or predictor) variables on the dependent variable, holding constant the effect of the others.

The explanatory variables used in the models were of two broad types. First, there were fixed variables, which took a value determined prior to the evaluation period. An example of such a variable would be the size of establishment in 1996.[14] Second, there were change variables, whose value altered during the course of the evaluation period. The change in the proportion of employees in a particular job group between 1996 and 1999 who were female would be an example of a change variable. The most important change variable, however, was of course the introduction of ETU.

Explanatory variables were retained in the reported versions of each model if they were statistically significant, or if they were part of a group of variables of which some of the members were significant. It did not prove possible to explain changes in weekly working hours and the speed/difficulty of recruitment, so reporting is confined to models on the change in hourly wages, change in the percentage of low-paid employment and change in hourly wages of the most recent low-paid recruit.

4.1 Change in hourly wages of semi/unskilled and clerical/sales employees

The models were run separately for the job groups in which ETU is likely to have its most noticeable impact - semi/unskilled and clerical/sales employees. The results of this estimation for semi-skilled/unskilled employment are shown in the appendix, Table 2.

Of necessity, this model was restricted to those employers who reported a level of average gross hourly pay for semi/unskilled employees in both 1996 and 1999. Once employers were also excluded if they had missing values on any of the control variables, the model was computed for 385 members of the panel sample. As this model estimated the impact of ETU on the change in wages of semi/unskilled *employees*, it was weighted by employment in that job group at the beginning of the evaluation period. The adjusted R^2 for the model was 0.43, which indicates that it was able to explain 43 per cent of the change in hourly pay of semi/unskilled employees that occurred between 1996 and 1999, a satisfactorily high proportion for this type of exercise.

Among fixed variables, the average gross hourly wage of semi/unskilled employees in 1996 and the size of establishment in that year had the most explanatory power. While larger establishments saw faster wage growth

[14] The use of 'prior' variables in this way introduces the danger that standard errors will be distorted and *t* values inflated by serial correlation (Gujarati, 1992, 1995). This was tested for in each of the econometric models by computing and inspecting the Durbin-Watson statistic, which in each case suggested that the models were not affected by serial correlation.

for semi/unskilled employees between 1996 and 1999, the opposite was the case for those establishments in which wages were already high in 1996. This latter effect is due to the National Minimum Wage - the wage growth in establishments that already paid above £3.60 in 1996 was unsurprisingly slower than in establishments that had to meet the requirements of the legislation.

Among change variables, an increase in the number of semi/unskilled workers employed by the establishment between 1996 and 1999 was associated with an increase in average pay for that job group. Wages tended to be higher where wage-setting was influenced by the supply of labour in 1999 but not in 1996, but lower where national agreements or pay trends were important in 1999 but not in 1996.

The variables indicating whether the employer was located in a Scheme A pilot area or a Scheme B area, as opposed to the Control areas, were not significant in this model, indicating that ETU had no impact on the change in wages of semi-skilled/unskilled employees between 1996 and 1999 (the appendix, Table 2).

The appendix, Table 3 shows the results of the model that explained the change in the average hourly wages of clerical and sales employees between 1996 and 1999. This model had an adjusted R^2 of 0.51, which meant it was able to explain most of the wage change that occurred for clerical/sales employees during the evaluation period. The model was restricted to the 277 employers with valid data and was weighted by employment in the clerical/sales job group in 1996.

The average wage of clerical/sales employees at the beginning of the evaluation period again had a pronounced negative effect on 1996-99 wage growth. The proportion of clerical/sales employees who worked part-time (less than 30 hours per week) in 1996 also exerted downward pressure on wages. Among change variables, an increase between 1996 and 1999 in the proportion of clerical/sales employees who were female reduced wage growth, as did an increase in the proportion of such employees who worked part-time. Conversely, increased product or service demand was associated with an increase in the average wage levels of clerical/sales employees.

As was the case with semi/unskilled employees, ETU had no effect on the change in wages of clerical/sales employees between 1996 and 1999. Where employers had become *aware* of ETU by 1999, however, whereas they had not been aware in 1996, this was associated with the payment of lower wage increases to clerical/sales employees. This suggests that where employers show increased awareness of ETU, the benefit is more likely to restrain wage growth.

4.2 Change in the proportion of low-paid semi/unskilled and clerical/sales employment

If ETU had exerted a 'wage effect' this should be manifested in an increase in the proportion of low-paid employment within the semi/unskilled and clerical/sales job groups in the pilot relative to the Control areas. The appendix, Table 4 shows the model results for the change between 1996 and 1999 in the proportion of semi/unskilled employees who were paid at a rate of £4 per hour or below. Just over half of the panel sample (454 employers) employed some semi/unskilled workers at these wage levels in both 1996 and 1999 and provided valid data for all the other variables contained in the model. The model had a reasonably high adjusted R^2 of 0.43, which indicates that it was able to explain 43 per cent of the change in the proportion of low-paid semi/unskilled employment that occurred between 1996 and 1999. It was weighted by employment in the semi/unskilled job group at the beginning of the evaluation period.

Among fixed variables, the proportion of semi/unskilled workers who were paid £4 per hour or below in 1996 exerted a strong downwards influence on the change in this proportion over the course of the evaluation period. This can again be related to the National Minimum Wage introduction, with employers heavily dependent on low-wage labour having little scope to increase this dependence during a period in which statutory wage protection was re-introduced. The size of establishment in 1996 also had a pronounced negative effect, but where employers were operating in the traditionally low-paying hotel/catering industries and other services, they reduced their reliance on low-paid labour within the semi/unskilled job group less rapidly than was the case in other industries. Where employers said that national pay trends and national agreements were important in wage-setting in 1996 but not in 1999, this was associated with an increase in the proportion of semi/unskilled employees who were low-paid. This was the most important change variable.

ETU had no effect on the change between 1996 and 1999 in the proportion of semi/unskilled employees who were low-paid. Increased *awareness* of ETU, however, was again associated with a change consistent with theoretical expectations - where employers were aware of ETU in 1999 whereas they had not been in 1996, this was associated with an increase in the proportion of low-paid employment with in the semi-skilled/unskilled job group.

With an adjusted R^2 of 0.56, the OLS model that explained the change in the proportion of low-paid clerical/sales employment between 1996 and 1999 had a high degree of explanatory power (the appendix, Table 5). The model was computed for the 465 members of the panel sample who employed clerical/sales employees for whom they provided wage data in both 1996 and 1999 and who also had valid data for each of the variables included in the model. It was weighted by clerical/sales employment in 1996.

The proportion of clerical/sales employees who were low-paid in 1996 was the most powerful fixed variable in the model and had a negative effect on the dependent variable. The proportion of clerical/sales employees who were part-timers in 1996 was strongly associated with an increase in the proportion of such workers who were low-paid between 1996 and 1999, a finding which mirrors the importance of the same variable in the wage change model (see the appendix, Table 3). Amongst change variables an *increase* in the proportion of the clerical/sales workforce who worked part-time was associated with an increase in the proportion of such workers who were paid at a rate of £4 per hour or less. The same was true if wage-setting was influenced by the pay individuals were willing to accept in 1999 but not in 1996.

ETU had no effect on the change in the proportion of low-paid clerical/sales employment between 1996 and 1999. Increased awareness was again associated with an increase in the proportion of low-wage employment, although in this case it was increased awareness of in-work benefits in general rather than ETU in particular that was important (the appendix, Table 5).

4.3 Change in hourly wages of most recent low-paid recruit

Further models were constructed to try to detect whether ETU had any effect on the wages offered to new recruits. The appendix, Table 6 shows the results for the model measuring the influences on the change in wage offers to employers' most recent low-paid recruit between 1996 and 1999. Just over a third of employers in the panel sample (300) had recruited an employee at wages of £4 per hour or below in both 1996 and 1999 and had valid data on all of the variables included in the model. This model had an adjusted R^2 of 0.53, which meant it was able to account for more than half of the variation in the dependent variable. Information was not collected on the job group of the most recent low-paid recruit, so this model was weighted by employment as a whole in 1996.

Among fixed variables, the wage level of the most recent low-paid recruit in 1996 had the largest effect on wage growth for this type of employee over the course of the evaluation period. The explanation for this is the same as for similar findings in the earlier models and relates to the impact of the National Minimum Wage, which ensured that wage growth amongst employers who paid less than £3.60 per hour to their most recent low-paid recruit in 1996 was faster than for those who paid more. Wage growth in relation to the most recent low-paid recruit was also constrained in production industries and other services.

Of the change variables, those relating to wage-setting had the most impact on the change in wages of the most recent low-paid recruit. Where employers reported that the pay individuals were willing to work for was an important factor in 1996 but not in 1999, this was associated with slower wage growth than was the case otherwise. Conversely, if

employers said that the supply of labour was important in 1996 but not in 1999, this was associated with relatively fast wage growth.

A major distinction between this model and those reported above was that the change in hourly wage offers to the most recent low-paid recruit between 1996 and 1999 was subject to an ETU effect. After controlling for other variables influencing wage change, employers located in Scheme B areas reported slower wage growth than was the case in Control areas. This is the type of effect ETU would be expected to have if the benefit was making low-paid work more attractive for eligible employees. There was no such effect in Scheme A areas. Awareness of ETU and in-work benefits in general was also associated with slower wage growth, albeit not strongly[15]. If employers were aware of ETU in 1999 having not been in 1996, hourly wage offers to the most recent low-paid recruit rose more slowly than was otherwise the case. The same was true if employers became aware of in-work benefits in general during the course of the evaluation period.

The main reason why an ETU effect applied to the change in hourly wage offers to the most recent low-paid recruit but not to other outcome variables is probably because it is easier for employers to change the wages offered to new workers than to existing staff.[16]

4.4 Assessing the impact of ETU: summary of multivariate analysis

It proved possible through multivariate analysis to explore in detail three areas where ETU might have been expected to have an impact:

- Change in hourly wages.
- Change in the percentage of low-paid employment.
- Change in hourly wages of the most recent low-paid recruit.

The five econometric models that were used to estimate the impact of ETU in these areas were able to explain a satisfactorily high proportion of the variation in each dependent variable and satisfied other criteria for robustness and reliability. They suggested that ETU had no impact on change in hourly wages or in the percentage of low-paid employment,

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[15] The coefficients on the AWARE and AWAREETU variables were only significant at the 90 per cent confidence level.

[16] The possibility was also considered that the employers who had recruited low-paid employees in both 1996 and 1999 were a non-random subset, rendering the results of this model ungeneralisable to the panel sample as a whole. This was tested for by constructing a probit model that identified the employer characteristics associated with recruiting low-paid workers in 1996 and 1999 and then inserting the inverse Mills' ratio (8) from this model into the OLS model explaining change in hourly wages of the most recent low-paid recruit. This is the established method for detecting and correcting for sample selection bias (Heckman, 1979). The 8 variable was non-significant in the model, indicating that sample selection bias was not present and that the results are generalisable to the population.

but that increased awareness of ETU was associated with suppressed wage growth in the case of clerical/sales workers and with an increase in the proportion of low-paid semi-skilled/unskilled workers. A discernible ETU effect was found in relation to the change in hourly wages of the most recent low-paid recruit, with employers in Scheme B areas registering slower wage growth for these employees than was the case in the Control areas.

5 CONCLUSIONS

The survey of employers set out to assess the impact of ETU on employers' behaviour. A number of outcomes following the introduction of the new benefit might be expected: lower wages, higher employment rates and the creation of new jobs; a change in employment policy; and an increase in awareness of in-work benefits.

5.1 Employment and new jobs

Among the job groups where ETU would be expected to have its greatest effect – semi/unskilled and clerical/sales jobs - there was mixed evidence regarding employment effects among the panel sample of employers. Levels of semi/unskilled employment were maintained between 1996 and 1999 in the pilot areas but fell substantially in the Control areas, a difference consistent with an ETU effect. However, clerical/sales employment grew more strongly in Control than in pilot areas, contrary to expectation. There was no evidence that recruitment difficulties had eased following the introduction of ETU.

5.2 Employment policy

Awareness of in-work benefits was high, although less than a third of employers reported any actual experience of these benefits. Awareness of ETU rose between 1996 and 1999, especially in Scheme B areas, though only six per cent of employers in the pilot areas reported any experience of ETU by 1999.

5.3 Wages

Of the three most common influences on the levels of pay offered by employers, two of them - the pay individuals are willing to accept and the pay offered by other local employers - give considerable scope for an ETU 'wage effect'. No such effect emerged clearly from the descriptive analysis, however, which instead produced a lot of conflicting evidence. For example, while among the panel sample of employers wages grew more slowly for semi/unskilled and clerical/sales workers between 1996 and 1999 in Scheme B areas than in Scheme A or Control areas, the average proportion of each job group earning £4 per hour or below in 1999 did not vary by evaluation area. The one area in which the descriptive evidence was a little more consistent was in relation to recent low-paid recruits. Thus, analysis of the cross-section surveys showed that recent low-paid recruits were paid more in 1999 than equivalent workers in 1996 in all areas, but this wage growth was slower in Scheme A areas than in Scheme B or Control areas and, among the panel sample, the average pay of recent low-paid recruits rose more quickly between 1996 and 1999 in Control areas than in pilot areas.

The multivariate modelling produced limited evidence of an ETU effect on wages. There was no evidence of an ETU effect on change in hourly wages of clerical/sales and semi/unskilled employees between 1996 and

1999, nor on the change in the proportion of employees in these job groups who were low-paid. But in relation to the change in wages of the most recent low-paid recruit a clear ETU 'wage effect' did emerge, albeit only in relation to Scheme B areas, where wage growth was slower for recent low-paid recruits than in Control areas.

Department of Social Security

Research Report No 132

Earnings Top-up Evaluation: Employers' Reactions

Part Two • Econometric Analysis

Chris Hasluck and Anne Green

6 EARNINGS TOP-UP AND THE RECRUITMENT PROCESS

6.1 Introduction

One of the main arguments for an in-work benefit such as Earnings Top-up (ETU) is that it would increase the incentive of jobseekers to accept job opportunities at the lower end of the wage distribution. The result would be to increase competition for low-paid jobs. In the absence of a mechanism (such as a wage reduction) for inducing employers to increase the number of jobs on offer, the net impact of ETU on employment might be expected to be small and mainly at the expense of other job seekers[17]. Such a view, however, overlooks the dynamic aspects of the jobs market. At any moment, a proportion of jobs remains unfilled (vacancies) while employers seek to match the job vacancy to a suitable recruit. In some instances, vacancies remain unfilled because they only offer low pay. Insofar as ETU increases the incentive to take low-paid jobs, employers may find that they can fill vacant jobs more quickly than hitherto and can recruit to jobs previously 'hard to fill'. Where this happens, the average time taken to fill vacancies will fall and the proportion of total jobs occupied will increase. There may thus be some scope for an increase in employment despite the overall number of jobs remaining unchanged.

In order to establish whether there are any wider labour market effects arising from the introduction of ETU, it is essential to examine employer behaviour, particularly behaviour relating to vacancies and recruitment, before and after the introduction of the benefit and also to compare employer behaviour in ETU pilot areas and in the Control or Comparison areas. This report presents the findings of research relating to these important indicators of the impact of ETU on the labour market.

6.2 Aim and objectives of the research

The aim of the research was to establish the impact of ETU on the recruitment process. More specifically, the research examined three research questions. These were:

- Was there any evidence of change over time in the structure of vacancies in the ETU pilot areas compared to the Control areas?
- Were the number of vacancies, especially 'hard to fill' vacancies, lower in the ETU pilot areas after the introduction of ETU, and in comparison to the Control areas?
- Had the durations of unfilled vacancies become shorter since the introduction of ETU or were unfilled vacancy durations shorter in ETU pilot areas than in the Control areas?

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[17] Conventionally, such effects are described as substitution and displacement effects (see Hasluck 1998 for a description of these potential effects). Briefly, 'substitution' would have arisen if ETU-subsidised workers were employed at the expense of non ETU-subsidised workers. 'Displacement' is similar but work via competitive forces through the markets for goods and services.

6.3 In-work benefits and the recruitment process

Employers with jobs to fill can be thought of as 'searching' for acceptable recruits from amongst the many jobseekers in the labour market. Acceptable recruits are those who meet the employer's hiring standard. A wide range of factors influence the acceptability of jobseekers to an employer. Such factors include characteristics such as attitude, previous experience, skills and so forth. However, a willingness to work for the wage on offer must also be a necessary characteristic if a potential recruit is to be successfully hired. In the case of employers offering low-skill and low wage jobs, the lowest wage at which the jobseeker would accept a job (the reservation wage) may be the most important consideration, subject to some minimum standard of attitude and motivation. This is particularly so where an employer cannot increase the wage on offer because the job is of low value-added, the enterprise is operating in a very competitive product market with low margins, or because of collective wage agreements or other conventions preventing individual wage flexibility. In these circumstances employers will search at the extensive margin of the labour market, using whatever recruitment channels are available, with the objective of finding as many potential recruits as possible in the hope of finding someone willing to work for the (low) wage on offer.

The probability that an employer will find a recruit in any period of time will depend on the number of jobseekers looking for work, how many of them would be prepared to accept the wage offered[18], the recruitment methods used and the intensity of their use. In some instances the employer will have set such a low wage that the vacancy will remain permanently unfilled because no 'acceptable' (i.e. willing to accept the wage on offer) recruit can be found by the employer. In other instances, the wage offered may be such that only a very few jobseekers would accept it and the employer will have to undertake many searches to find such recruits and to hire them. The length of time that a vacancy remains unfilled (the vacancy duration) will thus be determined by factors such as local labour supply conditions, the costs of search and levels of out-of-work benefits (which affects the lowest acceptable, or reservation, wage) and employers' demand for labour (the productivity of labour and the wage on offer), the cost of keeping the vacancy unfilled and the alternative recruitment channels open to the employer.

By reducing the lowest acceptable wage of jobseekers, in-work benefits, such as ETU, have the effect of shifting the labour supply function facing employers. By 'topping up' earnings, ETU allows jobseekers to accept jobs at wage levels which they would have considered unacceptable without the benefit[19]. ETU shifts the labour supply function 'to the

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[18] In technical terms, this refers to the distribution of 'reservation wages' amongst jobseekers. The reservation wage is the lowest wage at which a person would be prepared to accept employment.

[19] Surveys of low-paid workers and the unemployed have shown that ETU would create a positive work incentive for most low-paid households (Marsh, Ford and White, 1998).

right' by reducing reservation wages at the lower end of the distribution. This suggests that ETU could have an impact upon the number and duration of unfilled vacancies. For any particular vacancy, especially those for which a willingness to work at low pay is the most important requirement, employers will encounter 'acceptable' recruits more frequently than was the case before the introduction of ETU. This will raise the probability of a successful hire from any given search activity and this, in turn, will reduce the expected or average duration of unfilled vacancies.

Any reduction in the average duration of unfilled vacancies will be reflected in a reduction in the number of such vacancies and, by implication, an increase in the level of employment[20]. The reduction in the number of vacancies is a reflection of the increased proportion of total jobs actually filled. This represents an improvement in the effectiveness with which the jobs market operates (although not necessarily in its efficiency). The fall in the stock of vacancies represents the net employment gain from ETU. How large this net gain is in reality depends on the extent to which there are significant numbers of vacancies remaining unfilled for lack of people willing to work for the wage on offer and the extent to which ETU increases the incentive for jobseekers to accept such jobs.

Reductions in the average duration of vacancies could be temporary if employers respond to the changed recruitment conditions. If employers find it easier than previously to recruit, this may temporarily reduce the time that vacancies remain unfilled. However, such a deviation from normal experience may signal to employers that the labour market is more competitive and they may react to such untypical, and possibly unexpected, success in recruiting workers. Employers may have in mind an acceptable time to fill a vacancy based upon the costs of recruitment and the costs of leaving a job unfilled. If so, their response to greater success at recruiting may be to reduce the wage on offer (or to raise their hiring standards in other ways). As this would reduce the arrival rate of suitable recruits, raise the duration of unfilled vacancies and, in turn, raise the number of unfilled vacancies back to the level that existed prior to the introduction of ETU. The impact of ETU on vacancy duration could thus be transitory. Indeed, changes in recruitment activity and vacancy duration could be the mechanisms which induce increases in the number of jobs by triggering wage reductions that result in an increase in the demand for labour and increased employment.

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[20] As the number (or stock) of unfilled vacancies when the job market is in a 'steady state' (V) is equal to $D_v \times I_v$, where D_v is the mean duration of an unfilled vacancy and I_v the flow of new vacancies onto the labour market, it follows that a reduction in D_v will reduce the number of vacancies observed with any given level of vacancy inflow and this implies an increase in the level of employment.

6.4 The data

The research used two main sources of data. These were:

- Vacancies notified to the Employment Service.
- The 1996 and 1997 ETU Employer Surveys.

6.4.1 Notified vacancies

Data on vacancies notified to the Employment Service were available for the 12 ETU pilot and Control areas (using approximations based on Jobcentre Office areas). The vacancy data consisted of monthly and quarterly series that could be accessed via NOMIS[21]. The quarterly series were particularly important because they provided information about vacancies by industry, occupation and median duration. In general, the series were available for vacancies notified (vacancy inflow), unfilled vacancies (vacancy stock), vacancies filled and vacancy outflow (the latter being vacancies filed plus vacancies cancelled). The median duration of vacancies by occupation and industry provided information about the length of time that unfilled vacancies had been on the books of the Employment Service and allowed vacancies that were 'hard to fill' to be identified.

However, in general, it is important to bear in mind some shortcomings of ES vacancy data. The main disadvantage of the ES notified vacancy series was the partial coverage of notified vacancies. Overall, the 1992 Employers' Recruitment Practices Survey (ERPS) suggested that between half and one third of all vacancies were notified to the Employment Service (Hales, 1993). However, this problem may have been less serious in the case of vacancies for low-paid jobs than for other types of job. According to the ERPS, around 35 per cent of engagements involving pay of less than £4 per hour were notified to a Jobcentre, compared with only 19 per cent of jobs paying more than £4 per hour. Amongst people recruited from unemployment, the corresponding figures were 44 per cent and 27 per cent.

It is widely recognised that a disproportionately high share of vacancies notified to the Employment Service nationally was for unskilled jobs, semi-skilled jobs in general and skilled manual and craft jobs (Hales, *op cit.*; Elias and White, 1991). Similarly, at the local level, an analysis of alternative sources of vacancy information in Cambridgeshire indicated that the concentration of notified vacancies was on less skilled jobs, together with clerical and secretarial positions, while only a fraction of managerial and professional vacancies were notified to the Employment Service (Tuffnell, 1998). The evidence nationally suggests that large organisations were less likely to notify vacancies to the Employment Service. Similarly but for quite different reasons, employers offering very low-paid and casual jobs were also less likely to notify the Employment Service. Such jobs were more likely to be filled using informal recruitment channels.

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[21] The National On-line Manpower Information System.

Despite the shortcomings outlined above, the advantage of information on vacancies notified to Jobcentres for comparative local labour market analysis is that it was the most consistent source available (see also Green: 2001). Indeed, despite efforts to set up databases (locally and nationally) of vacancies advertised in the press or to measure vacancies by means of surveys of employers, there was no other source of vacancy information collected or compiled on a consistent basis. So, information on vacancies notified to Jobcentres, while partial in coverage, was the best available at the time of the research.

6.4.2 Employer survey data

Whatever their limitations as a source of information on the stock of unfilled vacancies, surveys of employers remain the only source of detailed information about the process of recruitment within establishments. Surveys of employers in the eight ETU pilot and four Control areas were carried out in 1996 and 1997.[22] These surveys were unrepresentative of the population of all employers in that they concentrated on collecting information from employers with significant proportions of low-paid workers. The two surveys could be linked to provide a longitudinal panel of employers.

The employer surveys collected a wide range of data about the recruitment process. This data covered the procedures and recruitment channels used, numbers recruited in the past 12 months, turnover, recruitment difficulties, time taken to recruit, wages offered and a range of related information. The data was available for three main groups of employees: semi-skilled and unskilled, skilled and craft workers and people doing routine clerical work and sales assistants. Much of the recruitment data related to the most recent recruit hired at a wage of less than £4.00 per hour.

There were two limitations to the Employer Survey data. First, while the sample of employers was relatively large by the standards of most employer surveys, sub-sample size quickly diminished when the data was disaggregated by area, establishment size and industry. The statistical analysis was thus limited to broad groupings of classificatory variables. Second, the employer surveys covered employers of broad groups of low-paid workers. However, the sample was not targeted on employers whose employees were in receipt of ETU. Employers were asked

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[22] A third survey of employers was carried out in 1999. However, the number of employers from 1997 that remained in the sample was relatively small. This sample attrition will have introduced a bias into the data (the effect of which is unknown). Any gain in terms of evidence of longer-term effects of ETU must be balanced against the loss of reliability introduced by such bias. For this reason, no analysis was undertaken with the 1999 sample as it was felt that the impact of ETU on recruitment would have been most evident around the time of its introduction and that longer-term effects would be small. Lissenburgh (2001) examined similar issues using the matched element of the employer survey over the three sweeps (1996-1999) and found similar results to those reported here.

questions which related to their knowledge of ETU and awareness of employees in receipt of ETU. However, as ETU was paid to employees, there was no guarantee that the employer was aware of this fact. The sample of employers may thus consist of a mixture of those whose employees were claiming ETU, those that were in a similar position but not aware of it, employers whose employees were not claiming ETU and some who believed their employees were claiming ETU even though this was not the case. However, this was a problem only if the effect of ETU was restricted to employers with ETU claimants as employees. In a competitive local labour market this is unlikely as shifts in labour supply will directly or indirectly affect all employers.

6.5 Analysis

Analysis focused on the research questions set out in Section 6.2. The first research question was whether there was evidence of any change in the pattern, duration and level of vacancies attributable to the introduction of ETU. The analysis involved *time series analysis* of notified vacancies. Two type of analysis were undertaken. First, the behaviour of the vacancy time series was examined for the sub-periods before ETU and after ETU. If ETU had an effect on the duration and level of vacancies this should have been evident in the form of a 'break' in the vacancy trends in ETU pilot areas. It is possible that ETU Scheme A and Scheme B differed in their impacts and this hypothesis was also tested. Similarly, if notified vacancies were affected by the introduction of ETU, then *comparative analysis* contrasting the two types of ETU pilot with the Control areas might reveal the scale and timing of any impacts on vacancies.

ETU, if it had any effect at all on vacancies, could have been expected to impact on vacancies for semi-skilled and unskilled jobs more than vacancies for other occupational groups. Within the limitations of the occupational vacancy series, the analysis examined specific types of vacancy. ETU could also be expected to impact upon 'hard to fill' vacancies, especially where the reason for recruitment difficulty was low pay rather than a shortage of skills. The analysis examined the 'hard to fill' series as well as vacancies from specific sectors (such as hotels and catering) where the likely conditions of employment may have led to a more significant ETU effect than elsewhere in the labour market.

Analysis of notified vacancies represents an aggregate approach to the investigation of the impact of ETU on vacancies and provides no direct evidence of the impact of ETU on recruitment. Such direct evidence was provided by the two employer surveys. While there was no time series data available on recruitment behaviour in ETU pilot and Control areas, the 1996 survey represents a 'before ETU' baseline. This can then be compared with the 1997 survey which provides 'after ETU' data and facilitates a *'before and after study'* of the impact of ETU on the recruitment of low-paid workers. The identification of real differences between the pre-ETU behaviour and post-ETU behaviour was helped by the linking of the two employer surveys to form a panel (thus eliminating sampling variation), albeit at the cost of reducing the sample size.

The analysis of recruitment behaviour concentrated on differences in turnover, engagements and, in particular, the time taken to recruit to low-paid vacancies. Comparisons of such differences with the Control areas provided an indication of the extent to which observed changes in recruitment and vacancy duration would have been expected to occur in any event, perhaps because of changes in the general level of activity in the economy. The hypothesis that the length of time taken to fill a vacancy was shorter in the ETU pilot areas than in the Control areas was examined.

7 TRENDS IN NOTIFIED VACANCIES IN ETU AREAS

7.1 Introduction

An introduction to the scope of Employment Service (ES) data on vacancies and its strengths and weaknesses was provided in the Chapter 6, Section 6.4. However, two key points are worthy of reiteration here. First, the ES data series provides only a *partial* picture of the total number of vacancies in a local economy. As a consequence, the results presented here will be subject to a relatively wide margin of error. The analyses should be interpreted with caution.

Monthly vacancy data series were extracted from NOMIS for the period January 1994 to October 1998[23] for each of the 12 local areas,[24] and for Scheme A areas (aggregated together), for Scheme B areas (aggregated together), for Control areas (aggregated together) and for Great Britain. Four data series were extracted for each area. These were:

- *notified vacancies*: vacancies notified to a Jobcentre within a particular month;
- *unfilled vacancies*: vacancies which remained unfilled at the end of the month (i.e. the 'stock' of vacancies);
- *vacancies filled*: vacancies notified to a Jobcentre and filled by a jobseeker referred by the Jobcentre or another agency to whom ES has copied the vacancy;
- *vacancies cancelled*: vacancies withdrawn by ES for any reason other than they have been filled by ES.

The vacancy series could be disaggregated by occupation and by industry. However, this level of detail was only available on a quarterly basis. In addition, changes in the occupational and industrial classifications used by ES meant that data on the current occupational classification were only available from 1994; and on the current industrial classification from July 1995.

For the purposes of analysis, in occupational terms a distinction was made between:

- low-paid occupations;
- other occupations.[25]

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[23] The latest date for which data were available at the time of the research. The ES data series for the ETU pilot areas up to the end of 1999 are considered in Green (2001).

[24] Results at this level of detail are not presented here.

[25] All occupations which are not 'low paid'.

A list of 'low-paid occupations' was derived using data from the New Earnings Survey relating to earnings in SOC Minor Groups. The Council of Europe Decency Threshold was used as a cut-off with any occupation with average earnings below that level deemed to be low paid[26]. The low-paid occupations identified in this manner are listed in Table 7.1 in which it is apparent that such occupations were predominantly drawn from SOC Major Groups 5, 6, 7, 8 and 9.

Table 7.1 Low paid occupations

SOC Minor Group	Occupation title
55	Textiles, garments and related trades
58	Food preparation trades
59	Other craft and related occupations
62	Catering occupations
64	Health and related occupations
65	Childcare and related occupations
66	Hairdressers, beauticians and related occupations
67	Domestic staff and related occupations
69	Personal and protective service occupations nec
72	Sales assistants and check-out operators
79	Sales occupations nec
80	Food, drink and tobacco process operatives
81	Textiles and tannery process operatives
85	Assemblers/lineworkers
86	Other routine process operatives
90	Other occupations in agriculture, forestry and fishing
95	Other occupations in sales and services
99	Other occupations nec

In addition to low-paid occupations, a distinction was also made between two industries characterised by low pay and the rest of economic activity[27]. The two low pay industries were:

- G: Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods, (subsequently referred to as distribution);
- H: Hotels and restaurants, (subsequently referred to as hotels and catering).

[26] The assistance of Abigail McKnight in providing information and advice on this topic is acknowledged.

[27] These two industries were identified in analyses by Abigail McKnight, Peter Elias and Rob Wilson as containing particular concentrations of low-paid workers.

7.2 Trends in aggregate vacancies

Figures 7.1 to 7.4 show trends in aggregate vacancies (notified, unfilled, filled and cancelled) for the period from January 1994 to October 1998 for Great Britain, Scheme A, Scheme B and Control areas, respectively. The following key trends were apparent:

- Marked seasonal variations were evident in the notification of vacancies.
- In all area types there was little evidence for a change (either a significant increase or a significant decrease) in the number of vacancies notified to Jobcentres over the period from 1994 to 1998.
- In all area types there was evidence of a steady increase in the number of unfilled vacancies between 1994 and 1998 – reflecting the general improvement in economic conditions over the period.[28]
- There was some evidence in all area types for an increase in cancelled vacancies, particularly from 1997 onwards.
- In all area types there was some evidence of an increase in filled vacancies, again particularly from 1997 onwards.
- There was no clear evidence of a 'break' in vacancy trends in Scheme A and Scheme B areas associated with the introduction of ETU; indeed, the trends follow the same general pattern in all area types.

7.3 Trends in vacancies in low-paid occupations and industries

Aggregate vacancies were disaggregated into low-paid and other occupations and industries. A comparison of the occupational structure of vacancies by ETU scheme types is presented in Table 7.2.[29]

Table 7.2 Share of notified vacancies accounted for by low-paid occupations

Per cent

Area	10/94	10/95	10/96	10/97	10/98
Great Britain	55	55	54	54	55
Scheme A	54	55	52	55	52
Scheme B	61	59	59	59	58
Control areas	58	59	56	58	57

From this summary table it is apparent that:

- there was very little difference between area types in the occupational structure of vacancies: Scheme B had the largest proportion of vacancies in low-paid occupations of any of the area types, but in all areas the shares of low-paid vacancies over the period from October 1994 to October 1998 was in the range 52 per cent to 61 per cent;
- there was no clear trend over time in the occupational structure of vacancies in any of the area types.

[28] As highlighted in Green (2001).

[29] The occupational structure of unfilled vacancies shows a very similar pattern to that of notified vacancies.

7.4 Trends in vacancy durations

In Chapter 6 it was hypothesised that the durations of vacancies may have shortened in the Scheme A and Scheme B areas with the introduction of ETU. Information on the changing median duration of filled and unfilled vacancies, distinguishing low-paid occupations from other occupations, is presented in Figures 7.5 to 7.8 for Great Britain, Scheme A, Scheme B and Control areas, respectively. The main features emerging are:

- there was relatively little variation in the median time taken to fill vacancies in low-paid occupations and other occupations both within and between area types;
- the general trend over the period from 1994 to 1998 was for the median duration of filled and unfilled vacancies to increase slightly;[30]
- there were marked seasonal variations in the median duration of unfilled vacancies[31] in all areas;
- across all area types the general trend is for the median duration of unfilled vacancies in low-paid occupations to be slightly shorter than that for other occupations.

In the light of these findings it must be concluded that there was no evidence from these data series that the durations of unfilled vacancies had become shorter since the introduction of ETU, or shorter in the Scheme A and Scheme B areas compared to the Control areas.

The industrial analysis of vacancy durations yields no clearer a picture. In general, the median duration of filled vacancies was shorter for other industries than for distribution and hotels and catering[32] both within and between area types. Likewise, the median duration of unfilled vacancies was also similar for distribution, hotels and catering and other industries within and between area types.

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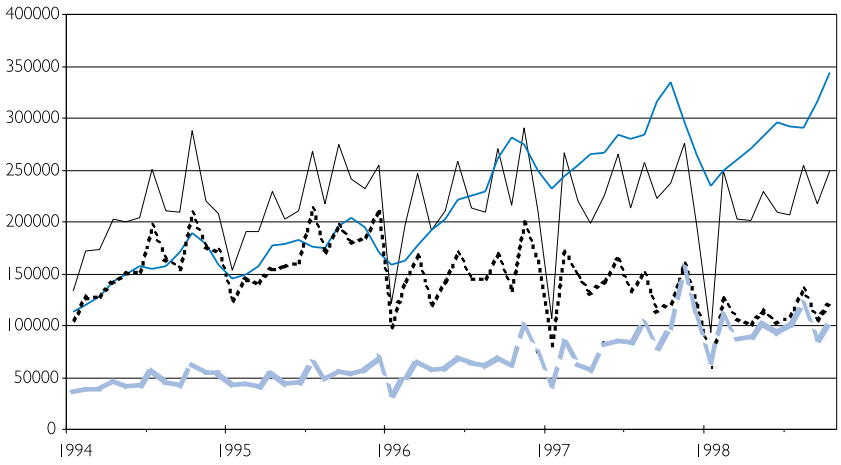
[30] This was to be expected given the increase in vacancies notified to ES along with the decline in the number of unemployed over the period in question.

[31] The median duration of unfilled vacancies was greatest in the first (i.e. winter) quarter.

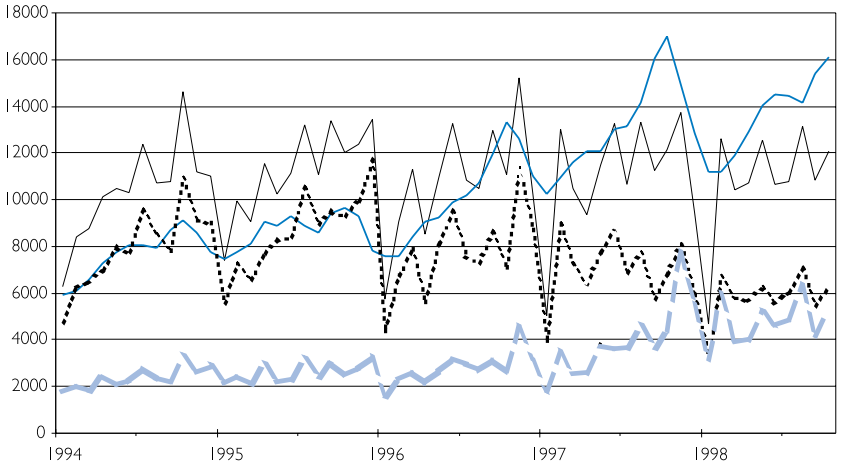
[32] That is, the industries in which low pay was concentrated.

Figure 7.1 Trends in aggregate vacancies in Great Britain, 1994-98



GB

Figure 7.2 Trends in aggregate vacancies in Scheme A areas, 1994-98



AS

Figure 7.3 Trends in aggregate vacancies in Scheme B areas, 1994-98

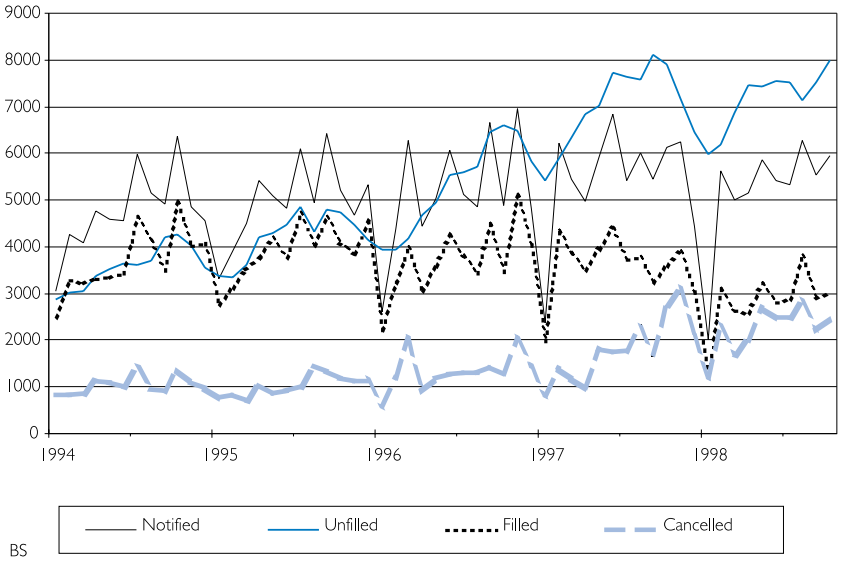


Figure 7.4 Trends in aggregate vacancies in Control areas, 1994-98

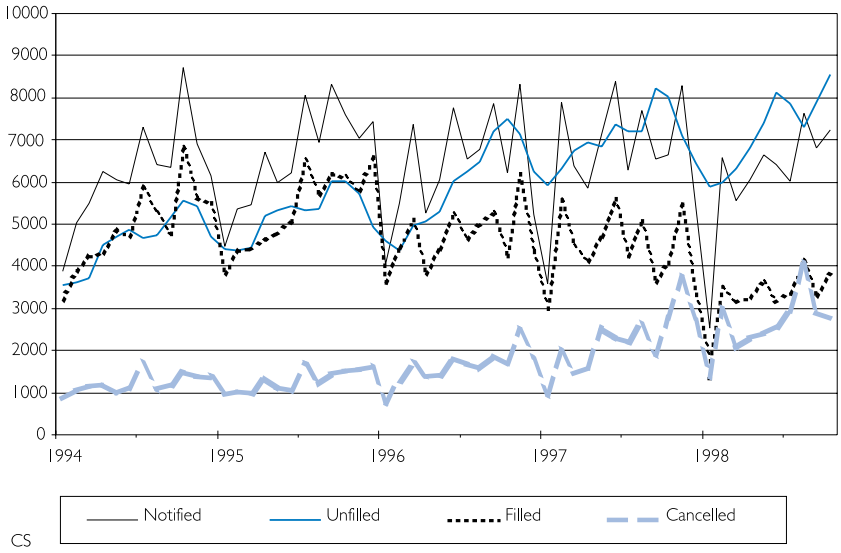


Figure 7.5 Median duration of vacancies by occupation, Great Britain, 1994-98

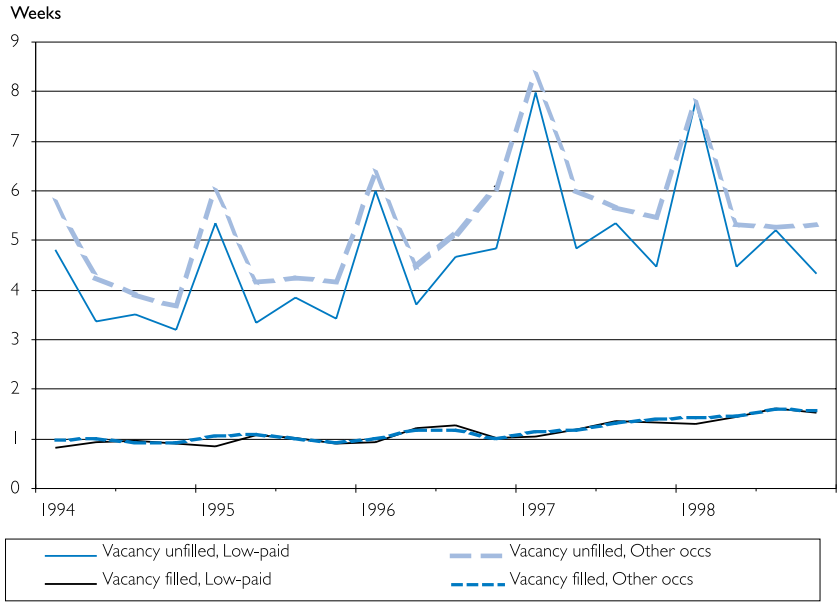


Figure 7.6 Median duration of vacancies by occupation, Scheme A areas, 1994-98

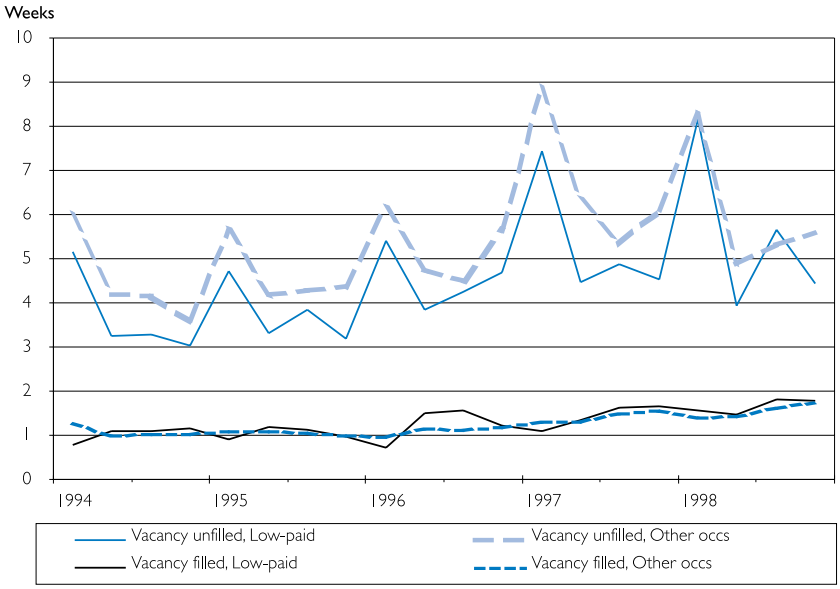


Figure 7.7 Median duration of vacancies by occupation, Scheme B areas, 1994-98

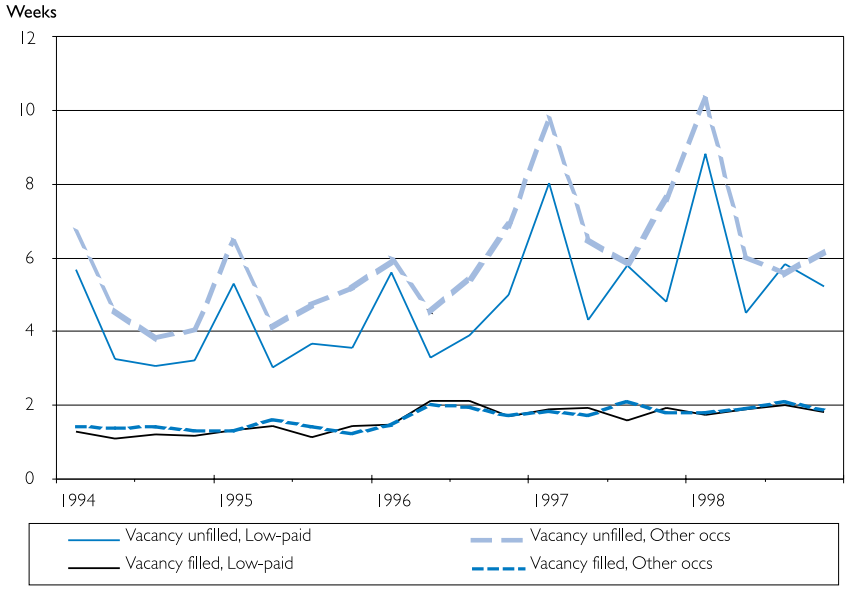
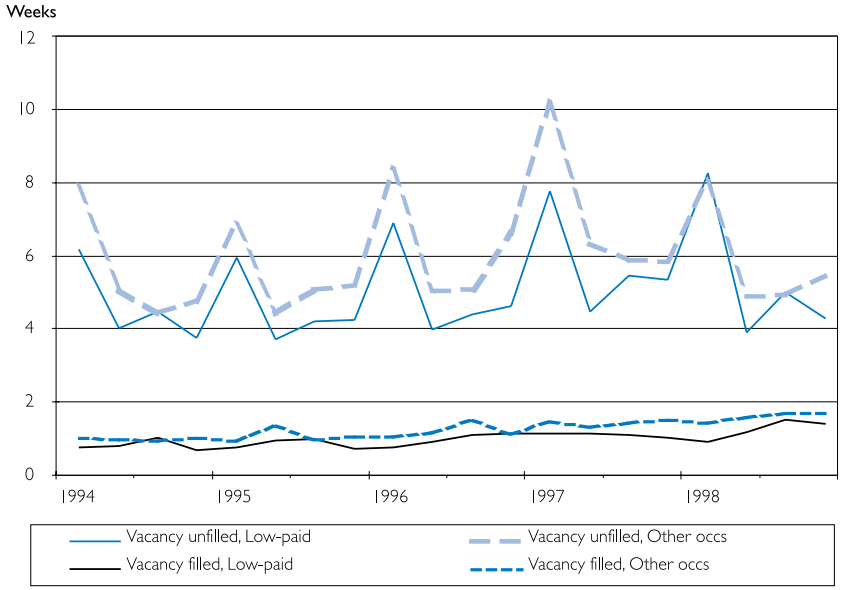


Figure 7.8 Median duration of vacancies by occupation, Control areas, 1994-98



8 RECRUITMENT AND VACANCIES AT ESTABLISHMENT LEVEL

8.1 Introduction

The potential effects of the introduction of ETU on employers and employment would be brought about by the effect of ETU on the supply of labour available to employers, particularly where the employer has jobs in which eligible individuals could obtain ETU (that is, jobs offering employment of at least 16 hours per week at a wage rate of £4.00 per hour or less). An improvement in labour supply would reduce the cost of employment because it would be easier and quicker to recruit, because employees remain in employment longer, or because wage rates fall.

In seeking evidence of an ETU impact on employment, several types of effect might be considered. Following the introduction of ETU any of the following possibilities, *compared to the Control areas*, might be observed:

- a faster growth/slower decline in overall employment levels;
- a faster growth of employment in occupations containing a high proportion of low-paid workers;
- a faster rate of recruitment to low-paid jobs;
- a lower rate of labour turnover from low-paid jobs;
- a greater ability to recruit to low-paid jobs;
- shorter vacancy durations;
- less reported skill shortages;
- a reduced need to raise wages to fill vacancies;
- (possibly) a fall in wage levels in low-paid jobs.

Within ETU pilot areas, differential change between ETU eligible jobs and non-eligible jobs or between employers who recruited to low-paid jobs and those who did not might be regarded as *prima facie* evidence of substitution effects (if the differences are in the expected directions). For example, if the proportion of low-paid jobs that are below 16 hours per week were to decrease following the introduction of ETU, this might be indicative of a substitution effect.

This chapter examines the evidence on these issues using data from a matched sample of employers in ETU pilot and Control areas.

8.2 A matched sample of employers in ETU areas

Three surveys of employers have been conducted in the 12 ETU pilot and Control areas. The first survey covered 2,401 establishments and was conducted in 1996. A second survey was carried out in 1997 and a third in 1999, three years after the first. The employer surveys were designed and managed by PSI while data collection was undertaken by NOP. The data was made available to IER by PSI as part of the ETU evaluation programme.

An important feature of the employer samples was a panel of establishments contacted on each of the three occasions. As with all panel surveys, some initial respondents dropped out of the sample at the second and third interview stages. This may have happened because the business had ceased trading, the establishment had relocated to an area outside the ETU pilot study, the employer refused to be interviewed on the second or third occasion or for some other reason. The level of sample attrition was significant. In 1997 the number of employers re-interviewed was 1,494 (62 per cent of the original 2,401) while the number of employers remaining in the sample had fallen to just 808 by 1999 (34 per cent of the original sample of employers).

The research reported in this chapter was based on a matched sample of 1,494 employers interviewed in both 1996 and 1997. This matched sample provided a longitudinal perspective on employment in the 12 areas over the 12 months that spanned the introduction of ETU and thus provides the basis for a 'before and after' examination of the effect of introducing ETU. The use of a panel of employers ensures that any observed differences in employment, recruitment or similar matters reflect changes in employer behaviour rather than be the consequence of random sampling variation (as would be the case if a different sample of employers was used before and after the introduction of ETU). Consideration was given to extending the analysis to embrace the third, 1999 survey of employers. However, this was not undertaken for two reasons. First, the impact of ETU (if any) was most likely to be observed in the period 1996-97 when the contrast between pre- and post-ETU employer behaviour might be most marked. Second, any benefits from a longer-term perspective of ETU effects could be expected to be offset by the difficulty of comparing employer behaviour in significantly different labour market conditions and the impact of the unknown, but potentially significant bias introduced into any such comparison by the substantial sample attrition of the panel.

Establishments in the 12 areas covered by the ETU evaluation programme were initially sampled in 1996 in a manner whereby the probability of selection was approximately proportionate to the size (employment) of the establishment. However, in order to provide an adequate sample in sectors containing relatively few establishments but a high proportion of low-paid jobs (where employees were likely to be eligible for ETU), some sectors were over-sampled. The main focus of over-sampling was the retail/catering and other personal/community service industries. Over-sampling was not necessary in the case of distribution (which contained many low-paid jobs) because the number of establishments in the population was large. For some purposes (such as describing the population of employers in each area) it was necessary to apply weights to the data in order to correct for the sampling procedures used. However, such weighting of the data was unnecessary when inferences were being drawn about changes or differences. The analysis reported in this chapter was, consequently, based on unweighted data.

8.3 Employment change

Table 8.1 describes the broad scale and direction of employment change across ETU areas in terms of total employment and employment in the three broad occupational sectors for which detailed information was collected. The table suggests that across all ETU areas, 62 per cent of employers had experienced an increase in total employment between 1996 and 1997. This pattern was broadly similar in each of the two ETU pilot areas and the Control areas although slightly more of establishments in the Control areas experienced some employment growth than was the case in either of the ETU pilots areas.

Table 8.1 Establishments reporting employment change, by area and occupational group

Percentage within areas

	Scheme A	Scheme B	Control	All areas
Total employment				
Rising	62	61	64	62
Stable or falling	38	39	36	38
Semi-skilled and unskilled manual				
Rising	64	63	59	62
Stable or falling	36	37	41	38
Skilled manual				
Rising	67	62	64	65
Stable or falling	33	38	36	35
Clerical and sales				
Rising	66	67	65	67
Stable or falling	34	33	35	33

Against this background of general employment growth, the pattern of change was somewhat different when the three broad occupational groups were considered separately. In the case of unskilled and semi-skilled jobs, higher proportions of establishments in both Scheme A and Scheme B areas reported rising employment than did establishments in the Control areas. Similarly, establishments in Scheme A areas and (to a lesser extent) Scheme B areas were also more likely to report an increase in employment in skilled manual and clerical and sales jobs than establishments in Control areas. In the case of skilled manual jobs, 64 per cent of establishments in the Control areas reported an increase in employment. This was less than the proportion in Scheme A areas but more than in Scheme B areas. This fairly crude evidence suggests that employers who employed low-paid workers were more likely to be increasing the employment of such groups in the workforce if the establishment was located in one or other of the ETU pilot areas.

Rather than simply looking at whether an establishment experienced employment growth or not, the actual change in the number of employees

can be considered. Both the 1996 and 1997 surveys collected information about the number of employees within the three broad occupational groups. Table 8.2 sets out the levels of employment reported by employers in the matched sample and the change in employment estimated to have taken place over the interval between the two surveys. Total employment refers, in this instance, to all employment in the three low-paid occupational groups (and not to all employees)

The evidence suggests that the number of employees in sample establishments increased by over a third (38 per cent) during 1996-97. Recorded employment growth was greatest in Scheme A areas where it increased overall by just over 50 per cent. This figure was 10 percentage points above that recorded by establishments in the Control areas and well over twice that recorded in Scheme B areas where employment increased by just 23 per cent. On the face of it such a pattern of employment change lends mixed support to the hypothesis that there were significant ETU effects. While the higher growth of employment in Scheme A areas was as might be expected, the relatively low growth of employment in Scheme B areas (where ETU is paid at higher rates) is not consistent with the hypothesis that ETU encouraged job growth. However, a low take-up of ETU in Scheme B areas (so there was no ETU effect) or other unobserved differences between areas could also have produced the pattern of employment change observed.

Table 8.2 Employment change, 1996-1997, by area

Column percentages

Area	Employment 1996	Employment 1997	Employment change 1996-97	Change 1996-97 (%)
Scheme A areas	34247	51622	17375	51
Scheme B areas	34722	42653	7931	23
Control areas	29810	42079	12269	41
All areas	98779	136354	37575	38

An even more complex pattern emerges when employment change is considered at the level of the broad occupational group. Table 8.3 sets out the levels of employment in establishments in the matched sample in 1996 and 1997 for each occupational type together with the percentage rate of change. The different experience of the three areas is immediately apparent. The overall growth of low-paid employment of 41 per cent in Control areas was largely the product of a virtual doubling of recorded employment in clerical and sales jobs. In the other two groups (skilled and semi-skilled/unskilled) employment growth was much more modest (just 9 per cent for skilled jobs and 10 per cent for semi-skilled/unskilled jobs). This pattern of employment change was not dissimilar to that found in Scheme B areas where substantial growth (56 per cent) in clerical and sales jobs offset virtually unchanged levels of employment in the

other two occupational groups. In contrast, the reported changes in employment in Scheme A areas were strikingly different. Strong growth in employment took place in clerical and sales jobs (as in the other areas), but there was also substantial growth in the number of both skilled and semi-skilled employees. Indeed, employment growth was greatest in the former (skilled).

Table 8.3 Employment change, 1996-1997, by area and occupational group

Column percentages

Area	Employment 1996	Employment 1997	Employment change 1996-97	Change 1996-97 (%)
Semi-skilled				
Scheme A areas	11653	17568	5915	51
Scheme B areas	9847	12239	8608	87
Control areas	9230	13585	4355	47
Skilled				
Scheme A areas	15195	15207	12	0
Scheme B areas	9314	8934	-380	-4
Control areas	7411	11554	4143	56
Clerical and sales				
Scheme A areas	12375	13567	1192	10
Scheme B areas	8792	9586	794	9
Control areas	5319	10269	4950	93

It is easier to account for such observed differences in employment change than to explain them. Such observed differences could have been the result of the introduction of ETU in Scheme A and Scheme B areas. If so, this would suggest that the introduction of ETU was associated with a positive impact on employment in skilled and semi-skilled manual jobs (although the lack of any effect in Scheme B areas needs to be explained). However, such a difference in employment growth could also have resulted from a differential sensitivity of the three areas to cyclical changes in aggregate economic activity. As national employment was growing over the period, it might have been the case that employment in Scheme A areas was simply more responsive to such macroeconomic developments.

The introduction of ETU could have been expected to impact most on jobs at the lower end of the wage distribution rather than those at the upper end. While the three occupational groups were selected because they contained a high proportion of low-paid jobs, not all jobs within these groups were low-paid. If the mechanism driving employment growth in these job groups was related to the introduction of ETU, it would be expected that employment would have grown most (or declined

least) amongst jobs paying a wage of less than £4 per hour (the effective upper threshold for eligibility for ETU). If so, the share of such employment would have increased. Table 8.4 sets out the estimated share of each of the three occupational groups in 1997 across the three ETU areas. The table also contains information on the change in the share of each group that was paid less than £4 per hour. This change is presented as the percentage point change and thus represents the percentage of the job group moving into or out of low-paid employment.

Table 8.4 Employment structure, 1996-97, by area and occupational group

	Share of occupational group		Share of those earning less than £4 per week in job group	
Area	Percentage share of employment in 1997	Percentage point change 1996-97	Percentage share of employment in 1997	Percentage point change 1996-97
Semi-skilled				
Scheme A areas	38.3	-2.5	52.5	-5.8
Scheme B areas	39.3	-0.7	58.2	-10.6
Control areas	39.0	-4.2	58.4	-3.3
Skilled				
Scheme A areas	26.1	-0.1	18.9	-1.3
Scheme B areas	26.5	-1.9	22.9	+0.9
Control areas	26.3	-1.8	18.9	-1.0
Clerical and sales				
Scheme A areas	27.5	-0.5	23.3	-6.1
Scheme B areas	26.3	-1.6	26.2	-5.0
Control areas	26.7	+2.3	27.2	-2.0

Table 8.4 indicates that employment in the three job groups did not grow by as much as other elements in the workforce of establishments in the sample. This is evident from the decreasing shares of semi-skilled manual, skilled manual and clerical and sales jobs in all ETU areas despite the growth in numbers employed in these groups (as discussed above).

On average, over half of semi-skilled manual jobs across all three types of ETU areas were paid at less that £4 per hour in 1997. This, however, was a smaller proportion than 12 months earlier (especially in Scheme B areas). Only a quarter of clerical and sales workers were receiving less than £4 per hour in 1997 and this proportion had also fallen sharply from the previous year. In both cases, the change in shares of low-paid jobs was the opposite of what would have been expected if ETU had had an impact. If ETU had brought about an improved supply of labour to low-paid jobs then the share of such jobs would have been expected to decrease at a slower rate in the ETU pilot areas than in the Control areas.

In fact, the reverse was the case with the fall in share of low-paid semi-skilled and clerical jobs being greater in the ETU pilot areas than in the Control areas. Only in the case of skilled manual workers in Scheme B areas did the share of low-paid employment change in the expected direction. Against the general trend, their share of employment increased slightly. This might be considered as evidence that ETU had increased the employment of low-paid skilled workers relative to those paid in excess of £4 per hour. Offsetting this positive finding of an impact, it must be acknowledged that such an effect was not evident in regard to the other two occupational groups or observed in Scheme A areas. However, since the ETU subsidy was greatest in Scheme B areas, it was plausible that any effect might have been most evident in those areas.

8.4 Recruitment of low-paid workers

ETU might affect employment through changes in employers' recruitment practices. This could happen because the employer has greater success in recruiting workers to low-paid jobs, or it may be that employers saw a cost advantage in actively seeking to recruit to low-paid jobs (which they did not do before ETU was introduced). Either way, an increase in recruitment to low-paid jobs would be expected. The evidence relating to recruitment from the matched sample of employers in ETU evaluation areas is now considered.

Two kinds of relevant recruitment information were collected in the matched sample. In the first place there was information about the numbers recruited to the three job groups (semi-skilled manual, skilled manual and clerical and sales). Second, there was information about the wage at which people were recruited. In particular, information was collected about the last person recruited to a job paying less than £4 per hour. From this and other information collected by the survey it was possible to identify some key indicators of recruitment behaviour, such as recruitment rates and whether anyone has been recruited to a low-paid job.

Table 8.5 presents the estimated mean recruitment rates in establishments in the sample in 1996 and 1997[33]. The table suggests that recruitment rates fell in all three job groups in both Scheme A areas and Control areas. In Scheme B areas, recruitment rates to semi-skilled manual jobs fell (broadly in line with change in the other two areas) but increased in respect of skilled manual and clerical and sales jobs. The interpretation of these changes is not straightforward.

The recruitment rate can fall either because the rate at which new workers were recruited fell with employment remaining constant, or because total employment increased with the flow of recruitment remaining constant

[33] The recruitment rate is defined as the number recruited to a job group divided by total employment in that job group)

(or some combination of both). In the case of the Control areas, the substantial growth in all job groups contributed to the fall in recruitment rates. This was also the case in Scheme A areas, and Scheme B areas in respect of semi-skilled workers. However, in the case of skilled manual and clerical and sales jobs, in both ETU pilot areas (Scheme A and Scheme B) there was little or no growth in employment and the changes in recruitment rates reflected changes in recruitment activity. The positive changes in the recruitment rates in Scheme B areas are most striking. They suggest that in the face of falling employment (skilled jobs) or very modest employment growth (clerical and sales) recruitment activity increased at a faster rate than employment. As the largest ETU benefits were paid to claimants in Scheme B areas, this again provides some support for the proposition that ETU has impacted on recruitment in this area.

Table 8.5 Recruitment rates, by ETU area, 1996-97

	1996	1997	Change 1996-97
Scheme A areas			
Semi-skilled	61.7	54.6	-7.1
Skilled	42.9	29.6	-13.3
Clerical and sales	32.1	28.7	-3.4
Scheme B areas			
Semi-skilled	85.3	75.1	-10.2
Skilled	39.6	44.0	+4.4
Clerical and sales	32.9	41.3	+8.5
Control areas			
Semi-skilled	73.5	64.4	-9.1
Skilled	37.4	28.4	-9.0
Clerical and sales	29.7	25.0	-4.7

Despite the suggestion in Table 8.5 that recruitment may have increased rather more than expected in Scheme B areas, such evidence cannot be conclusive since many other factors may affect recruitment and such factors cannot be guaranteed to have remained unchanged across the three types of areas. To take account of these factors requires the use of multivariate analysis and the modelling of recruitment.

In the model of recruitment the dependent variable was the probability (or more accurately, the odds) of an establishment recruiting a low-paid worker (earning £4 per hour or less) or not. Using information from the matched sample, establishments were classified into those that had recruited at least one worker at or below £4 per hour in the preceding 12 months. The analysis was conducted separately for recruitment in 1996 and 1997. A very simple model of recruitment was used in which the likelihood of recruiting a low-paid worker was regressed against variables reflecting the location of the establishment (large urban, rural, seaside), ETU evaluation area, size of establishment, industry, occupational

shares and awareness of in-work benefits. This was less of a model of recruitment than an attempt to standardise the employer recruitment data.

Table 8.6 Variables used in the recruitment model

SCHEMEA	Located in Scheme A area
SCHEMEB	Located in Scheme B area
SEASIDE	Located in seaside area
RURAL	Located in rural area
LURBAN	Located in large urban area
IND2	Manufacturing
IND3	Construction
IND4	Distribution and hotels and catering
IND5	Transport
IND6	Finance, banking, insurance and real estate
IND7	Public administration, education and health
SIZE1	2-24 employees in 1997
SIZE3	50-99 employees in 1997
SIZE4	100-199 employees in 1997
SIZE5	200+ employees in 1997
SIZE1@6	2-24 employees in 1996
SIZE3@6	50-99 employees in 1996
SIZE4@6	100-199 employees in 1996
SIZE5@6	200+ employees in 1996
RCLSAPC	% total in clerical and sales, 1997
RSSKPC	% total in semi-skilled, 1997
RSKPC	% total in skilled, 1997
CLSAPC	% total in clerical and sales, 1996
SSKPC	% total in semi-skilled, 1996
SKPC	% total in skilled, 1996
AWARE	Was aware of in-work benefits in 1997
AWARE96	Was aware of in-work benefits in 1996

The variables used in the analysis are listed in Table 8.6. The analysis used logistical regression analysis with a binary dependant variable taking the value 1 if the establishment recruited a low-paid worker (and zero if it did not). The results of such an analysis must be related to a 'base case'. In this instance the base case was an establishment located in 'a large town' in an ETU Control area. It was an establishment of between 25 and 49 employees in the primary and public utility sector. The respondent was not aware of in-work benefits at the time of the survey[34]. The result of the analysis is presented in Table 8.7.

[34] The choice of base case is essentially an arbitrary one and does not affect the significance of the results.

Table 8.7 The determinants of recruitment to low-paid jobs

The odds of recruiting a low-paid worker in 1996				
Variable	B	S.E	Sig	Exp(B)
SCHEMEA	-.0829	.1390	.5509	.9204
SCHEMEB	.1764	.1409	.2105	1.1930
SEASIDE	-.0344	.1608	.8309	.9662
RURAL	-.0217	.1601	.8923	.9786
LURBAN	.0261	.1628	.8727	1.0264
IND2	-.3724	.2400	.1208	.6891
IND3	-.4293	.3283	.1911	.6510
IND4	.9383	.2037	.0000	2.5557
IND5	-.3769	.2466	.1264	.6860
IND6	.0300	.3095	.9229	1.0304
IND7	.2325	.2303	.3125	1.2618
SIZE1@6	-.4338	.1751	.0132	.6481
SIZE3@6	.1547	.2304	.5020	1.1673
SIZE4@6	.1210	.2537	.6334	1.1286
SIZE5@6	-.4015	.2710	.1385	.6693
SSKPC	.0186	.0047	.0001	1.0187
SKPC	.0048	.0047	.3072	1.0048
CLSAPC	.0062	.0048	.1977	1.0062
AWARE96	.1577	.1432	.2705	1.1709
Constant	-.9540	.5401	.0774	
The odds of recruiting a low-paid worker in 1997				
Variable	B	S.E.	Sig	Exp(B)
SCHEMEA	.1300	.1419	.3597	1.1388
SCHEMEB	.0708	.1417	.6173	1.0734
SEASIDE	.0949	.1631	.5607	1.0995
RURAL	-.0545	.1624	.7370	.9469
LURBAN	-.3443	.1657	.0377	.7087
IND2	-.4843	.2556	.0581	.6161
IND3	-.4533	.3635	.2125	.6356
IND4	1.2010	.2052	.0000	3.3235
IND5	-.1563	.2560	.5414	.8553
IND6	-.2108	.3380	.5329	.8099
IND7	.3269	.2339	.1621	1.3867
SIZE1	-.3219	.1763	.0678	.7248
SIZE3	.1733	.2238	.4389	1.1892
SIZE4	-.3778	.2535	.1361	.6854
SIZE5	-.0982	.2553	.7004	.9064
RSSKPC	.0161	.0035	.0000	1.0162
RSKPC	.0038	.0036	.2887	1.0038
RCLSAPC	.0017	.0037	.6382	1.0017
AWARE	.8875	.1745	.0000	2.4291
Constant	-1.9443	.4294	.0000	

The results suggest that similar factors determined the recruitment of low-paid workers in both 1996 and 1997. The significant determinants of the odds of recruiting a low-paid worker in 1996 were IND2, IND4, SSK, and SIZE1. In 1997 the significant variables were the corresponding

variables for 1997 (IND2, IND4, RSSK, SIZE1@6) plus LURBAN and AWARE. The results suggest that, compared to the base case, establishments which were in manufacturing were less likely to recruit low-paid workers while those in distribution and hotels were very much more likely. Very small establishments were less likely to recruit low-paid workers while establishments with a high proportion of semi-skilled manual employees in their workforce were more likely. In 1997, it appeared that establishments located in large urban areas were less likely to recruit low-paid workers. Of particular interest is the change in the significance of the variable measuring awareness of in-work benefits (AWARE96 and AWARE). In 1996 (before the introduction of ETU) establishments in which the respondent was aware of in-work benefits was no more likely to recruit a low-paid employee than other establishments. However, in 1997 (after the introduction of ETU) awareness of in-work benefits was associated with a greater likelihood of recruiting a low-paid worker. This points to the introduction of ETU having had some impact on recruitment even though the area-based indicators of ETU (SCHEMEA and SCHEMEB) were not significant in their own right.

The impact of ETU should be most evident at the margin of recruitment, that is where an employer was wavering between recruiting a low-paid worker and recruiting some other type of worker. To explore this possibility, the analysis was applied to establishments that did not recruit any workers to low-paid jobs (less than £4 per hour) in 1996. Selecting those employers who had not recruited to a low-paid job in 1996, a new binary variable was defined such that it had the value 0 if the establishment had not recruited a low-paid worker in 1997 and 1 if it had recruited a low-paid worker in 1997. The explanatory variables used in the analysis of 'switching' to low-paid recruitment were the same as for the preceding analysis of recruitment. The results of this analysis are shown in Table 8.8.

The result of the multivariate analysis of recruitment of low-paid workers (from not employing low-paid workers in 1996 to recruiting low-paid workers in 1997) was very similar to the results for the recruitment of low-paid workers in general, with one important exception. As before, an establishment was less likely to have switched to the recruitment of a low-paid worker if it was a manufacturing establishment and more likely to have done so if it was in distribution and hotels. An establishment was also more likely to have switched to recruiting low-paid workers, the greater was the proportion of semi-skilled jobs in its workforce. The impact of ETU might be indicated by the very strong association between the awareness of in-work benefits (AWARE) and increased odds of recruiting to a low-paid job. However, for the first time in the analysis, establishments located in Scheme A areas appeared to have been more likely to have recruited to low-paid jobs (SCHEMEA) than employers located elsewhere. This variable was significant at the 90 per confidence

limit (although not at the 95 per cent level). Taken together, the significance of AWARE and SCHEMEA are at least suggestive of a weak ETU effect on the recruitment of workers paid less than £4 per hour.

Table 8.8 Factors associated with the recruitment of a low-paid worker in 1997 (when not having recruited a low-paid worker in 1996)

Variable	B	S.E.	Sig	Exp(B)
SCHEMEA	.6199	.3204	.0530	1.8588
SCHEMEB	.4710	.3325	.1566	1.6017
SEASIDE	.4753	.3633	.19081	.6085
RURAL	.5779	.3829	.1312	1.7822
LURBAN	.1397	.3888	.7194	1.1499
IND2	-1.0629	.5174	.0399	.3455
IND3	-.0996	.5935	.8667	.9052
IND4	.9009	.4143	.0297	2.4617
IND5	-.3414	.4848	.4813	.7108
IND6	-1.0459	.8346	.2101	.3514
IND7	-.0938	.4688	.8415	.9105
SIZE1	-.2529	.3686	.4926	.7765
SIZE3	-.4738	.5101	.3530	.6226
SIZE4	-.3883	.5237	.4584	.6782
SIZE5	-.3193	.5077	.5294	.7266
RSSKPC	.0174	.0074	.0183	1.0176
RSKPC	.0071	.0073	.3294	1.0072
RCLSAPC	.0012	.0079	.8766	1.0012
AWARE	1.0879	.4225	.0100	2.9681
Constant	-3.3273	.9197	.0003	

8.5 Recruitment and vacancy durations

If ETU had induced an improvement in labour supply, this would be likely to have been accompanied by a fall in the average time taken to fill a vacancy (the duration of a vacancy). If employers' demand for labour was rising, then such improvements in the supply of labour would have resulted in the duration of vacancies increasing less quickly than would have been the case in the absence of ETU. The duration of vacancies can thus be used as an indicator of the impact of ETU. Changes in vacancy durations or differences across areas may provide evidence of differential impacts on groups in the workforce (substitution) or on different employers (displacement).

Ideally, an analysis of vacancy durations would compare the time taken to fill low-paid jobs with the time taken to fill other jobs. The ETU employer survey did not, however, collect detailed information about the recruitment of workers other than the three low-paid groups. As a result, the ideal comparison was not possible. However, other comparisons were feasible. In particular, recruitment to jobs with a potential for ETU eligibility (those offering 16 or more hours of low-paid work per week) could be compared to jobs offering less than 16 hour per week (and thus ineligible for ETU). It was also possible to examine the duration of

vacancies for low-paid job vacancies in establishments that were aware of in-work benefits and contrast such a duration with that in establishments where the employer was unaware of in-work benefits.

The period 1996-97 was a period of rising demand for labour in all three ETU areas. Employment in the three job groups covered by the sample increasing sharply. In this context, it was not surprising to find that the mean duration of time taken to fill a vacant job paying £4 per hour or less increased from 12.7 days in 1996 to 15.1 days in 1997. This increase reflected the increased pressure of demand for labour in that period. The increase in the mean time to fill a vacancy was observed in all three evaluation areas, as shown in Table 8.9 below.

Table 8.9 Mean time taken to recruit to a job paying £4 per hour or less

Days

	1996	1997	Percentage change 96-97
Scheme A areas	14.1	17.9	27.0
Scheme B areas	13.3	14.8	11.3
Control areas	10.9	12.9	18.3
All areas	12.7	15.1	18.9

Table 8.9 shows that vacancy durations tended to be rather longer in both the ETU pilot areas when compared with the Control areas. This was the case in both 1996 and 1997. Such a difference could reflect a range of differences other than ETU between the areas, such as different occupational structure, different methods of recruitment, different wages rates and so forth. In view of this, evidence of an ETU impact may be better sought by considering the relative change in vacancy durations across the areas rather than in absolute differences in the time taken to fill vacancies. In this respect, the evidence in Table 8.9 is contradictory. Overall, the mean duration of a vacancy across all three areas increased by just under 19 per cent between 1996 and 1997. The change in the mean duration of a vacancy in the Control areas was almost exactly the same as this overall average. However, while the increase in vacancy duration was much lower in Scheme B areas, vacancy durations increased at a faster rate in Scheme A areas. This result might have been expected since, as discussed above, there was very little employment growth in semi-skilled and skilled manual job groups in Scheme B areas while there was much greater employment growth in all job groups in Scheme A areas and in the Control areas.

Further comparisons can be made by considering the duration of vacancies for 'ETU-eligible' and 'ETU-non eligible' jobs (approximately identified in terms of hours of work and pay). It might be expected that vacancies that were eligible for ETU would be easier to recruit to and thus have a

smaller increase in vacancy duration than other jobs. Table 8.10 presents measures of the mean vacancy durations in jobs distinguishing between those that were potentially ETU-eligible (16+ hours of work) and where the employer was aware of in-work benefits.

Table 8.10 Mean vacancy duration, by area, hours and awareness of in-work benefits

	1996	1997	Percentage change 96-97
16 or more hours			
Scheme A areas			
Aware	14.5	15.8	9.0
Not aware	17.2	45.1	162.2
Total	15.0	18.9	26.0
Scheme B areas			
Aware	14.8	16.2	9.5
Not aware	10.7	17.2	60.7
Total	14.0	16.3	16.4
Control areas			
Aware	13.6	13.6	0
Not aware	8.6	12.8	48.8
Total	12.8	13.5	5.4
Less than 16 hours			
Scheme A areas			
Aware	14.2	14.9	4.9
Not aware	10.7	15.5	44.9
Total	12.1	15.0	24.0
Scheme B areas			
Aware	8.9	10.1	13.5
Not aware	17.3	9.5	-45.1
Total	10.8	10.0	7.4
Control areas			
Aware	7.5	11.9	58.7
Not aware	6.6	7.0	6.1
Total	7.3	11.6	58.9

If ETU were to have had an impact on vacancy durations in the pilot areas, it would be expected that the duration of 'eligible' vacancies would increase least in Scheme B areas and most in the Control areas. Little difference would be expected across the three types of area in respect of ineligible jobs offering less than 16 hours per week. The evidence from Table 3.10 was, however, somewhat mixed. In the case of jobs offering 16 or more hours of work per week (ETU eligible), the average time taken to fill vacancies did indeed increase more slowly in Scheme B areas

than in Scheme A areas (as might be expected since Scheme B offers the higher benefit). However, the lowest increase in vacancy duration was in the Control areas and this was counter to what might have been expected. Turning to vacancy durations of jobs offering different hours, the increase in vacancy durations in low-paid jobs offering less than 16 hours per week was greater than the change in duration of vacancies for jobs offering 16 hours or over. This was what would have been expected if ETU had affected the 16+ hours jobs more than jobs offering lower hours. However, this suggestion of an ETU effect must be tempered by the fact that the difference was also evident in the Control areas where ETU was not on offer.

Table 8.10 highlights, yet again, the apparent importance of employer awareness of in-work benefits. Irrespective of whether ETU was on offer in an area or not, the increase in vacancy duration was consistently lower in establishments that were aware of in-work benefits. One interpretation of this association is that when an employer reported an awareness of in-work benefits, this was an indication that such benefits were actually being claimed by some of their employees. If so, awareness of in-work benefits was an indicator of those establishments where in-work benefits were being claimed and where the impact on labour supply was real (as opposed to potential).

The complexity of the vacancy creation process and employers' recruitment practices was such that it would be difficult to isolate the impact of a measure such as ETU without attempting to account for the many other factors that impinged on the time taken to fill a vacancy. An adequate explanation of changes in vacancy durations required multivariate analysis that would standardise for establishment characteristics and local labour market conditions. A variety of models of vacancy duration were estimated from the matched sample of ETU area employers, using the wide variety of data collected in the surveys. Such data included the hours of work, the recruitment channels used, the hiring standards used (in terms of previous experience, age and other characteristics) as well as industry, occupation, establishment size and type of labour market and location. Despite previous success at modelling such processes (see Hasluck, 1995) no satisfactory model of the vacancy filling process from which the effect of ETU could have been isolated was identified.

9 CONCLUSIONS

9.1 ETU and the recruitment process

This report has examined the evidence relating to the impact of the introduction of ETU on employers and employment. The research considered the mechanism by which ETU might bring about employment effects. If ETU made employment in low-paid jobs more attractive to some jobseekers than hitherto in the absence of the ETU benefit payment, employers will have experienced an increase in the flow of jobseekers willing to work in low-paid jobs. The consequence of such an improvement in labour supply might have been to allow employers in areas where ETU was on offer to fill job vacancies more quickly and, in more extreme cases, to fill job vacancies that would have previously remained unfilled. While the overall number of jobs may not have been changed as the result of ETU, it is possible that the proportion of jobs that were filled had increased, representing an increase in the effectiveness of the job matching process performed by the labour market.

If ETU had an effect on employment of the form outlined above, this suggests that it is through an examination of vacancies and recruitment that evidence of an ETU effect will be found. Changes in the number of unfilled vacancies and the time taken to fill them before and after the introduction of ETU, and comparisons of ETU pilot and Control areas, may provide indicators of the impact of the introduction of ETU. This report has examined the evidence relating to these aspects of ETU. Two types of analysis were undertaken. In the first, a broad perspective was taken by examining vacancy flows at the level of the ETU pilot and Control areas. The second approach considered evidence from individual employers about their experience of the recruitment of workers to low-paid jobs.

9.2 ETU and notified vacancies

The analyses of Employment Service (ES) data on notified vacancies revealed no clear evidence of ETU having had an impact on:

- the structure of vacancies; or
- the time taken to fill vacancies;

in Scheme A and Scheme B areas relative to either the Control areas or relative to Great Britain as a whole.

This does not necessarily mean that ETU had no impact on the recruitment process and the structure of vacancies. Rather, it may mean that any impact was small relative to other impacts on the notification of vacancies to ES and other influences on the manner and speed by which vacancies were filled/remained unfilled. No evidence was available on the precise

nature of other influences nor were such influences quantified. However, two possible factors other than ETU that might have affected vacancy notifications were:

- a drive by ES during the ETU pilot period to increase the number of vacancies notified by employers;
- an improvement in economic conditions such that jobseekers took longer assessing potential job opportunities, with vacancies remaining unfilled for slightly longer.

Vacancies in a local economy may have been generated by employment growth, skills shortages and labour turnover, as well as by policy initiatives such as ETU. Moreover, the relative importance of these factors may vary between local areas, hence the relative impact of each was difficult to assess.

9.3 ETU and recruitment at establishment level

The second element of the research considered evidence relating to employment, recruitment and vacancy durations from a sample of employers in the three types of ETU area. Some evidence of an ETU effect was found but such evidence was, at best, weak and was, at times, contradictory.

Inspection of evidence relating to employment change provided little clear indication that the introduction of ETU was associated with an increase in employment in ETU pilot areas. The employment share of low-paid workers was declining in all areas and decreased at a higher rate in the ETU pilot areas than in the Control areas. However, the increasing share of skilled manual employment in Scheme B was in marked contrast to this general picture and might be indicative of some ETU effect (especially as ETU was paid at a higher rate in Scheme B areas). Evidence relating to recruitment, again, provided only weak and contradictory support for the hypothesis that the introduction of ETU had led to an increase in the rate of recruitment to low-paid skilled manual and clerical and sales jobs. Where found, this effect was most marked in Scheme B areas.

In order to isolate ETU effects from other influences on recruitment, multivariate analysis was used to model the recruitment process. The model found that whether or not an establishment recruited a low-paid worker was significantly influenced by the type of activity undertaken (industry) and size of establishment. While no direct evidence of an ETU effect was found, employers were more likely to have recruited to low-paid jobs after ETU was introduced if they were aware of in-work benefits. Such awareness might be an indication of actual experience of ETU by such employers. Restricting the analysis to employers who did not recruit a low-paid worker in 1996 but did so in 1997 found similar factors to be associated with a switch in recruitment but also found some weak evidence that employers located in Scheme A areas were more

likely to have recruited a low-paid worker when not having done so in the previous year (before the introduction of ETU). As before, awareness of in-work benefits was the most strongly related influence on such a switch in recruitment.

The period covering the introduction of ETU was a period of increasing demand for labour and this was reflected in the evidence of increasing vacancy durations across all areas. If ETU facilitated the recruitment of low-paid workers, such increases might be expected to be lower in the ETU pilot areas than in the Control areas. While this was true of Scheme B areas it was not true of Scheme A areas. Comparison of ETU 'eligible' and 'ineligible' jobs found that average vacancy durations increased least in ETU eligible jobs. While this was consistent with the presence of an ETU effect, the presence of this pattern in the Control areas was not. However, vacancy durations increased less (recruitment was easier) amongst employers who were aware of in-work benefits than amongst employers who were unaware of such benefits. This might be seen as an indication that any ETU effect was concentrated on establishments in which employees were not only eligible for ETU but were also actually claiming it. Unfortunately, the employer data provides no direct evidence of actual take-up of ETU.

9.4 Some concluding thoughts

The lack of any evidence of a strong and significant effect on employers' recruitment and vacancies arising from the introduction of ETU can be interpreted in a number of different ways. In the first place, any such effects were likely to have been of a small scale. Given that ETU was unlikely to increase the number of jobs that employers offer (their demand for labour), any effect would be limited to making the market for low-paid jobs more efficient so that a greater proportion of jobs were actually filled at any time. If potential ETU effects were of such a modest scale, then they would be difficult to detect. This would be because, first, any ETU effects could easily be overwhelmed by the effects of other factors inducing change in employment and recruitment (such as changes in local labour market and macroeconomic conditions, other policy developments and so forth). Second, the detection of any small ETU effect required the data to be sufficiently sensitive to allow such effects to be seen and isolated from other factors. As acknowledged in this report, ES notified vacancies are a fairly crude measure of total vacancies in the local labour market while the ETU Employer Survey data, while very detailed, also has its limitations (as do all sample surveys).

The lack of any significant evidence of an ETU effect on employers is consistent with other research undertaken as part of the evaluation of the ETU pilots (see, for instance, Lissenburgh, 2001). However, it is worth considering whether such a lack of detectable impact matters. While one of the objectives of ETU was to increase the incentive of jobseekers to enter low-paid jobs, a second objective was to raise the real income of members of low-paid households. A common criticism made of

interventions in the labour market is that any gains made will be at the expense of other people in the workforce (through substitution effects and the like). However, just as there is little strong evidence of a positive ETU effect on employment, there is no significant evidence of a negative impact either. The recruitment of people who were ineligible for ETU does not appear to have been adversely affected. This being so, the lack of any evidence of a significant labour market impact from the introduction of ETU can be seen as a very positive finding. It suggests that an incentive to enter low-paid employment, and an improvement in the real incomes of low-paid workers, may be achievable without the offsetting labour market consequences allegedly associated with such policy intervention.

Table 1 Response Analysis 1996 and 1999

	1996	1999
Completed Interview	2,400	2,400
Non-completed contact	259	220
Refusals and quits	687	1,154
Invalid*	1,213	1,650
Total issued	4,559	5,424
Response rate (upper estimate) - contacted eligibles	78%	68%
Response rate (lower estimate) - all valid addresses	72%	64%

No weight applied

* Invalid includes those establishments who had ceased trading, those who were not contacted after five calls and those who failed the interview screener (not business addresses, sole trader enterprises or those who employed only voluntary workers)

Table 2 Change in hourly wage offers 1996-99: OLS difference model

(semi-skilled/unskilled job group)

Dependent variable: Change in hourly wage of semi-skilled/unskilled employees

Variable	Co-efficient (B)	Standard Error B	Significance
Constant	3.6777	0.3122	0.0000
Number of employees in establishment in 1996	0.0021	0.0002	0.0000
Hotel/catering industry or other services	-0.4746	0.1393	0.0007
Independent establishment	0.2280	0.1119	0.0423
Public sector establishment	0.6735	0.1882	0.0003
Proportion of semi-skilled/unskilled employees who were female in 1996	-0.3932	0.1735	0.0240
Number of semi-skilled/unskilled employees who were paid at a rate of £4 per hour or below in 1996	-0.0027	0.0012	0.0242
Average gross hourly pay of semi-skilled/unskilled employees in 1996	-0.7038	0.0471	0.0000
25-50 per cent of the establishment's sales revenue was accounted for by wages, salaries and other labour costs in 1996 (private sector only)	-0.4989	0.1494	0.0009
50-75 per cent of the establishment's sales revenue was accounted for by wages, salaries and other labour costs in 1996 (private sector only)	-0.2307	0.2087	0.2696
75-100 per cent of the establishment's sales revenue was accounted for by wages, salaries and other labour costs in 1996 (private sector only)	-0.7379	0.2775	0.0081
Don't know what proportion of establishment's sales revenue was accounted for by wages, salaries and other labour costs in 1996.	-0.2895	0.1404	0.0399
Wage-setting influenced by national agreements in 1999 though not 1996	-0.3927	0.1321	0.0031
Wage-setting influenced by the supply of labour in 1999 though not 1996	0.2554	0.1244	0.0407
Change in the number of semi-skilled/unskilled employees from 1996 to 1999	0.0013	0.0006	0.0445
Area A	-0.1100	0.1266	0.3856
Area B	0.0068	0.1283	0.9576

Table 3 Change in hourly wage offers 1996-99: OLS difference model

(clerical/sales job group)

Dependent variable: Change in hourly wage of clerical/sales employees

Variable	Co-efficient (B)	Standard Error B	Significance
Constant			
	4.6701	0.4482	0.0000
Number of employees in establishment in 1996	0.0011	0.0005	0.0414
Hotel/catering industry or other services	-0.7640	0.2896	0.0088
Public sector establishment	-1.0583	0.2745	0.0001
Proportion of clerical/sales employees who worked less than 30 hours per week in 1996	-1.8069	0.3171	0.0000
Average gross hourly pay of clerical/sales employees in 1996	-0.7214	0.0579	0.0000
Don't know what proportion of establishment's sales revenue was accounted for by wages, salaries and other labour costs in 1996	-0.4552	0.1797	0.0118
Change in the proportion of clerical/sales employees who were female between 1996 and 1999	-1.0069	0.2971	0.0008
Change in the proportion of clerical/sales employees who worked less than 30 hours per week between 1996 and 1999	-0.7208	0.3093	0.0205
Whether any initial training is provided for clerical/sales employees which requires time away from the job	0.7478	0.1841	0.0000
Number of clerical/sales employees who had been recruited in the past 12 months, in 1996.	-0.0364	0.0088	0.0000
Rising product/service demand	0.6121	0.1724	0.0004
Wage-setting influenced by national agreements in 1999 though not 1996	-0.3777	0.2332	0.1064
Wage-setting influenced by national agreements in 1996 though not 1999	-0.5380	0.2428	0.0275
Wage-setting influenced by other employers behaviour in 1999 though not 1996	0.0845	0.2350	0.7194
Wage-setting influenced by other employers behaviour in 1996 though not 1999	-0.6176	0.2372	0.0097
Wage-setting influenced by the supply of labour in 1999 though not 1996	0.0623	0.2258	0.7828
Wage-setting influenced by the supply of labour in 1996 though not 1999	0.7462	0.2329	0.0015
Wage-setting influenced by local trade unions in 1999 though not 1996	0.1541	0.3324	0.6431
Wage-setting influenced by local trade unions in 1996 though not 1999	0.8367	0.3328	0.0125
Wage-setting influenced by the pay individuals are willing to accept in 1999 though not 1996	-0.0045	0.2299	0.9842
Wage-setting influenced by the pay individuals are willing to accept in 1996 though not 1999	0.7064	0.2386	0.0033
Aware of ETU in 1999 but not in 1996	-0.4636	0.1902	0.0154
Area A	0.3454	0.2093	0.1000
Area B	-0.1475	0.2127	0.4884

Table 4 Change in the proportion of low-paid employment 1996-99: OLS difference model

(semi-skilled/unskilled job group)

Dependent variable: Change in proportion of low-paid semi-skilled/unskilled employees

Variable	Co-efficient (B)	Standard Error B	Significance
Constant			
	0.5174	0.1006	0.0000
Number of employees in establishment in 1996	-0.0004	0.0000	0.0000
Hotel/catering industry or other services	0.2279	0.0417	0.0000
Proportion of semi-skilled/unskilled employees who were paid at a rate of £4 per hour or below in 1996	-0.7915	0.0524	0.0000
Average gross hourly pay of semi-skilled/unskilled employees in 1996	-0.0524	0.0176	0.0031
Whether often took on semi-skilled/unskilled employees on a short-term or temporary basis in 1996	-0.1270	0.0330	0.0001
Wage-setting influenced by national agreements in 1999 though not 1996	0.1322	0.0454	0.0038
Wage-setting influenced by national agreements in 1996 though not 1999	0.1959	0.0429	0.0000
Wage-setting influenced by other employers behaviour in 1999 though not 1996	-0.0205	0.0450	0.6478
Wage-setting influenced by other employers behaviour in 1996 though not 1999	0.0310	0.0445	0.4853
Wage-setting influenced by the supply of labour in 1999 though not 1996	-0.0339	0.0454	0.4546
Wage-setting influenced by the supply of labour in 1996 though not 1999	-0.0937	0.0439	0.0333
Wage-setting influenced by local trade unions in 1999 though not 1996	0.0199	0.0608	0.7428
Wage-setting influenced by local trade unions in 1996 though not 1999	-0.0199	0.0783	0.7987
Wage-setting influenced by the pay individuals are willing to accept in 1999 though not 1996	-0.0015	0.0451	0.9723
Wage-setting influenced by the pay individuals are willing to accept in 1996 though not 1999	0.0011	0.0414	0.9773
Change in the proportion of semi-skilled/unskilled employees who were female between 1996 and 1999	-0.2185	0.0779	0.0052
Aware of in-work benefits in 1999 but not in 1996	-0.1014	0.0450	0.0246
Aware of ETU in 1999 but not in 1996	0.0697	0.0348	0.0457
Area A	-0.0486	0.0408	0.2341
Area B	-0.0195	0.0411	0.6350

Table 5 Change in the proportion of low-paid employment 1996-99: OLS difference model

(clerical/sales jobs group)

Dependent variable: Change in proportion of low-paid clerical/sales employees

Variable	Co-efficient (B)	Standard Error B	Significance
Constant	-0.0489	0.0557	0.3801
Proportion of clerical/sales employees who worked less than 30 hours per week in 1996	0.4034	0.0558	0.0000
Proportion of clerical/sales employees who were female in 1996	0.1019	0.0530	0.0552
Proportion of clerical/sales employees who were paid at a rate of £4 per hour or below in 1996	-0.6656	0.0448	0.0000
Number of clerical/sales employees who were paid at a rate of £4 per hour or below in 1996	-0.0014	0.0003	0.0000
Business had commenced trading at its present location within the past 12 months in 1996	-0.0101	0.0319	0.7513
Business had commenced trading at its present location within the past 2 years in 1996	0.0122	0.0415	0.7688
Business had commenced trading at its present location within the past 5 years in 1996	-0.0828	0.0457	0.0710
25-50 per cent of the establishment's sales revenue was accounted for by wages, salaries and other labour costs in 1996 (private sector only)	0.0285	0.0379	0.4514
50-75 per cent of the establishment's sales revenue was accounted for by wages, salaries and other labour costs in 1996 (private sector only)	0.0964	0.0481	0.0455
75-100 per cent of the establishment's sales revenue was accounted for by wages, salaries and other labour costs in 1996 (private sector only)	-0.0273	0.0695	0.6938
Don't know what proportion of establishment's sales revenue was accounted for by wages, salaries and other labour costs in 1996	0.0306	0.0337	0.3647
Whether often took on clerical/sales employees on a short-term or temporary basis in 1996	-0.0674	0.0281	0.0178
Number of clerical/sales employees who had left jobs or had jobs terminated in the last 12 months in 1996	-0.0058	0.0020	0.0052
Rising product/service demand	-0.0703	0.0264	0.0081
Falling product/service demand	0.0875	0.0398	0.0287
Wage-setting influenced by local trade unions in 1996 though not 1999	0.0775	0.0437	0.0769
Wage-setting influenced by the pay individuals are willing to accept in 1999 though not 1996	0.1096	0.0329	0.0009
Wage-setting influenced by the pay individuals are willing to accept in 1996 though not 1999	-0.0581	0.0323	0.0733
Change in the number of clerical/sales employees from 1996 to 1999	-0.0007	0.0002	0.0061
Change in the proportion of clerical/sales employees who worked less than 30 hours per week between 1996 and 1999	0.2386	0.0492	0.0000
Aware of in-work benefits in 1999 but not in 1996	0.0852	0.0356	0.0170
Aware of ETU in 1999 but not in 1996	-0.0191	0.0268	0.4754
Area A	-0.0441	0.0325	0.1754
Area B	-0.0396	0.0311	0.2038

Table 6 Change in hourly wage offers to most recent low-paid recruit 1996-99: OLS difference model

Dependent variable: Change in hourly wage of most recent low-paid recruit

Variable	Co-efficient (B)	Standard Error B	Significance
Constant	3.5151	0.1844	0.0000
Average gross hourly pay of the most recent low-paid recruit in 1996	-0.9173	0.0561	0.0000
Other services	-0.3470	0.0985	0.0005
Production industries	-0.1930	0.0696	0.0059
Wage-setting influenced by national agreements in 1999 though not 1996	-0.0538	0.0637	0.3990
Wage-setting influenced by other employers behaviour in 1999 though not 1996	0.1516	0.0773	0.0510
Wage-setting influenced by other employers behaviour in 1996 though not 1999	-0.0346	0.0673	0.6075
Wage-setting influenced by the supply of labour in 1999 though not 1996	-0.1146	0.0750	0.1274
Wage-setting influenced by the supply of labour in 1996 though not 1999	0.1356	0.0656	0.0397
Wage-setting influenced by local trade unions in 1999 though not 1996	-0.0356	0.0908	0.6947
Wage-setting influenced by local trade unions in 1996 though not 1999	0.0671	0.1300	0.6059
Wage-setting influenced by the pay individuals are willing to accept in 1996 though not 1999	-0.1540	0.06840.0251	
Employer experienced recruitment difficulties in 1996 but not in 1999	-0.1309	0.0698	0.0617
Aware of in-work benefits in 1999 but not in 1996	-0.1326	0.0723	0.0679
Aware of ETU in 1999 but not in 1996	-0.0996	0.0522	0.0576
Area A	-0.0635	0.0664	0.3395
Area B	-0.1415	0.0622	0.02347

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