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THE IMPACT OF THE MINIMUM WAGE ON IRISH FIRMS

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EXECUTIVE SUMMARY

The Purpose of the Study

The National Minimum Wage was introduced in Ireland in April 2000. A survey of firms was carried out by the The Economic and Social Research Institute prior to its introduction, as part of a prospective analysis of the likely impact of the minimum wage. The present study is based on a further survey carried out in late 2000/early 2001, commissioned by the Department of Enterprise, Trade and Employment. This survey interviewed both a substantial proportion of the firms in the earlier sample – for whom the situation "before and after" the minimum wage can be directly compared – and significant numbers of other firms. Here the results from these surveys are used to assess the impact of the minimum wage on employment, wage levels and other aspects of work organisation among Irish firms. Broader issues relating to the impact on the earnings distribution and on household incomes, requiring complementary analysis of individual and household-level data rather than information from firms, are not addressed.

The 1998/99 Survey of Firms

The specially-designed survey of firms carried out in late 1998/early 1999, before the minimum wage was introduced, obtained information from 1,062 Irish private sector firms. About one in five employees in these firms were being paid less than IR£4.50 an hour. About three-quarters of employers in the survey were aware of the proposed minimum wage, but many did not know its detailed specification. Only about 11 per cent said they had taken steps to prepare for the minimum wage, and even in the sectors most affected this figure was no higher than one-quarter.

The Follow-up Survey

Like the original survey, the follow-up survey was designed principally to collect details on the current employment structure of private sector firms. A range of information on the firm itself and on perceptions of the effects of the minimum wage was also obtained. All the firms who completed the first survey were included in the target sample for the second one, as well as a further random sample of 1,160 firms, selected on a random stratified basis. The overall response rate in the survey was 53 per cent.

Key Characteristics and Trends

Most firms in most sectors in the follow-up survey said they had no employees paid IR£4.50 or less per hour; textiles and clothing manufacture, retailing, and hotels/bars/restaurants were the exception. Most sectors and firms were doing well in terms of trends in profits and volume of business, but firms with low paid employees were doing less well. Staff turnover had increased particularly in retail and personal services, and recruiting staff was seen as a problem by many firms. Basic labour costs were also identified as an important problem by a substantial proportion of firms, more than in the previous survey. This highlights the tightness of the labour market around the time the minimum wage was introduced.

Perceptions of the Impact of the Minimum Wage

While virtually all the respondents to the survey had heard about the minimum wage, significant proportions did not know exactly when it had been introduced or the exact level at which it was set. Only a small minority had availed of the reduced rates payable for young/inexperienced workers.

About 5 per cent of employees were said to have received an increase in pay as a direct result of the minimum wage, and about 13 per cent of firms said that they had to increase pay for employees above the minimum wage to restore differentials. However, over 80 per cent of firms said that, in the light of trends in the Irish labour market, they would have had to increase wage rates anyway. Only 16 per cent of firms said that the minimum wage directly increased their labour costs, and for half of these the increase was less than 5 percentage points.

Only 5 per cent of respondents said they would be employing more people today in the absence of the minimum wage, representing an extra 5,000 employees across all firms in the population. However, almost half of this total was in firms which did not now actually employ anyone paid IR£4.50 or less, suggesting that this figure is if anything an over-estimate.

Changes in Pay Structures

The percentage of workers who earned IR£4.50 per hour or less fell from 21 per cent in 1998/99 to just over 4 per cent in 2000/2001. The risk of being low paid varied according to full time/part time status, sector, gender and age in a way that is familiar from previous surveys, with young workers and women facing a higher probability and low pay being prevalent in sectors such as textiles, retailing, hotels etc. and personal services. The main concentrations of sub-minimum wage workers were in occupational grades related to sales and personal services.

Changes in the Common Sample of Firms

We then considered changes in the structure of employment at the level of the individual firm for the sub-sample of cases which participated in both rounds of the survey. The probability of going out of business over the period was most strongly related to their having experienced a fall in their profit levels over the preceding 12-month period. The proportion of minimum or sub-minimum wage workers in the workforce did not appear to be a factor influencing that probability.

As one would expect in the light of the cross-sectional results, only small percentages of firms remained with persistently high levels of minimum wage employees over the period in question and very few actually increased the percentage of their workforce paid at this level. The firms in question appeared to be concentrated principally in the retail sector, with some lesser concentrations in the Hotel/Restaurant/Bar sector.

Econometric Estimates of the Impact of the Minimum Wage

Using data for the firms included in both the before and after surveys, statistical analysis sought to pin-point the effects of the national minimum wage, notably on employment levels. The results showed that employment growth among firms which had low-wage workers in the first survey was not significantly different to that for firms which had no such workers. However, employment growth may indeed have been reduced among the small number of firms most severely affected by the minimum wage legislation.

1. INTRODUCTION

1.1 The Context for the Study

A National Minimum Wage was introduced for the first time in Ireland in 2000. It took effect from 1 April 2000, at a level of IR£4.40 per hour for experienced adult employees and lower figures for those under 18, first-time job entrants or those undergoing training. It marked a significant departure from the more limited system of Joint Labour Committees which have for many years regulated pay rates and working conditions in specific occupations and sectors.

The commitment to introduce a national minimum wage was contained in the Government's 1997 *Action Programme for the New Millennium*, and the National Minimum Wage Commission appointed by the Government reported in early 1998. Prior to introduction, an interdepartmental group of officials set up to deal with issues relating to the implementation of the minimum wage commissioned a study of its likely impact (Nolan *et al.*, 1999). That study estimated how many employees would be affected by the minimum wage, and looked at the likely impact on work incentives and labour supply, and on employment, competitiveness and inflation. In doing so it drew on a number of data sources, including the Living in Ireland surveys carried out by the ESRI, and employed the *SWITCH* tax-benefit micro-simulation model and the *HERMES* macro-model of the Irish economy.

This prospective impact study also included a substantial new survey of firms, which obtained detailed information on overall employment, employment at wage levels affected by the minimum wage, sector and type of activity, profitability, the importance of wage costs and the scope for substitution of capital for labour, knowledge about the minimum wage and subjective evaluations by employers of its likely impact. The survey was carried out by the ESRI's Survey Unit in late 1998/early 1999, with over-sampling of particular sectors likely to be most affected, and obtained responses from over 1,000 firms. As was highlighted at the time, this was very important not only for the prospective impact study but also for monitoring and evaluation after the event, since the same sample of firms could be surveyed again after the minimum wage was introduced.

The Department of Enterprise, Trade and Employment subsequently commissioned a further survey of firms, carried out in late 2000/early 2001 by the ESRI's Survey Unit. This survey interviewed both a substantial proportion of the firms in the 1998/1999 sample – for whom the situation "before and after" the minimum wage can be directly compared – and significant

numbers of other firms. In this study the results from this survey of firms, and the earlier one, are used to assess the impact of the minimum wage on employment and wage levels and other aspects of work organisation among Irish firms. This provides important new material relevant to assessment of the effects of the minimum wage. It does not of course represent a comprehensive basis on which to make an overall assessment, since the minimum wage is intended to affect not only firms and individual earnings but also household incomes and poverty. Here our focus is firmly on what is happening at the level of the firm, and a complementary analysis based on individual/household data (such as that obtained in the Living in Ireland surveys) will be required before a full account of the impact of the introduction of the minimum wage and its success in attaining its aims can be given.

This chapter provides the background and context in which the results of the new survey are to be set. We begin by recalling in Section 1.2 the thrust of the findings of the prospective impact study. Section 1.3 describes the survey of firms that comprised one element of the impact study and serves as the baseline for much of the present study. Section 1.4 looks at trends in the labour market and macroeconomy since that study was completed, which are critical in interpreting the results of the new survey and uses them to inform an assessment of the impact of the minimum wage. Finally, Section 1.5 presents a detailed description of the specification of the minimum wage as introduced in April 2000.

1.2 The Prospective Impact Study

The study on the likely impact of the national minimum wage was carried out by a team of researchers led by the ESRI and including contributers from the National University of Ireland, Maynooth, and University College London/London School of Economics (Nolan *et al.*, 1999). It focused primarily on a minimum wage at the nominal rate of IR£4.40 (or 70 per cent of that figure for those aged under 18) mentioned by the Minimum Wage Commission (1998). Alternative specifications were also examined to test the sensitivity of the results, namely rates of IR£4 and IR£5 per hour.

The study assumed that the minimum wage would be introduced in April 2000, so that the analysis entailed projection forward from the base of information available when the study was being completed in early 1999. In particular, the distribution of earnings shown by the ESRI's 1997 Living in Ireland Survey was projected forward to April 2000 in order to estimate the numbers likely to be directly affected by the minimum wage. The core assumption adopted was that median earnings would increase by about 15 per cent between October 1997 and April 2000, and that earnings at the very bottom would rise by about 4 per cent more than the median (as they had between 1994 and 1997).

Projecting forward from the 1997 survey on this basis suggested that 13.5 per cent of all employees would be under IR£4.40 (or IR£3.08 if under 18) in 2000, the study's central estimate of the

numbers likely to be below the specified minimum wage. Varying the projected increases in median and lower earnings between 1997 and 2000 still produced a figure in the range 13-15 per cent. The profile of the employees falling below the specified minimum wage was very similar to that presented in Nolan's (1999) study for the Minimum Wage Commission, which had been based on the ESRI's 1994 survey. More than half those below the minimum wage were women, about one-third were working less than 30 hours per week, and over 40 per cent were aged under 25. Clerical and service workers were heavily over-represented among those below the minimum.

The overall increase in gross earnings associated with the specified minimum wage was estimated to be 1.6 per cent of total gross earnings. The likely scale of increases in wages above the minimum as a reaction to the narrowing of differentials – "spill-over" – was very difficult to assess, but assuming that only those located within 50 per cent of the minimum itself were affected, and that they obtained additional increases tapering from 5 per cent down, it was shown that spill-over would bring the total wage bill increase up from 1.6 per cent to 2 per cent. Sub-sectors identified as facing wage bill effects well above average included textile and apparel manufacturing, sale and repair of motor vehicles and sale of automotive fuel, retail trade other than motor vehicles, hotels, restaurants and bars, other personal services and household domestic employees.

Simulating the impact of the minimum wage on replacement rates suggested that it would lead to some improvement in financial work incentives and labour force participation rates were expected to rise in response to the introduction of the minimum wage, particularly amongst women.

The ESRI's *HERMES* macroeconomic model was used to estimate the overall impact of the minimum wage on employment, unemployment and competitiveness. The central simulation results suggested a fall in employment of 13,500, equivalent to 0.9 per cent of total forecast employment in 2000. This was driven in equal measure by a direct impact on the demand for low-wage labour, and a decline in the demand for higher-wage labour due to the indirect impact on inflation, increasing wage demands and reducing competitiveness. These estimates did not take into account the potentially positive impact of a minimum wage on effort and productivity levels and turnover of employees, or monopsony in parts of the low-wage labour market.

The study also noted that the Irish minimum wage was going to be higher in nominal terms than the minimum introduced in the UK at stg£3.60 in 1998, and in relative terms the Irish minimum was likely to represent about 56 per cent of median earnings for those aged 18 or over, while the UK minimum wage for those aged 22 or more was 47 per cent of their median hourly wage. In addition, the UK youth rate applies to all those aged under 22, whereas in the Irish case 18 was the age cut-off although reduced

rates also apply in some other circumstances, as spelt out in detail in Section 1.4 below.

1.3 The 1998/99 Survey of Firms

The specially-designed survey of firms carried out in late 1998/early 1999 as part of the prospective study on the likely impact of the minimum wage serves as benchmark for much of the present study and it is, therefore, important to describe it in some detail at this point. The principal objective of the survey was to provide a representative picture of size and structure of the workforce among private sector employers with particular emphasis on a breakdown of employment in terms of occupational grade and basic pay structures. The questionnaire sought details on workforce size and structure distinguishing full time and part time employees, hourly pay ranges, age and gender; the extent of vacancies, hirings, and departures from the enterprise in the 12 months preceding the survey; and direct and indirect questions to assess attitudes and perceptions among businesses to the introduction of minimum wage legislation, as well as views on its likely impact on employment and business activity.

The questionnaire recorded details in respect of the entire business enterprise or firm in contrast to the establishment, outlet or branch. The effective sample was subsequently re-weighted to represent the totality of business *enterprises* in Ireland. A random stratified sample of businesses was selected from lists of firms which are maintained in the ESRI. Prior to sample selection these firms were stratified according to sector, size (number of employees) and region. A total of 8 sectors was used for stratification prior to sample selection as follows: building and construction; manufacturing of textiles and apparel; other manufacturing and production; retail; wholesale; banking/property/renting/business services; hotels/restaurants; bars; personal services; other services. Within each sector firms were also stratified according to a number of employees. Firms were stratified by region within each of these broader stratifications. A disproportionate systematic sample was then selected with a view to ensuring that each sector/size stratum would be reasonably represented in terms of absolute number of cases in the final effective sample for analysis and reporting.

A total valid sample of 2,330 enterprises was selected. A total of 1,062 questionnaires were successfully completed so the effective response rate was 46 per cent, in line with what one might expect for a general sample of the population of firms. A total of 394 firms refused to participate in fieldwork while a further 397 were unavailable for interview throughout that period and the remainder could either not be located or returned some "other" response outcome. Prior to analysis, the responding firms were statistically adjusted so as to ensure that the structure or composition of the effective sample was in line with the structure or composition of the population from which it was selected according to a number of important classificatory variables such as size, sector etc. All

questionnaires were completed on a personally administered basis which involved an interviewer paying a visit to each respondent and completing the instrument on site. (Responses were most often received from the person carrying out the functions of personnel manager.)

One of the primary purposes of the firm survey was to derive an estimate of the overall numbers likely to be directly affected by the minimum wage, and of the sectors most affected. The key finding was that workers on an hourly wage of less than IR£4.50 constituted 21 per cent of all private-sector employees in the firms surveyed. (This was consistent with the results for the private sector from the 1997 ESRI household survey examined in detail elsewhere in the prospective impact study.) Women, part time workers and those aged under 18 faced the greatest risk of being low paid. However the majority of those receiving an hourly wage of less than IR£4.50 were full time and over 18 years. Sales and personal service workers were the occupations both facing the greatest risk of low pay and accounting for the majority of low paid workers. Associated with these occupations were industries such as the retail sector and hotel and restaurants, although certain manufacturing sectors such as textiles and apparel were also seen as likely to be disproportionately affected. Small firms did not appear more likely to have minimum wage workers than bigger ones, and in all 42 per cent of firms said that they currently employed at least some staff at IR£4.50 or less per hour.

To assess these firms' views on the likely impact of the introduction of a minimum wage, respondents were asked to consider a situation in which the hourly wage of adult employees (i.e. those aged 18 years and over) paid less than IR£4.50 per hour rose to a minimum basic hourly rate of IR£4.50. (That figure was used because subsequent questions probed respondents' knowledge of the actual level at which the minimum is to be set.) Substantial numbers said that cutting back on profit margins and improved staff morale were likely. Relatively small numbers said that substitution of labour with capital was likely, while about 20 per cent felt that productivity increases were likely. About one-third of firms felt that the minimum wage would be likely to reduce staff turnover, and about one-quarter said that they would retrain/upgrade work of current staff. Seventeen per cent indicated that the introduction of the minimum wage could result in their going out of business – though the possibility of strategic response must be noted there, with respondents having an incentive to over-state the likely impact in order to influence policy. About 56 per cent of firms indicated that staff /unions would probably insist on restoration of pay differentials as a result of the minimum wage. About 40 per cent felt that the minimum wage would be "likely" to have no effect on their business, while the same proportion felt that was unlikely.

Finally, firms' knowledge of the minimum wage proposals was probed. Almost three-quarters had heard about proposals on the minimum wage. However, when asked about the level at which it

would be introduced only 8 per cent of those who said they had heard of it were able to quote the IR£4.40 rate, with a further 31 per cent mentioning IR£4.50, and only 26 per cent knew that it was to be introduced in the year 2000. When asked about the sub-minimum wage proposals wage for young persons and trainees, as many as 88 per cent of those who had heard of the minimum wage proposals indicated that they had either never heard of or did not know the level of this sub-minimum rate.

As well as contributing substantially to the prospective impact study, the fact that the survey of firms was carried out in 1998/99 was recognised at the time as very important for future monitoring and evaluation of the impact of the minimum wage. Being able to survey the same sample of firms before and after the introduction of the minimum wage greatly enhances prospects of a reliable evaluation of its actual effects after the event. Exploiting this potential is one of the main aims of the present study, and we turn in the next chapter to a description of the survey of firms carried out in late 2000/early 2001, which re-interviewed a substantial proportion of the respondents to the 1998/99 survey as well as a significant number of other firms. Before turning to the results of that more recent survey on which this study is focused, it is worth sketching out in the next section key trends in the Irish economy after the impact study was completed which are relevant to the impact of the minimum wage.

1.4 Macro-economic and Labour Market Developments

In considering relevant trends in the Irish economy after the impact study was completed, the evolution of employment and wage levels is clearly of central importance. Restrained wage growth had been a notable feature for much of the 1990s, due to a combination of factors including the social partnership agreements pay norms, lower personal income tax rates and strong growth in the supply of labour. However, the labour market tightened significantly in the late 1990s, with employment growing by over 6 per cent in 1999 and the unemployment rate falling below 5 per cent at the end of 1999. These factors served to put upward pressure on wage rates across all sectors of the economy as labour became increasingly scarce.

Economic activity accelerated from already high growth rates, with GDP growing by almost 10 per cent in real terms in 1999 and even faster in 2000, while real GNP grew by almost 8 per cent in 1999 and 10 per cent in 2000. Total employment increased significantly, with an additional 95,600 persons in work in 1999 and a further increase of 75,000 in 2000. The labour force continued to grow very rapidly by international standards, reflecting rising labour force participation rates, the natural increase in those of working age and net immigration. An indicator of potential labour supply is provided by the number of unemployed persons and discouraged workers as a percentage of the labour force, inclusive of discouraged workers (who are not looking for work). By late 1997, approximately 11 per cent of the

labour force consisted of unemployed and discouraged workers, whereas by 2000, this number had halved. Those with a loose attachment to the labour market had thus increasingly been drawn into the labour force.

The rise in employment was accompanied by a marked decline in unemployment and long-term unemployment. The numbers unemployed fell from 125,000 in 1998 to 95,000 persons in 1999, and were down to 73,000 in 2000. The unemployment rate continued to fall, reaching 5.6 per cent in 1999 and 4 per cent in 2000. The long-term unemployment rate also more than halved from the beginning of 1998 to 2000. This level of unemployment clearly places workers in a strong wage bargaining position, as employers have to bid up wage rates in order to retain and attract labour.

Evidence on earnings trends across a broad range of occupations and sectors shows that wage inflation began to accelerate significantly from 1997 onwards. Data on industrial earnings indicate that average hourly earnings increased by about 17 per cent between 1997 and 2000. Average hourly and weekly earnings in the construction industry were up about 30 per cent. Average earnings in the public sector rose by about 15 per cent over the same period.

Consumer prices rose by only about 2 per cent during 1998 and 1999 on average, but accelerated sharply towards the end of 1999, and in 2000 were up 5.6 per cent on average. Some of this increase was due to a number of special factors such as a budgetary increase in tobacco taxes and high oil prices, as well as a fall in the euro and then rising interest rates. However, rates of price increase for services and related expenditure, some in labour intensive sectors where the minimum wage is particularly relevant, also contributed.

Overall, then, from the period of the study into the likely impact of the minimum wage in Ireland up to the date of its introduction the economy performed very strongly indeed. Over the three years from 1997 to 2000 average earnings in the non-agricultural sector rose by around 5.5 per cent a year. This is broadly consistent with the rate of increase assumed in the prospective study from the 1997 survey data on the distribution of earnings – then the latest available. Unfortunately, it is not clear at this stage how trends varied by level of earnings or skill, but there are some indications that growth for the least skilled has been significantly higher than the average, perhaps to a greater extent than assumed in the prospective study. This analysis of labour market and macroeconomic trends up to the introduction of the minimum wage suggests that if anything fewer workers may have been affected than the impact study's central estimate, with the effect on the wider economy correspondingly reduced.

1.5 The National Minimum Wage

The National Minimum Wage introduced from 1 April 2000 was framed in terms of hourly earnings. A minimum of IR£4.40 per hour was set, and employers were not permitted to pay below that figure to "experienced adult workers". Employees under 18 years of age, first-time job entrants, or those undergoing training could be paid below that figure for a specified period.

Important issues arise as to precisely how the hourly rate of pay is calculated, and how those entitled to the minimum versus sub-minimum rate are distinguished. For "experienced adult workers", their average hourly rate of pay in the pay reference period, which may be a week, a fortnight or no longer than a month, must not be less than the specified minimum. Employers may select the reference period to be used for a given employee, and are obliged to inform each employee in writing of the period selected. The average hourly rate of pay is then calculated by dividing the employee's gross reckonable pay in the reference period by their working hours in that period. Working hours must include any overtime. Reckonable pay includes basic pay, shift premia, piece and incentive rates, commissions and bonuses which are productivity related, a specified value where board and/or lodgings are provided by the employer, and the amount of any service charge distributed to employees through the payroll. (Overtime premium, Sunday and public holiday premium and unsocial hours premium on the other hand are not included in reckonable pay.)

Whereas an "experienced adult worker" must be paid at least the specified minimum, certain categories of employee may be paid less, and for these sub-minimum amounts are specified below which hourly pay rate must not fall. Those aged under 18 are one such group, and the rate set for them in April 2000 was IR£3.08. Those aged over 18 but in their first year from date of first employment represent a second group, for whom the minimum then specified was IR£3.52. For those aged over 18 but in their second year from date of first employment, a minimum of IR£3.96 was set. For employees aged over 18 in structured training or study undertaken in normal working hours, figures of IR£3.30, IR£3.52 and IR£3.96 applied depending on whether they were in their first, second or third period of training or study. In order to qualify, structured training has to be aimed at enhancing work performance, has to include 10 per cent away from ordinary operational work, and has to have an assessment or certification procedure or confirmation of course completion.

The amounts in force from April 2000 have subsequently been increased, and the approach taken to up-rating over time is an important issue to which we return in our concluding chapter. It is the rates originally set which applied when our firm survey was carried out, however, and it is to this firm survey that we now turn.

2. THE FOLLOW-UP SURVEY

2.1 Introduction

In this chapter we provide details on the operational aspects of the follow-up survey and the construction of the dataset underlying this study. We begin in Section 2.2 by discussing the content of the questionnaire. Section 2.3 is concerned with details of sample design and response rates. Section 2.4 considers the way in which the data were re-weighted prior to analysis. Finally, Section 2.5 outlines the way in which the survey was administered.

2.2 The Questionnaire

The survey instrument was designed to principally collect details on the current employment structure of private sector non-agricultural firms. In particular, we were concerned to record details on the number of persons engaged on both a full time and part time basis according to, *inter alia*, hourly basic pay rates, age and gender. These questions formed the core of the questionnaire. In addition, details were recorded in respect of background classificatory variables including changes in the volume and value of business over the years immediately preceding the survey. In addition, details were recorded on the firms' perceptions of the effects of minimum wage legislation on its operation and in particular, the perceived effects the legislation had on wage levels.

A. The questionnaire contained a total of 7 sections as follows:
B. Background details and basic classificatory information (Q's 1-11, 14,15). These included recent trends in the value and volume of the respondent's business.
C. Indirect questions on perceptions of current labour costs as a constraint to business expansion (Q's 12-13).
D. Employment structures among persons engaged on a *full time* basis according to broad occupational grade; hourly basic pay rates; gender and age composition (Q's17a-17l).
E. Employment structure of persons engaged on a *part time* basis according to occupational grade; hourly basic pay rates; gender and age composition (Q's 18a-19c).
F. The firm's experience of vacancies, hiring and departures of persons engaged over the 12 months preceding the survey (Q's 20-25).
G. Knowledge of the minimum wage (Q's 26-29d).
H. Perceptions of the impact of the minimum wage on a range of operational aspects of the company including, in particular, its impact on hourly wage rates (Q's 30-41).

The survey instrument recorded details in respect of the entire business enterprise or firm in contrast to the establishment, outlet

or branch. The effective (or completed) sample was subsequently re-weighted to represent the totality of business *enterprises* in Ireland.

2.3 Sample Design and Response Rates

The sample used in the survey was drawn from two main sources. A total of 1,062 firms successfully completed the questionnaire in the first round of the survey in 1999. All 1,062 relevant firms were included in the target sample for the second round of the survey. In addition to this "old" sample component we augmented our target sample with a "new" random sample of 1,160 firms which had not been asked to participate in the survey in the first round of the project.

By continuing with the "old" sample which successfully completed the survey in 1999, we were able to ensure that we would have longitudinal micro-data at the level of the individual enterprise over time. This would allow us to look at changes over time in terms of the size and content of the labour-force in individual business entities. The purpose of the two phase survey which we have undertaken as part of our study of the impact of the minimum wage is to allow us to carry out a "before and after" analysis of the size and structure of private sector employment. It is usual that this sort of analysis is based on what one would describe as two independent cross-sectional surveys. This means that one undertakes two separate independent surveys of firms at two discrete points in time. One then compares the aggregate results from the first survey with those from the second. This allows one to assess the overall net effect of the introduction of the legislation at a broad or aggregate level. Analysis based on repeated cross-sectional surveys does *not* allow one to make any statement about the change which has taken place at the level of the *individual firm*. This means that by carrying out analysis based on repeated cross-sections one can describe *net* effects across all firms in general. One cannot, however, undertake any micro-level analysis based on the experience of individual enterprises. The longitudinal analysis presented in Chapter 6 of the report is based on this type of longitudinal analysis where we discuss changes that have taken place at the level of the individual respondent.

Although the longitudinal component provides a wealth of important new micro-level information we decided to supplement the target sample used in the survey with a fresh or additional sample of businesses. We had two main reasons for doing this. First, and most importantly, we anticipated a response rate of the order of 55 per cent among the firms which had participated in the first round of the survey. This would have left us with just over 580 completed questionnaires. This sample size is really too small to allow one to undertake the required analysis. A total of 1,000 completed questionnaires was the target set for the sample. Second, to ensure that the re-weighted sample (Section 2.4 below) is fully representative of the *current* population of all firms in the cross-section it is important to include an adequate mix of old and

new businesses in the sample. By supplementing or augmenting the original sample with a new sub-sample one can ensure that the final sample for analysis at the second wave of the survey is fully representative of the structure of all current enterprises in the population.

The supplementary sample of new businesses was selected on a random stratified basis from lists of firms which are maintained for this purpose in the ESRI. Prior to sample selection these firms were stratified according to sector; size (number of employees) and region. The sectors used for pre-stratification as follows: Building and Construction; Manufacture of Textiles and Apparel; Other Manufacturing and Production; Retail; Wholesale; Banking, Property, Renting and Business Services; Hotels/Restaurants/Bars; Personal Services; Other Services. Within each sector firms were stratified according to number of employees and region. A sample was then selected with a view to ensuring that each sector/size stratum would be reasonably represented in terms of absolute number of cases in the final effective sample for analysis and reporting.

Table 2.1 below outlines the response levels for the survey. The left-hand segment of the table provides details on response outcomes in respect of the "old" sample of firms which also participated in the survey in 1999. The right-hand segment relates to outcomes from the "new" or supplemented sample.

Table 2.1: Response Rates for Second Round Minimum Wage Survey

	"Old" Sample		"New" Sample		Total	
Outcome	No.	Per Cent	No.	Per Cent	No.	Per Cent
Successfully Completed	605	60.6	467	45.6	1,072	53
Completed but Unusable	6	0.6	0	0	6	0.3
Refused	138	13.8	174	17	312	15.4
Never Available for Interview	249	24.9	383	37.4	632	31.3
Out-of-Business	57	Valid Sample 100%	130	Valid Sample 100%	187	Valid Sample 100%
Not Relevant	7	(n=998)	6	(n=1,024)	13	(n=2,022)
Total	1,062		1,160		2,222	

We can focus in the first instance on response levels for the "old" sample. One can see from the table that a total of 64 of the firms in question were either out of business or otherwise invalid elements in the population by the time of the second survey in 2001. When these were excluded this gave a valid sample of 998 firms. Just under 61 per cent of these successfully completed the questionnaire. One can also see that 14 per cent of businesses explicitly refused to participate in the survey while the remaining 25 per cent were never available throughout the fieldwork period. This latter category can be interpreted as a "soft" refusal.

The middle segment of the table shows that the response rate among the "new" sample was lower at just under 45 per cent. The higher response rate among the "old" sample-which had already participated in the first phase of the survey is very much as one

would expect and simply reflects the fact that this group of firms had already shown themselves to be predisposed towards participation in the survey.

These response levels for old and new samples translate to an overall response level of 53 per cent for the full target sample. This is very much in line with the order of the response rate which one might reasonably expect for a personally administered survey of firms of this type.

2.4 Re-weighting the Data

Prior to analysis, the 1,072 questionnaires from responding firms were statistically adjusted or re-weighted so as to ensure that the structure or composition of the effective sample was in line with the structure or composition of the population from which it was selected according to a number of important classificatory variables such as size, sector etc. This re-weighting of the data is necessary for two reasons.

First, there may be systematic and differential levels of non-response as between one group of firms and another within the sample. For example, small firms in a given sector may have an above average propensity to participate in surveys of this nature. If this were the case then they would be over-represented in the final sample for analysis and would consequently be contributing "too much" to the aggregate results. Accordingly, one should statistically adjust or re-weight the data to ensure that all sub-groups of the population are appropriately represented in the sample, in line with their representation in the overall population.

Second, the sample was selected on a disproportionate stratified basis. This means that some size/sector strata were over-represented in the original sample so as to ensure adequate coverage in the final effective sample for analysis. For example, given the Department's concern with sectors such as the Manufacturing of Textiles and Apparel or Retail it was decided to over-sample from them when selecting the target sample. This over-representation at sample selection stage was adjusted for in the re-weighting scheme.

In deriving the weights or adjustment factors two related but independent weighting systems were prepared. The first is based on the firm as the entity or unit of analysis. The second is based on the employee. In the latter weighting scheme each firm is interpreted as a group of employees rather than as an entity in its own right. The way these two sets of weights were derived is described in the Appendix to this chapter. The *employee-based* weight is used in deriving estimates of *employment or employee structures*, in subsequent sections of the report. The *enterprise-based* weight is applied in deriving population estimates of the characteristics of *firms*.

Although weighted, the grossed estimates presented are, of course, subject to standard statistical sampling variances. These variances will be especially pronounced in the analysis of sub-groups based on a small number of respondents. As noted above,

the survey was re-weighted to reflect the totality of business enterprises in Ireland, in contrast to the establishment, outlet or branch. All information recorded on the questionnaire relates to the complete enterprise in all of its branches or outlets throughout the Republic of Ireland.

2.5 Survey Implementation

All questionnaires were completed on a personally administered basis which involved an interviewer paying a visit to each respondent and completing the instrument on site. Given the nature of the survey and the potential bias which could be introduced to the sample results by strategic responses, personal administration of the survey was essential. In other words, it was important that information was recorded from the respondent in respect of occupational and pay structures as well as details on likely responses to the introduction of pay floors before terminology such as Minimum Wage Legislation was used directly. Consequently, it was not possible to leave the survey form with respondents for self-completion. In a very small number of the larger companies a specially prepared 4 page section on occupational structures was left with respondents for completion and subsequent collection by the interviewer. This special section was used only in circumstances where the enterprise was so large that it would have been unreasonable and impractical to expect the respondent to have collated details from personnel and other files in the course of the interview.

Survey forms were returned to ESRI by interviewers as they were completed for editing, checking and data entry. At each of these stages the questionnaire was carefully checked to ensure completeness and, in particular, internal consistency of the data provided to ensure that, for example, the figures provided on total numbers engaged on a full time and part time basis was consistent with subsequent detailed breakdowns. Where inconsistencies were apparent these were resolved by phone follow-up with the respondent.

APPENDIX: RE-WEIGHTING THE DATA

Prior to analysis, the 1,072 questionnaires from responding firms were statistically adjusted or re-weighted so as to ensure that the structure or composition of the effective sample was in line with the structure or composition of the population from which it was selected according to a number of important classificatory variables such as size, sector etc. This re-weighting of the data is necessary for the reasons outlined in Chapter 2, and the way in which it was implemented is described in this Appendix.

In deriving the weights or adjustment factors two related but independent weighting systems were prepared. The first is based on the firm as the entity or unit of analysis. The second is based on the employee. In the latter weighting scheme each firm is interpreted as a group of employees rather than as an entity in its own right. To derive these sets of weights one has to establish the structure of the population from which the effective sample has been selected. The structure used in this survey was based on size and sector. A total of 9 sectors and two size categories was used for re-weighting purposes. The size categories were 0-99 and 100+ employees for Manufacturing of Textiles & Apparel and Other Manufacturing & Production; and 0-9 and 10+ employees for the Service Sectors and Construction. This provides one with a total of 18 strata or size/sector cells in the re-weighting matrix (2 size categories * 9 sectors). Using a number of sources such as the Census of Industrial Production; the Annual Services Enquiries and the *Quarterly National Household Survey* one can derive the overall structure of the population of relevant businesses in terms of both enterprises (firms) and also employees within the 18 size/sector strata use in re-weighting. This is outlined in Appendix Table 2.1.

The classification in this table was used to re-weight the data using a standard ratio weighting technique in which each of the 1,072 responding enterprises was assigned a weight corresponding to the ratio of the population total to the sample total in the relevant cell. In other words, the weight is given as:

$$W_i = P_i/S_i$$

where the i's refer to the size/sector cells in Appendix Table 2.1. P_i is the total number in the population of each cell and S_i refers to

the number in the corresponding cell in the sample which successfully completed the questionnaire and so were included in the analysis. The W_i's are the weights associated with each unit in the sample and it is this which ensures that the sample figures are adequately grossed to population totals. The weights are derived using two bases viz. (i) the enterprise and (ii) the number of employees. The *employee-based* weight is used in deriving estimates of *employment or employee structures*, in subsequent sections of the report. The *enterprise-based* weight is applied in deriving population estimates of the characteristics of *firms* in other sections.

Appendix Table 2.1: Structure of Population of Enterprises as Derived from CIP, Annual Services Enquiries and the Labour Force Survey

Size/Sector/Stratum		Number of Enterprises (000s)	Nos. Engaged (000s)	NACE Sectors Covered
Building and Construction	0-99 emps.	12	59.9	45
	100+ emps.	2	85.1	
Manuf. Of Textiles & Apparel	0-99 emps.	0.3	7.0	17; 18
	100+ emps.	0.04	7.9	
Other Manuf & Production	0-99 emps.	3.6	90.5	5; 10; 11; 12; 13; 14; 15; 16
	100+ emps.	0.5	194.0	19-37; 40; 41
Retail	0-9 emps.	22.4	82.9	50; 52
	10+ emps.	2.4	107.9	
Wholesale	0-9 emps.	3.9	13.7	51
	10+ emps.	5.2	38.8	
Banking/Property/Renting/	0-9 emps.	15.2	59.6	70; 71; 73; 74
Business Services	10+ emps.	2.3	156.7	
Hotels/Restaurants/Bars	0-9 emps.	9.9	37.4	55
	10+ emps.	2.6	72.6	
Personal Services	0-9 emps.	4.5	12.0	93
	10+ emps.	0.3	10.1	
Other Services	0-9 emps.	8.0	19.9	60; 61; 62; 63; 64; 91
	10+ emps.	2.6	166.6	92; 95; 80; 85; 90
TOTAL ABOVE			1,222.6	
Agriculture			122.7	
Non-Agric. Self Employment			124.0	
Public Admin/Defence/Education			239.0	
Total			1,801.3	

3. KEY CHARACTERISTICS AND TRENDS

3.1 Introduction

In this chapter, we set out some key characteristics of the firms in the recent survey, and present their perspectives on recent trends. We look first at the relationship between sector of activity and size of firm, proportion of low paid employees, and Irish versus foreign ownership. We then look at trends in size of the firm's workforce, staff turnover, and volume of business. We then look at the extent to which firms said they were making a profit or loss, and at the importance of the wage bill in overall operating costs. Finally, we discuss what aspects of their operations firms themselves felt to be most difficult, and how this had changed since the previous survey carried out in late 1998/early 1999.

3.2 Key Characteristics by Sector

We look first in Table 3.1 at the characteristics of sample firms by sector of activity cross-classified by numbers employed, the proportion of the workforce paid IR£4.50 or less, and Irish versus foreign ownership. We see that many of the firms in the building and construction, retail, banking/finance/business, hotels/restaurants/bars and personal and other services sectors had less than 10 employees. Manufacturing – including textiles and clothing – and wholesale sectors were the only ones where a substantial number of firms had 35 or more employees.

In most sectors, three-quarters or more of all the responding firms said they had no employees paid IR£4.50 or less per hour – the exception being hotels/restaurants/bars where that figure was under two-thirds. The only sectors where a substantial number of firms had a significant proportion of their workforce (15 per cent or more) paid IR£4.50 or less were textiles, retail and hotels/bars/restaurants. In the retail and hotels/bars/restaurants sectors about one-quarter of all firms had a significant proportion of their workforces low paid in that sense, while for textiles and clothing manufacturing that figure was 15 per cent. The breakdown of firms into Irish versus foreign-owned varied a good deal across the sectors, ranging from virtually all domestically-owned in building and construction, retail and hotels/restaurants/bars to 10-16 per cent foreign-owned in the manufacturing and wholesale sectors.

Table 3.1: Firms Classified According to Sector and (I) Size; (ii) Percentage of Workforce who are Paid IR£4.50 or Less Per Hour; (iii) Ownership

	(I) Size Category						(ii) Percentage Workforce IR£4.50/Per Hour or Less				(iii) Nationality		
	3 or Less	4-9 Engaged	10-34 Engaged	35-55 Engaged	100+ Engaged	Total	None	LT15%	15+%	Total	Irish	Foreign	Total
			%					%				%	
Sector													
Building and Construction	22.1	63.6	6.3	5.4	2.6	100.0	92.7	6.1	1.2	100.0	99.8	0.2	100.0
Manufacture Textiles and Apparel	18.5	17.0	43.6	11.8	9.1	100.0	74.2	10.6	15.2	100.0	87.9	12.1	100.0
Other Manufacture	8.0	15.0	41.8	23.0	12.2	100.0	79.8	9.7	10.4	100.0	84.3	15.7	100.0
Retail	41.8	48.5	5.2	3.2	1.3	100.0	72.8	2.1	25.1	100.0	99.6	0.4	100.0
Wholesale	16.2	26.7	33.5	15.5	8.2	100.0	82.0	10.7	7.2	100.0	89.7	10.3	100.0
Banking /Finance/ Business	48.1	38.8	5.2	4.3	3.7	100.0	88.5	2.2	9.2	100.0	92.2	7.8	100.0
Hotels/Restaurants/Bars	26.5	52.9	5.9	7.3	7.5	100.0	62.8	10.5	26.6	100.0	97.8	2.2	100.0
Personal and Other Services	32.6	48.6	8.4	5.2	5.2	100.0	87.8	2.5	9.7	100.0	94.0	6.0	100.0
All Firms	3.2	46.0	10.2	6.5	4.5	100.0	80.7	5.0	14.3	100.0	95.6	4.4	100.0

3.3 Recent Trends in Size, Staff Turnover and Volume of Business

We now characterise responding firms in terms of their own assessment of changes in the size of their workforce in the last two years. Table 3.2 shows that when asked about the situation compared with two years ago, half the respondents stated their workforce was unchanged. One-third said their workforce had increased, while 16 per cent said it was smaller. The proportion stating that the workforce had increased was higher than average in the other manufacturing and wholesale sectors. The proportion stating the workforce had declined was above average in building and construction and even more so in textiles and clothing where more than one-third of respondents gave that reply.

Table 3.2: Firms Classified According to Changes in Size of Workforce Over Two Years Preceding the Survey

	Size of Workforce			
	Larger	Same	Smaller	Total
			%	
Sector				
Building and Construction	32.9	41.4	25.7	100.0
Manufacture Textiles and Apparel	26.0	38.7	35.3	
Other Manufacture	46.2	36.7	17.1	100.0
Retail	28.1	58.4	13.5	100.0
Wholesale	43.3	40.3	16.3	100.0
Banking /Finance/ Business	30.2	51.9	17.9	100.0
Hotels/Restaurants/Bars	27.1	63.4	9.5	100.0
Personal and Other Services	39.2	46.0	14.7	100.0
Size of firm				
3 or less	12.0	71.1	16.9	100.0
4-9 engaged	35.2	46.5	18.3	100.0
10-34 engaged	54.5	33.7	11.8	100.0
35-99 engaged	60.8	27.8	11.4	100.0
100+ engaged	75.9	15.7	8.4	100.0
Percentage of workforce paid IR£4.50 or less per hour				
None	32.9	51.9	15.2	100.0
Less than 15	42.2	41.6	16.2	100.0
15 or more	28.4	48.5	23.1	100.0
Nationality				
Irish	32.3	51.8	16.0	100.0
Foreign	49.5	27.6	22.9	100.0
All firms	33.0	50.7	16.3	100.0

In Table 3.3 we look at firms' own assessment of the way staff turnover has changed over the last 12 months. We see that overall, two-thirds of firms felt that there had been no change in turnover. A substantial majority of the remainder felt that turnover had increased rather than decreased, with one-quarter saying it had increased either slightly or substantially. The proportion saying turnover had increased was relatively high in Retail and particularly in Personal and Other Services. It was also high among firms employing some low paid workers. On the other hand large

firms, and foreign-owned ones, were more likely than others to say that turnover had decreased.

Table 3.3: Firms Classified According to Level of Staff Turnover at Time of Survey Relative to Position 12 Months Earlier

	Level of Staff Turnover at the Time of Survey Relative to the Position 12 Months Earlier					
	Decreased Substantially	Decreased Slightly	Remained Constant	Increased Slightly	Increased Substantially	Total
			%			
Sector						
Building and Construction	3.0	3.5	79.5	12.6	1.5	100.0
Manufacture Textiles and Apparel	1.8	8.5	54.1	12.6	15.4	100.0
Other Manufacture	2.3	8.0	55.6	20.2	11.5	100.0
Retail	1.6	7.4	65.9	22.6	5.6	100.0
Wholesale		7.7	61.5	19.5	6.7	100.0
Banking /Finance/ Business	2.2	8.8	73.9	24.1	3.6	100.0
Hotels/Restaurants/Bars	0.9	9.8	50.3	11.5	8.9	100.0
Personal and Other Services	1.7	6.2	68.5	30.2	8.7	100.0
Size of firm						
3 or less	1.9	3.4	85.5	8.2	1.0	100.0
4-9 engaged	1.7	9.3	62.9	19.4	6.9	100.0
10-34 engaged	1.1	7.9	56.8	25.4	8.7	100.0
35-99 engaged	2.2	8.1	40.9	36.8	12.0	100.0
100+ engaged	1.8	12.3	32.6	36.0	17.2	100.0
Percentage of workforce paid IR£4.50 or less per hour						
None	1.7	5.0	71.8	15.5	6.1	100.0
Less than 15	1.7	6.8	36.3	49.0	6.2	100.0
15 or more	2.0	19.9	50.2	23.1	4.9	100.0
Nationality						
Irish	1.7	6.6	68.1	18.1	5.5	100.0
Foreign	1.3	20.3	42.4	20.5	15.4	100.0
All firms	1.7	7.2	66.9	18.2	5.9	100.0

We now look at what firms said about trends in their volume of business in the last two years. Table 3.4 shows that almost two-thirds of all respondents said that their volume of business had increased. A further one-quarter said volume of business had remained constant, while only one in ten said it had decreased. Looking across the sectors, firms in the manufacturing (other than textiles and clothing) and wholesale sectors were more likely than others to say that volume of business had increased. A higher than average proportion in the hotels/restaurants/bars sector said volume was unchanged, while the percentage saying it had decreased was above average in building and construction – though even there it was no higher than 16 per cent. There was a clear relationship between firm size and volume, with the percentage saying that volume had increased much higher for large than small firms. Classifying firms by the proportion of their workforce paid IR£4.50 or less per hour, firms with some low paid employees and particularly those with a significant proportion of

the workforce low paid were less likely than others to say that volume had increased.

Table 3.4: Firms by Trends in Volume of Business in the Two Years Preceding the Survey

	Volume of Business			
	Increased	Constant	Decreased	Total
		%		
Sector				
Building and Construction	65.7	17.7	16.6	100.0
Manufacture Textiles and Apparel	64.5	25.5	10.0	100.0
Other Manufacture	73.8	18.5	7.7	100.0
Retail	66.4	23.7	9.9	100.0
Wholesale	75.8	14.8	9.4	100.0
Banking /Finance/ Business	57.2	30.5	12.3	100.0
Hotels/Restaurants/Bars	61.2	37.6	1.2	100.0
Personal and Other Services	58.8	30.0	11.2	100.0
Size of firm				
3 or less	54.9	30.2	14.9	100.0
4-9 engaged	61.5	28.5	9.9	100.0
10-34 engaged	80.0	15.8	4.2	100.0
35-99 engaged	82.7	12.9	4.4	100.0
100+ engaged	92.2	5.1	2.7	100.0
Percentage of workforce paid IR£4.50 or less per hour				
None	66.4	24.0	9.6	100.0
Less than 15	61.4	28.7	9.9	100.0
15 or more	54.1	33.9	12.0	100.0
Nationality				
Irish	63.5	26.4	10.1	100.0
Foreign	75.4	10.0	14.6	100.0
All firms	64.0	25.7	10.3	100.0

3.4 Profitability and Wage Costs

We now look at what firms in the sample said about their profitability and about the role which wage costs play in their overall operating costs. When asked about their overall profits in the last year, we see from Table 3.5 that almost 70 per cent of firms said they had made a profit – with most of these saying it was a moderate rather than a substantial profit. A further 21 per cent said they had broken even, with only 10 per cent saying they had made a loss – with once again most of the latter saying it was a moderate rather than a substantial loss. The sectors doing better than average in these terms were once again manufacturing (other than textiles and clothing) and wholesale.

Table 3.5: Firms by Level of Profits in the Last Year

	Substantial Loss	Moderate Loss	Broke Even	Moderate Profit	Substantial Profit	Total
Sector						
Building and Construction	0.2	5.7	17.7	69.0	7.4	100.0
Manufacture Textiles and Apparel	6.7	7.0	25.5	57.6	3.3	100.0
Other Manufacture	1.1	6.5	14.8	68.7	9.0	100.0
Retail	1.5	9.5	23.3	62.8	2.9	100.0
Wholesale		5.4	15.6	70.5	8.4	100.0
Banking /Finance/ Business	4.0	12.5	12.1	62.4	9.0	100.0
Hotels/Restaurants/Bars		1.3	43.3	53.5	1.9	100.0
Personal and Other Services	2.5	10.9	19.5	60.7	6.5	100.0
Size of firm						
3 or less	1.9	12.8	25.3	57.9	2.1	100.0
4-9 engaged	1.5	5.9	21.3	65.5	5.8	100.0
10-34 engaged	1.1	6.2	18.9	65.7	8.1	100.0
35-99 engaged	1.1	7.5	10.8	68.9	11.7	100.0
100+ engaged	2.0	3.9	7.8	64.4	21.9	100.0
Percentage of workforce paid IR£4.50 or less per hour						
None	1.0	7.7	20.4	64.4	6.5	100.0
Less than 15	1.5	1.7	16.7	70.1	10.1	100.0
15 or more	5.0	13.8	26.4	53.5	1.3	100.0
Nationality						
Irish	1.5	8.3	21.7	63.4	5.0	100.0
Foreign	3.2	5.4	8.6	58.8	23.9	100.0
All firms	1.6	8.2	21.1	63.2	5.9	100.0

The textiles/clothing and hotels/bars/restaurants sectors had relatively low proportions reporting profits, but the latter had a high proportion saying they broke even – it was the textiles/clothing and banking/finance/business sectors that had relatively high proportions reporting losses. Larger firms were more likely than smaller ones to report substantial profits, and it was notable that firms with a significant proportion of low paid employees in their workforce were less likely than others to report profits and more likely to report losses.

Another particularly important aspect of firms, in considering the impact the minimum wage might have, is the importance of wage costs in overall operating costs. In the survey, firms were thus asked to say approximately what percentage the total wage bill comprised of the company's total operating costs. Table 3.6 shows that across the sample as a whole this figure was 37 per cent on average. Since the average can be significantly affected by outliers, the median – that is, the level above and below which half of the sample falls – is also shown. Across the whole sample this is just slightly below the mean, at 35 per cent.

Table 3.6: Mean and Median of Wages Bill as a Percentage of Operating Costs

	Mean	Median
Sector		
Building and Construction	38.4	35.0
Manufacture Textiles and Apparel	35.1	33.0
Other Manufacture	35.5	33.0
Retail	32.1	30.0
Wholesale	36.5	33.3
Banking /Finance/ Business	43.9	50.0
Hotels/Restaurants/Bars	29.4	30.0
Personal and other Services	39.5	35.0
Size of firm		
3 or less	35.9	33.3
4-9 engaged	35.8	33.0
10-34 engaged	40.1	40.0
35-99 engaged	38.7	40.0
100+ engaged	41.0	37.0
Percentage of workforce paid IR£4.50 or less per hour		
None	37.3	35.0
Less than 15	38.2	39.0
15 or more	32.6	32.0
Nationality		
Irish	36.5	34.0
Foreign	42.8	45.0
All firms	36.7	35.0

Looking across the sectors, we see that the wage bill is a particularly high proportion of total operating costs in building and construction, banking/finance/business, and personal and other services. Even in those sectors, however, wages account for only about two-fifths of total operating costs. Focusing on the median rather than the mean, the major difference is between banking/finance/business, with a particularly high figure, and all other sectors. It is worth noting in particular that wages accounted for a lower proportion of total operating costs in smaller firms and in firms where a significant proportion of employees were low paid – and this is true whether one focuses on the mean or the median. (Such firms could of course also be affected by increases in the prices of other inputs as a result of wage increases elsewhere.)

3.5 Firms' Perceptions of Areas of Difficulty

Finally, respondents were given a list of a range of difficulties that could face a company, and asked to rank them in order of importance to their company at present. The same question was asked in the 1998/99 survey, so the responses at the two points in time – before and after the introduction of the minimum wage – can be compared. Table 3.7 shows for each of the seven suggested problems the proportion stating it was the most important problem

they faced, and the proportion for whom it was among the top two or three most important, in the two surveys.

We see that in both surveys recruiting staff was the area by far the most often identified as the most difficult, with almost 40 per cent of respondents selecting it. Basic labour costs/wages was clearly the next-most often selected as most difficult in 2000/2001, being selected as such by 23 per cent compared with 18 per cent in 1998/9. In both surveys unfair competition and corporation taxes were also selected by significant numbers, but the percentage selecting employer's PRSI had declined by the later survey. Industrial relations were not seen as a serious difficulty compared with these other aspects. Looking at the aspects that ranked as among the three most serious difficulties shows very much the same picture. It is worth noting that 78 per cent of firms in the recent survey considered basic wages/labour costs to be among the three most important difficulties, up from 64 per cent in the previous survey.

3.6 Conclusions

In this chapter some key characteristics of the firms in the 2000/2001 survey, and their perspectives on their own businesses, have been discussed. We highlight in this concluding section some particularly important features of the results. In considering the potential impact of the minimum wage, it is worth emphasising first that most firms in most sectors said they had no employees paid IR£4.50 or less per hour; the only sectors where a substantial number of firms had a significant proportion of their workforce at that pay level were textiles and clothing manufacture, retailing, and hotels/bars/restaurants. Furthermore, wage costs accounted for about 37 per cent of total operating costs on average, but for less than that in firms with a significant number of low paid workers.

The consistent picture on trends over time was that most sectors and firms were doing well, but that certain sectors and types of firm were doing less uniformly well or facing particular problems. Thus while overall twice as many firms said their workforce had increased as decreased, the latter was more common in textiles and clothing. Staff turnover had increased in retail and personal services, and firms with some low paid employees were less likely than others to say that volume had increased. Textiles and clothes manufacturers and firms with a significant proportion of low paid employees were also less likely than others to say they were making profits.

Table 3.7: Ranking Assigned to Seven Possible Difficulties in Terms of their Importance as they Face a Company: Results from 1999 and 2001 Surveys

Rank	Poor Industrial Relations	Recruiting Staff	Employer's PRSI	Basic Labour Costs/Wages	Unfair Competition	Corporation Taxes	Affordable Equity and Working Capital
	Cum. %	Cum. %	Cum. %	Cum. %		Cum. %	Cum. %
1	1.8	38.3	15.5	17.6	16.3	12.9	9.9
2	5.3	51.7	38.6	43.7	26.3	32.7	23.9
3	8.6	60.5	59.3	64.3	36.6	53.2	41.3
Rank	Cum %	Cum %	Cum %	Cum %	Cum %	Cum %	Cum %
1	3.0	39.1	7.8	23.3	12.5	12.9	9.3
2	5.1	52.9	27.4	57.4	20.9	29.2	21.6
3	10.3	63.4	48.7	78.1	36.4	47.6	34.0

When firms were asked what aspects of their operations they felt to be most difficult, recruiting staff was by far the most frequently identified. Basic labour costs were also identified as important by a substantial proportion of firms, and this proportion had risen since the previous survey in late 1998/early 1999. This highlights once again the tightness of the labour market around the time the minimum wage was introduced, a crucial consideration in the impact it is likely to have had on wages and employment. In the next chapter we focus directly on the minimum wage, and on the perceptions of firms in the survey about its effects.

4. Perceptions of the Impact of the Minimum Wage

4.1 Introduction

In the survey of firms carried out in late 2000/early 2001 to inform assessment of the impact of the introduction of the minimum wage, respondents were asked *inter alia* a range of questions about their knowledge of the minimum wage and their own perception of its effects. As noted in Chapter 1, results from the survey of firms carried out before the introduction of the minimum wage had indicated that although about three-quarters of respondents had heard about it, very few knew the details of what was involved. They also showed that a range of possible effects was anticipated by firms. In this chapter responses from the new survey on the state of knowledge of firms after the introduction of the minimum wage and on its perceived effects are presented and their implications drawn out, before turning in the following chapters to how actual employment levels and other features of the firms surveyed differed between the two surveys.

4.2 Knowledge of the Minimum Wage

In focusing on knowledge and perceptions, respondents were first asked simply whether they had heard about the introduction of the minimum wage. Table 4.1 shows the percentages saying they had/had not, distinguishing across a number of relevant dimensions. We see that overall virtually all the respondents said they had indeed heard about the introduction of the minimum wage, with less than 1 per cent saying they had not. This may be contrasted with the 72 per cent of firms who said they had heard about the minimum wage in the survey prior to its introduction, in 1998/9. The only sector where more than 1 per cent of respondents said they had not heard about the introduction of the minimum wage was building and construction. All the firms who actually employed someone on IR£4.50 or less per week said they knew about the minimum wage's introduction.

Table 4.1: Firms Classified According to Whether Or Not They Have Heard About the Introduction of the Minimum Wage

	Heard about the Minimum Wage?		
Sector	**Yes**	**No**	**Total**
		%	
Building and Construction	97.2	2.8	100.0
Manufacture Textiles and Apparel	100.0	0.0	100.0
Other Manufacture	99.5	0.5	100.0
Retail	99.3	0.7	100.0
Wholesale	100.0	0.0	100.0
Banking/Finance/Business	99.8	0.2	100.0
Hotels/Restaurants/Bars	100.0	0.0	100.0
Personal and Other Services	100.0	0.0	100.0
Size of Firm			
3 or less	98.8	0.2	100.0
4-9 engaged	99.5	0.5	100.0
10-34 engaged	100.0	0.0	100.0
35-99 engaged	99.5	0.5	100.0
100+ engaged	100.0	0.0	100.0
Percentage paid IR£4.50 or less per hour			
None	99.2	0.8	100.0
Less than 15 per cent	100.0	0.0	100.0
15 per cent or more	100.0	0.0	100.0
Ownership			
Irish	99.3	0.7	100.0
Foreign	100.0	0.0	100.0
All firms	99.4	0.6	100.0

Respondents were then asked when the minimum wage was introduced. Table 4.2 shows that one-quarter said that they did not know; this was more common in foreign than Irish-owned firms, and in firms that had no or only a small proportion of employees earning IR£4.50 or less than those who had a significant proportion of such employees. About 60 per cent of firms identified the correct date – that is, they said it was March, April or May 2000 (with April being the actual date). The remaining 15 per cent gave a start-date significantly before or after that. There was not a great deal of variation across sectors in the percentage giving the correct date, although larger firms were slightly more likely to have done so.

Table 4.2: Firms Classified According to When They Believe the Minimum Wage to Have Been Introduced

	Don't Know	1999 or Earlier	Jan/Feb 2000	Mar/May 2000	Jun/July 2000	Aug/Dec 2000	Total
				%			
Sector							
Building and Construction	35.4	0.9	0.0	54.1	8.5	1.1	100.0
Manufacture Textiles Apparel	16.8	4.0	2.0	69.5	0.0	7.7	100.0
Other Manufacture	22.5	7.2	4.3	56.9	3.7	5.5	100.0
Retail	16.8	4.6	5.4	69.1	0.4	3.7	100.0
Wholesale	37.6	8.8	2.1	47.0	2.1	2.3	100.0
Banking /Finance/ Business	21.1	5.2	1.3	61.9	5.0	5.5	100.0
Hotels/Restaurants/ Bars	28.6	0.0	7.1	63.4	0.6	0.3	100.0
Personal and Other Services	26.6	6.0	4.4	55.7	4.8	2.4	100.0
Size of Firm							
3 or less	23.1	3.0	2.0	61.3	3.0	7.5	100.0
4-9 engaged	27.1	5.6	5.6	57.6	3.6	0.5	100.0
10-34 engaged	26.4	4.8	3.4	61.1	2.2	2.0	100.0
35-99 engaged	24.2	1.3	1.5	67.2	3.3	2.4	100.0
100+ engaged	19.6	1.9	2.9	73.3	1.6	0.8	100.0
Percentage of Staff paid & IR£4.50 or less per hour							
None	28.2	3.9	3.9	56.9	3.9	3.2	100.0
Less than 15%	21.2	1.7	1.3	73.3	0.5	2.0	100.0
15% or more	12.6	7.4	4.8	72.8	0.6	1.8	100.0
Ownership							
Irish	24.9	4.2	4.0	60.8	3.2	3.0	100.0
Foreign	33.2	6.7	1.5	55.1	2.2	1.2	100.0
All firms	25.3	4.3	3.9	60.5	3.1	2.9	100.0

Respondents were then asked what was the basic hourly rate of pay for an experienced adult worker under the minimum wage. Table 4.3 shows that about 29 per cent said they did not know, with this percentage again being particularly high in the building and construction sector and in firms with few or no employees at or under IR£4.50 – and particularly low in hotels, restaurants and bars. About 30 per cent correctly identified IR£4.40 as the rate, while a further 20 per cent gave a figure between IR£4 and IR£4.50. About 15 per cent thought it was higher than IR£4.50, although again this was rare in firms with significant numbers of employees at or below that pay rate.

Table 4.3: Firms Classified According to their Perceived Level for Minimum Wage

	Don't Know	3.00-3.99	4.00-4.39	4.40	4.41-4.50 %	4.51-5.00	5.01-5.50	5.51/ above	Total
Sector									
Building and Construction	40.0	3.2	0.4	19.8	15.0	15.2	6.3	0.2	100.0
Manufacture Textiles and Apparel	20.4		3.3	44.1	13.7	15.2	3.3		100.0
Other Manufacture	28.5	0.5	3.3	37.6	17.7	8.2	1.3	2.9	100.0
Retail	31.3	1.1	4.3	34.5	16.4	10.6	1.5	0.2	100.0
Wholesale	34.0	0.8	6.1	33.5	15.9	4.4	3.4	1.9	100.0
Banking /Finance/ Business	28.3		0.4	36.8	15.1	7.3	6.1	5.9	100.0
Hotels/Restaurants/Bars	15.7		0.6	53.1	8.6	21.5		0.6	100.0
Personal and Other Services	27.9	2.3	6.9	26.6	28.7	5.1	2.5		100.0
Size of Firm									
3 or less	33.6	1.0	4.7	26.1	19.2	8.2	4.8	2.4	100.0
4-9 engaged	28.8	1.3	1.6	36.2	15.3	13.6	2.2	1.0	100.0
10-34 engaged	27.4	1.7	3.4	36.2	18.5	7.8	4.0	1.0	100.0
35-99 engaged	26.3	1.5	4.5	43.1	16.7	5.1	1.2	1.5	100.0
100+ engaged	17.6		4.7	52.0	12.9	10.3	1.0	1.5	100.0
Percentage paid IR£4.50 or less per hour									
None	32.2	0.7	3.2	28.3	17.6	12.5	3.8	1.8	100.0
Less than 15%	29.9	1.5	1.2	52.2	10.3	2.4	1.6	0.7	100.0
15% or more	14.8	4.2	3.4	58.6	15.7	3.0		0.3	100.0
Ownership									
Irish	29.7	1.3	3.2	34.3	16.5	10.4	3.2	1.5	100.0
Foreign	27.1		0.5	29.5	26.4	12.6	1.6	2.2	100.0
All firms	29.5	1.2	3.1	34.1	16.9	10.5	3.1	1.5	100.0

When asked about the reduced minimum rates of pay for young and inexperienced workers under the minimum wage, Table 4.4 shows that about 18 per cent of respondents said they had never heard of these sub-minimum rates, and a further 76 per cent said they had never availed of them. While only 6 per cent overall said they had availed of these sub-minimum rates, this percentage was considerably higher among large firms and in certain sectors (textiles and other manufacturing, hotels, restaurants and bars). Not surprisingly, it was also much higher among firms with low-wage employees, where 25-30 per cent said they had availed of the sub-minimum rates.

Table 4.4: Firms Classified According to their Use of Sub-Minimum Rates

	Ever Availed of Sub-Minimum Rates?			
	Yes	No	Never Heard of Sub-Minimum Rates	Total
Sector				
Building and Construction	3.5	82.8	13.7	100.0
Manufacture Textiles and Apparel	15.5	72.7	11.8	100.0
Other Manufacture	11.5	78.6	9.9	100.0
Retail	10.0	73.1	17.0	100.0
Wholesale	6.6	72.3	21.1	100.0
Banking/Finance/Business	0.2	79.5	20.3	100.0
Hotels/Restaurants/Bars	12.8	72.6	14.7	100.0
Personal and Other Services	2.2	76.0	21.8	100.0
Size of Firm				
3 or less	1.2	75.3	19.7	100.0
4-9 engaged	5.0	73.0	13.2	100.0
10-34 engaged	13.8	72.2	8.3	100.0
35-99 engaged	19.5	73.9	7.1	100.0
100+ engaged	19.0	76.1	17.7	100.0
Percentage paid IR£4.50 or less per hour				
None	1.3	79.7	19.0	100.0
Less than 15 per cent	30.9	67.5	1.6	100.0
15 per cent or more	25.2	57.9	16.9	100.0
Ownership				
Irish	6.4	75.8	17.8	100.0
Foreign	3.6	81.7	14.7	100.0
All firms	6.2	76.1	17.7	100.0

Concentrating on the firms which said they had availed of the sub-minimum rates, Table 4.5a shows that most (80 per cent) had availed of the reduced rate for employees under 18 years of age. About half had availed of the reduced rate for employees aged 18 or over but in their first year of employment or classed as trainees, while about one-quarter had availed of the corresponding rate for those in their second year of employment. Table 4.5b shows that about 37 per cent had only availed of the reduced rate for under-18s and 11 per cent had only availed of the reduced rate for trainees, while one-fifth had availed of all four types of sub-minimum wages. Table 4.5c shows that about 40 per cent of these firms had applied more than one rate to the same employee since 1st April 2000, when the minimum wage was introduced.

Table 4.5a: Firms which Availed of the Sub-Minimum Rates Classified According to Which Rate They Had Used

	Availed of?		
	Yes	No	Total
		%	
Under 18 years of age	80.0	20.0	100.0
1st year employment + over 18 years	47.2	52.8	100.0
2nd year employment + over 18 years	25.8	74.2	100.0
Trainee 18 years +	43.2	56.8	100.0

Table 4.5b: Firms which Availed of the Sub-Minimum Rates Classified According to the Combination of Rates Which They Had Used

	Availed of Sub-Minimum Rate for			
Under 18 years	1st year emp/ over 18 years	2nd year emp/ over 18 years	Trainee 18 years	Per cent
Yes	No	No	No	37.4
Yes	Yes	Yes	Yes	21.5
No	No	No	Yes	11.3
Yes	Yes	No	No	9.8
No	Yes	No	No	8.8
Yes	No	No	Yes	4.7
Yes	Yes	No	Yes	2.9
Yes	Yes	Yes	No	2.3
			Other combinations	1.2
			Total	100.0

Note: Above tables relate only to firms which availed of sub-minimum rates.

Table 4.5c: Firms which Availed of the Sub-Minimum Rates Classified According to Whether Or Not they Applied More Than One Rate to the Same Employee Since April 1st 2000

Applied Different Sub-Minimum Rates to Same Employee	Yes	No	Total
		%	
	41.0	59.0	100.0

4.3 Perceived Impact of the Minimum Wage

THE PERCEIVED EFFECTS ON PAY

Having probed their general knowledge of the minimum wage, firms were then asked directly for an assessment of its impact on them. They were first asked about how many people in the company got an increase in their hourly rate as a direct result of the minimum wage. Table 4.6a shows the distribution of responses, categorised by the percentage of employees stated to have got such an increase. We see that about 85 per cent of respondents said that no-one in their company had received an increase as a direct result of the introduction of the minimum wage. This reached almost 100 per cent in building and construction. However, almost half the firms with employees paid

IR£4.50 per hour or less said that some employees had received an increase as a direct result of the minimum wage. In firms where a significant proportion of employees were low paid and there were such increases, very often at least 20 per cent and in some instances 50 per cent or more of all employees in the company were affected.

Table 4.6b shows the mean percentage of the firm's employees said to have received an increase in their hourly rate as a direct result of the minimum wage. Over all firms this percentage was 6 per cent, but was almost 20 per cent for firms with a significant proportion of low paid employees. Table 4.6c shows the percentage of all the employees in each category said to have received such an increase. We see that almost 5 per cent of all employees are said by their employer to have received an increase as a direct result of the minimum wage, with this figure reaching 7 per cent in textiles manufacturing, 9 per cent in hotels, restaurants and bars and 12 per cent in retailing. About 25 per cent of employees in firms where a significant proportion of employees are low paid are said to have received such an increase.

Table 4.6a: Firms Classified According to the Percentage of their Staff Whom they Recorded as having Received an Increase in Hourly Rate as a Direct Result of the Introduction of the Minimum Wage

	Percentage of Persons Receiving an Increase in Hourly Rate as a Direct Result of Minimum Wage					
	None	Less than 10%	10% to LT 20%	20 to LT 50%	50% or more	Total
Sector			%			
Building and Construction	98.8	0.4	0.2		0.4	100.0
Manufacture Textiles and Apparel	66.1	10.3	5.2	5.2	13.3	100.0
Other Manufacture	77.2	6.3	4.5	6.9	5.1	100.0
Retail	76.5	0.9	2.2	10.3	10.1	100.0
Wholesale	86.9	2.5	1.9	5.1	3.6	100.0
Banking/Finance/Business	89.8	0.4	3.7	2.0	4.1	100.0
Hotels/Restaurants/Bars	76.3	2.0	1.4	17.8	2.5	100.0
Personal and Other Services	86.4	0.3	2.6	4.4	6.3	100.0
Size of Firm						
3 or less	94.9			2.7	2.4	100.0
4-9 engaged	80.9		2.8	9.0	7.2	100.0
10-34 engaged	81.2	2.1	2.5	8.3	6.0	100.0
35-99 engaged	67.3	11.2	7.9	7.4	6.2	100.0
100+ engaged	76.5	6.2	3.5	10.1	3.7	100.0
Percentage of Staff paid & R£4.50 or less per hour						
None Ie IR£4.50	91.7	.8	1.5	2.4	3.6	100.0
It 15 It4.50	54.7	8.3	12.6	23.7	.6	100.0
15+ It£4.50	53.7	1.2	2.8	25.7	16.6	100.0
Ownership						
Irish	84.1	1.2	2.2	7.0	5.4	100.0
Foreign	91.2	1.0	3.2	1.6	3.0	100.0
All Firms	84.5	1.2	2.2	6.8	5.3	100.0

Table 4.6b: Mean Percentage of Persons Engaged in Firms who Received an Increase in Hourly Rate as a Direct Result of the Minimum Wage (i.e. Mean in Each Category of the Percentage of Firm's Employees Receiving an Increase in Hourly Rate)

Sector	Mean Percentage	Size of Firm	Mean Percentage
Building and Construction	0.5	3 or less	2.3
Manufacture Textiles and Apparel	13.6	4-9 engaged	8.0
Other Manufacture	6.1	10-34 engaged	8.0
Retail	10.2	35-99 engaged	8.1
Wholesale	4.5	100+ engaged	6.3
Banking /Finance/ Business	3.8		
Hotels/Restaurants/Bars	7.7	**Percentage of staff paid IR£4.50 or less per hour**	
Personal and Other Services	6.1	None	3.5
		Less than 15	8.6
Ownership		15 or more	19.5
Irish	6.2		
Foreign	3.4	**All Firms**	6.1

Table 4.6c: Estimated Percentage of Persons Engaged in Each Category who Received an Increase in Hourly Rate as a Direct Result of the Minimum Wage

Sector	Estimated Percentage	Size of Firm	Estimated Percentage
Building and Construction	0.8	3 or less	2.9
Manufacture Textiles and Apparel	7.0	4-9 engaged	8.6
Other Manufacture	2.7	10-34 engaged	8.6
Retail	11.6	35-99 engaged	7.1
Wholesale	5.1	100+ engaged	2.5
Banking /Finance/ Business	2.4		
Hotels/Restaurants/Bars	8.9	**Percentage of staff paid IR£4.50 or less per hour**	
Personal and other Services	3.8	None	2.7
		Less than 15	4.2
Ownership		15 or more	24.7
Irish	5.7		
Foreign	1.3	**All Firms**	4.7

These perceived effects of the minimum wage on pay rates need to be carefully contextualised. Firms were also asked whether, in the light of trends in the Irish labour market over the last year, they would have had to increase wage rates anyway up to the minimum wage level. Table 4.7 shows that overall, over 80 per cent of all firms said they would. The percentage saying that they would *not* have had to increase pay rates anyway was relatively high among certain sectors – textiles manufacturing, retail and wholesale, personal and other services – and in firms with a significant proportion of low paid employees, but even there it was under 30 per cent.

As well as the pay of those directly affected by the minimum wage, an important issue about the impact of the minimum wage is whether the pay of those above the minimum wage would be

affected due to pressure to restore differentials. Some firms in the pre-introduction survey thought this was likely, despite assurances from the trade union movement that this would not serve as the basis for claims. In the post-introduction survey a question asked what percentage of workers above the minimum wage received an increase in hourly pay rates as a result of restoring pay differentials. The responses in Table 4.8 show that overall about 13 per cent of firms said that they did have to increase pay for some employees above the minimum in order to restore pay differentials. This was most likely in firms in the textiles, manufacturing, retail and hotels/restaurants/bars sectors and in larger firms.

Respondents were then asked whether the minimum wage directly increased their labour costs, or had no effect on labour costs. Table 4.9a shows that 16 per cent said that the minimum wage did directly increase their labour costs. This proportion was as high as one-quarter in retailing and in hotels/bars/restaurants. Over 40 per cent of firms with a significant proportion of low-wage employees said that the minimum wage had directly increased their labour costs. Table 4.9b then shows that among the firms which said the minimum wage did directly increase labour costs, about half said the increase involved was less than 5 percentage points, and about one-quarter said that it was more than 10 percentage points.

Table 4.7: Firms Classified According to Whether Or Not They Felt that, Given Trends of the Last Year in the Irish Labour Market, They Would Have Had to Increase Wage Rates up to the Level of the Minimum Wage.

	Wage Rates Increase Anyway				Wage Rates Increase Anyway		
	Yes	No	Total		Yes	No	Total
		%				%	
Sector				**Size of Firm**			
Building and Construction	83.3	16.7	100.0	3 or less	75.7	24.3	100.0
Manufacture Textiles and Apparel	75.0	25.0	100.0	4-9 engaged	77.2	22.8	100.0
Other Manufacture	83.4	16.6	100.0	10-34 engaged	88.8	11.2	100.0
Retail	71.5	28.5	100.0	35-99 engaged	90.6	9.4	100.0
Wholesale	71.6	28.4	100.0	100+ engaged	88.6	11.4	100.0
Banking /Finance/ Business	98.1	1.9	100.0				
Hotels/Restaurants/Bars	97.6	2.4	100.0	**Percentage of staff paid IR£4.50 or less per hour**			
Personal and Other Services	74.1	25.9	100.0	None	82.6	17.4	100.0
				Less than 15	94.3	5.7	100.0
Ownership				15 or more	75.0	25.0	100.0
Irish	81.6	18.4	100.0				
Foreign	61.3	28.7	100.0	**All Firms**	81.0	19.0	100.0

Table 4.8: All Firms Classified According to Whether Or Not They had to Increase the Hourly Rates of Higher-Grade Staff to Restore Pay Differentials

	Increase Rates of Higher Grade Staff				Increase Rates of Higher Grade Staff		
	Yes	No	Total		Yes	No	Total
		%				%	
Sector				**Size of Firm**			
Building and Construction	5.3	94.7	100.0	3 or less	5.3	94.7	100.0
Manufacture Textiles and Apparel	13.6	86.4	100.0	4-9 engaged	14.4	85.6	100.0
Other Manufacture	14.7	85.3	100.0	10-34 engaged	16.1	83.9	100.0
Retail	22.1	77.9	100.0	35-99 engaged	22.4	77.6	100.0
Wholesale	9.3	90.7	100.0	100+ engaged	25.5	74.5	100.0
Banking /Finance/ Business	6.7	93.3	100.0				
Hotels/Restaurants/Bars	15.2	84.8	100.0	**Percentage of staff paid IR£4.50 or less per hour**			
Personal and Other Services	9.8	90.2	100.0	None	8.0	92.0	100.0
				Less than 15	33.5	66.5	100.0
Ownership				15 or more	30.8	69.2	100.0
Irish	12.9	87.1	100.0				
Foreign	5.9	94.1	100.0	**All Firms**	12.6	87.4	100.0

Table 4.9a: Firms Classified According to Whether Or Not They Think the Introduction of the Minimum Wage Directly Increased Labour Costs

	Directly Increased Labour Costs?				Directly Increased Labour Costs		
	Yes	No	Total		Yes	No	Total
		%				%	
Sector				**Size of Firm**			
Building and Construction	4.7	95.3	100.0	3 or less	7.4	92.6	100.0
Manufacture Textiles and Apparel	35.8	64.2	100.0	4-9 engaged	16.7	83.3	100.0
Other Manufacture	19.6	80.4	100.0	10-34 engaged	26.2	73.8	100.0
Retail	26.2	73.8	100.0	35-99 engaged	31.8	68.2	100.0
Wholesale	16.7	83.3	100.0	100+ engaged	26.8	73.2	100.0
Banking /Finance/ Business	5.1	94.9	100.0				
Hotels/Restaurants/Bars	24.2	75.8	100.0	**Percentage of staff paid IR£4.50 or less per hour**	8.9	91	100.0
Personal and Other Services	13.9	86.1	100.0	None	8.9	91.1	100.0
				Less than 15	42.2	57.8	100.0
Ownership				15 or more	47.3	52.7	100.0
Irish	16.4	83.6	100.0				
Foreign	8.9	91.1	100.0	**All Firms**	16.1	83.9	100.0

Table 4.9b: Firms which felt the Introduction of the Minimum Wage Directly Increased their Labour Costs, Classified by Percentage Increase

Percentage Category	Per Cent of Respondents
Less than 3	17.6
3-LT 5	31.7
5-LT 10	26.7
10-Lt25	16.4
25 or more	7.6
Total	100.0

THE PERCEIVED IMPACT ON EMPLOYMENT

Having focused in some detail on the impact of the minimum wage on pay, firms were then asked about the effect on employment levels. Specifically, they were asked to suppose the minimum wage had not been introduced: did they think they would be employing more people today than they are, the same number, or fewer people? Table 4.10a shows that 95 per cent of respondents said that they would be employing the same number, and only 5 per cent said they would be employing more people in the absence of the minimum wage. (No-one said they would be employing fewer people.) The proportion saying they would be employing more in the absence of the minimum wage was highest in the textiles and clothing sector, and was also above average in hotels/restaurant/bars. Among firms with a significant proportion of low paid employees, it reached 16 per cent.

Table 4.10b then shows the responses to the follow-up question, which asked those who said employment would be higher in the absence of the minimum wage how many more they would be employing. We see that the responses indicate that total numbers employed would be about 5,000 higher. (This figure, like the other ones in the table, is grossed up to the population total implied by the responses of the sample). A significant proportion of that total is in the retail sector, about half is in firms with less than 10 employees, and almost all is in Irish rather than foreign owned firms. About half the total is in firms where a significant proportion of the workforce are paid IR£4.50 or less. Most of the other half is in firms who currently employ no-one under that figure, however, which may suggest that the total is if anything an over-estimate.

THE PERCEIVED IMPACT ON OTHER ASPECTS OF THE BUSINESS

Firms were then asked about whether the introduction of the minimum wage affected their operations across a variety of dimensions. The results are shown in Table 4.11 and 4.12.

Table 4.10a: Firms Classified According to Whether Or Not They Feel That, in the Absence of the Minimum Wage, They Would be Employing More, the Same Number or Fewer Persons Today

	Perception of Numbers Employed in Absence of Minimum Wage					Perception of Numbers Employed in Absence of Minimum Wage			
	More	Same	Less	Total		More	Same	Less	Total
			%				%		
Sector					**Size of firm**				
Building and Construction	0.2	99.8	0.0	100.0	3 or less	3.9	96.1	0.0	100.0
Manufacture Textiles and Apparel	12.7	87.3	0.0	100.0	4-9 engaged	5.5	94.5	0.0	100.0
Other Manufacture	2.8	97.2	0.0	100.0	10-34 engaged	6.5	93.5	0.0	100.0
Retail	6.3	93.7	0.0	100.0	35-99 engaged	8.1	91.9	0.0	100.0
Wholesale	6.3	93.7	0.0	100.0	100+ engaged	5.2	94.8	0.0	100.0
Banking /Finance/Business	5.7	94.3	0.0	100.0					
Hotels/Restaurants/Bars	8.9	91.1	0.0	100.0	**Percentage of staff paid IR£4.50 or less per hour**				
Personal and Other Services	4.3	95.7	0.0	100.0	None	3.0	97.0	0.0	100.0
					Less than 15	8.4	91.6	0.0	100.0
Ownership					15 or more	16.2	83.8	0.0	100.0
Irish	5.4	94.6	0.0	100.0					
Foreign	3.0	97.0	0.0	100.0	**All Firms**	5.3	94.7	0.0	100.0

Table 4.10b: Estimated Numbers of Additional Persons Who Would Be Employed Today in the Absence of Minimum Wage Legislation

Sector	Est. of Additional Employees	Percentage of Current Employees	Size of firm	Est. of Additional Employees	Percentage of Current Employees
Building and Construction	0	0.0	3 or less	900	1.5
Manufacture Textiles and Apparel	100	0.0	4-9 engaged	2,400	1.0
Other Manufacture	400	0.0	10-34 engaged	700	0.7
Retail	1,700	0.0	35-99 engaged	900	0.6
Wholesale	400	0.0	100+ engaged	400	0.1
Banking/Finance/ Business	1,000	0.0			
Hotels/Restaurants/Bars	1,000	0.0	**Percentage of staff paid IR£4.50 or less per hour**		
Personal and Other Services	700	0.0	None	2,400	0.2
			Less than 15	300	0.3
Ownership			15 or more	2,600	2.3
Irish	5,100	0.5			
Foreign	200	0.1	**All Firms**	5,300	0.4

We see in Table 4.11 that very few respondents felt that the minimum wage had a significant effect on their operations in terms of the way work is organised, working hours, use of less experienced staff, increased prices for their products, profit levels, reducing expenditure on training and development of employees, monitoring of employees, increasing spending on training, use of technology or machinery, and improving the quality of service. About 4 per cent did say that there was a significant impact on workers' pay and benefits structures, for example overtime or pay supplements. A considerably larger percentage said that the minimum wage had a slight effect across these various dimensions, with the highest proportions giving that response tending to be in the textiles and clothing and particularly in the hotels/restaurants/bars sectors. Table 4.12 shows that the greatest perceived effects across these dimensions were in firms at either end of the scale spectrum – with either 3-9 employees or 100 or more employees.

Table 4.11: Firms Classified According to their Perceptions of the Impact of the Minimum Wage on a Series of Operational and Related Aspects of their Business

Perceived Effect of Minimum Wage	Building and Construction	Manuf. Textiles and Apparel	Other Manufacture	Retail	Wholesale	Banking/ Finance/Business Services	Hotel/ Restaurants/ Bars	Personnel and Other Services	Total
Changed Pay and Benefits Structure									
Significant	0.8	5.2	4.9	5.0	3.3	2.0	7.8	2.9	3.7
Slight	0.6	17.0	10.3	9.5	8.5	11.9	27.3	13.7	11.7
None	98.6	77.9	84.8	85.6	88.2	86.0	64.9	83.4	84.6
Changed Work Organisation									
Significant	0.2	3.3	18.	2.1	1.0		2.0	0.3	1.0
Slight	0.6	8.5	3.2	6.7	7.5	9.5	17.5	6.4	7.7
None	99.2	88.2	94.9	91.2	91.5	90.5	80.6	93.2	91.3
Reduction of Working Hours									
Significant	0.2		0.5	1.2			0.6	0.3	0.5
Slight	0.4	3.3	2.7	7.6	3.6	6.0	30.2	6.1	8.4
None	99.4	96.7	96.8	91.2	96.4	94.0	69.3	93.6	91.1
More Inexperienced Staff									
Significant	0.2		0.9	1.4			0.8	0.3	0.6
Slight	0.8	5.2	4.3	5.3	7.5	6.3	30.6	10.0	9.1
None	99.0	94.8	94.7	93.3	92.5	93.7	68.5	89.7	90.3
Increased Prices									
Significant	0.4	6.7	3.2	1.4	1.7	0.4	2.2	4.5	1.8
Slight	1.6	15.2	10.6	15.2	13.6	8.0	46.2	10.3	14.9
None	98.0	78.1	86.1	83.4	84.8	91.6	51.5	85.2	83.2
Reduced Profits									
Significant	0.4	5.2	3.9	3.8	1.8	0.2	2.2	2.2	2.1
Slight	2.2	21.8	12.8	19.3	12.7	12.1	41.0	11.5	16.3
None	97.4	73.0	83.3	76.9	85.5	87.7	56.8	86.3	81.6

Table 4.11(cont.): Firms Classified According to Perceptions of the Impact of the Minimum Wage on a Series of Operational and Related Aspects

Perceived Effect of Minimum Wage	Building and Construction	Manuf. Textiles and Apparel	Other Manufacture	Retail	Wholesale	Banking/ Finance/Business Services	Hotel/ Restaurants/ Bars	Personnel and Other Services	Total
Reduced Expend. on Training									
Significant			0.5	2.0			0.6		0.6
Slight	0.6	6.7	3.4	2.9	4.3	6.1	14.7	6.2	5.4
None	99.4	93.3	96.0	95.1	95.7	93.9	84.7	93.8	94.0
Tightened Control on Labour									
Significant	0.2	6.7	4.7	4.1	2.6	0.4	3.4	0.9	2.2
Slight	1.0	13.6	7.4	9.6	8.5	6.3	18.6	8.5	8.6
None	98.8	79.7	87.9	86.3	88.9	93.3	78.0	90.6	89.2
Increase Training and Development									
Significant	0.4		2.2	0.4	2.5	0.4	2.0	2.3	1.2
Slight	0.2	6.7	5.4	6.3	5.1	6.1	25.4	6.5	7.8
None	99.4	93.3	92.4	93.3	92.5	93.5	72.7	91.2	91.0
Increase in Technology/Machinery									
Significant	0.4	5.2	3.8	0.5	1.7	0.6	0.6	2.0	1.0
Slight	0.6	11.8	5.3	6.5	5.9	6.7	15.8	6.2	6.8
None	99.0	83.0	91.0	93.0	92.5	92.7	83.6	91.8	92.2
Quality of Service/ Product									
Significant	0.4		0.5	1.9	0.8	0.2	0.8	1.4	1.0
Slight	0.6	13.6	7.0	7.8	6.7	6.9	17.5	6.8	7.7
None	99.0	86.4	92.4	90.2	92.5	92.9	81.7	91.8	91.3

Table 4.12: Firms' Perceptions of the Effects of the Minimum Wage Classified by Size

Perceived Effect of Minimum Wage	3 or Less	4-9 Engaged	10-34 Engaged	35-99 Engaged	100+ Engaged	Total
Pay/Benefits Structure						
Significant	0.7	4.8	5.6	7.0	6.4	3.7
Slight	3.6	16.0	10.7	16.8	20.8	11.7
None	95.7	79.2	83.6	76.1	72.8	84.6
Changed Work Organisation						
Significant	0.7	0.7	2.4	2.6	2.3	1.0
Slight	2.3	10.6	7.7	10.1	13.0	7.7
None	97.1	88.7	90.0	87.4	84.7	91.3
Reduction of Working Hours						
Significant	0	0.5	1.3	1.2	1.3	0.5
Slight	1.6	14.0	5.9	5.9	10.4	8.4
None	98.4	85.6	92.7	92.9	88.2	91.1
More Inexperienced Staff						
Significant	0	0.4	0.9	2.9	2.6	0.6
Slight	2.6	13.0	9.7	8.4	15.4	9.1
None	97.4	86.5	89.3	88.8	82.0	90.3
Increased Prices						
Significant	1.6	0.6	3.4	5.8	6.5	1.8
Slight	4.4	21.9	17.1	13.7	17.3	14.9
None	94.0	77.5	79.5	80.5	76.2	83.2
Reduced Profits						
Significant	0	2.0	3.5	8.2	5.0	2.1
Slight	6.5	22.2	17.8	19.0	21.1	16.3
None	93.5	75.8	78.6	72.8	73.9	81.6
Reduced Expenditure on Training						
Significant	0	0.8	0.6	2.4	0	0.6
Slight	1.6	7.9	6.1	6.4	4.1	5.4
None	98.4	91.2	93.3	91.2	95.9	94.0
Tightened Control on Labour						
Significant	0.6	1.5	4.2	8.1	7.3	2.2
Slight	2.8	10.9	10.7	14.4	14.8	8.6
None	96.6	87.6	85.0	77.5	77.9	89.2
Increase Training and Development						
Significant	1.0	0	4.2	4.7	2.5	1.2
Slight	0.7	11.9	6.0	12.9	14.1	7.8
None	98.4	88.1	89.8	82.4	83.4	91.0
Increase Technology/Machinery						
Significant	0.0	0.6	3.1	4.8	2.2	1.0
Slight	1.4	9.6	8.1	8.1	12.3	6.8
None	98.6	89.8	88.8	87.1	85.5	92.2
Quality of Service/ Product						
Significant	0	1.4	1.9	1.7	1.3	1.0
Slight	3.2	9.3	8.4	14.5	12.0	7.7
None	96.8	89.3	89.7	83.8	86.7	91.3

Firms were then asked about the impact of the minimum wage on aspects of their business such as morale, productivity, retraining, subcontracting, turnover and industrial relations. We see in Table 4.13 that most firms said in each instance that the minimum wage had no effect in any of these areas. Among the minority who said there was some effect, most felt that morale had improved, productivity had increased, and industrial relations had improved. The most even divide was in the case of staff turnover, where only 8 per cent felt the minimum wage had an impact but 3 per cent then said it had decreased and 5 per cent that it had increased. Table 4.14 shows that when firms are categorised by size, effects across these dimensions were perceived more often in larger than in smaller firms.

Table 4.13: Firms Classified According to their Perceptions on the Direction of Effect of the Minimum Wage on a Number of Areas of Business, by Sector

Effect of Minimum Wage on	Building & Construction	Manf/ Textile & Apparel	Other Manuf. & Production	Retail	Wholesale	Prop/Rent/ Bus. Serv.	Hotels/Rest/ Bar	Pers & Other Services	Total
Staff Morale									
Decrease	0.4	1.8	0.9	2.0	1.6			0.5	0.8
No effect	96.1	81.0	88.2	82.4	87.6	97.0	72.1	89.4	87.4
Increase	3.5	17.2	10.9	15.6	10.7	3.0	27.9	10.1	11.8
Productivity									
Decrease	0.4		1.6	0.9	0.8		0.3	0.3	0.5
No effect	95.9	83.0	92.0	88.2	94.3	97.8	88.6	94.7	92.8
Increase	3.7	17.0	6.3	10.8	4.9	2.2	11.1	5.0	6.7
Staff Retraining/ upgrading									
Decrease	0.2			0.9	1.6	0.2	0.6	0.3	0.6
No effect	99.6	93.3	93.1	92.7	92.5	97.8	94.1	96.2	95.3
Increase	0.2	6.7	6.9	6.3	5.8	2.1	5.3	3.5	4.1
Subcontracting									
Decrease	0.4		0.7		0.8		0.3	1.0	0.4
No effect	99.0	93.1	95.6	95.5	96.6	97.5	97.5	99.0	97.3
Increase	0.6	6.9	3.6	4.5	2.6	2.5	2.2		2.4
Staff Turnover									
Decrease	3.1		1.3	1.7	1.6		16.3	1.0	3.4
No effect	96.3	86.4	92.7	92.9	92.5	97.0	73.7	95.8	92.0
Increase	0.6	13.6	6.0	5.4	5.8	3.0	10.0	3.2	4.7
Industrial Relations									
Decrease	3.1	5.1	1.1	0.9	0.8		0.6	0.3	0.9
No effect	96.5	87.9	95.1	95.2	94.2	97.9	97.2	97.4	96.3
Increase	0.4	6.9	3.8	3.9	5.0	2.1	2.2	2.3	2.7

Table 4.14: Firms Classified According to their Perceptions on the Direction of Effect of the Minimum Wage on a Number of Areas of Business, by Size

	3 or Less	2-9 Engaged	10-34 Engaged	35-99 Engaged	100+ Engaged	Total
Staff Morale						
Decrease	0.6	0.4	1.7	2.9	2.1	0.8
No effect	94.7	85.3	82.3	75.69	84.1	87.4
Increase	4.7	14.3	16.0	21.4	13.8	11.8
Productivity						
Decrease	0.6		1.9	1.5	0.8	0.5
No effect	96.2	91.9	89.2	88.2	92.3	92.8
Increase	3.2	8.1	8.8	10.3	6.9	6.7
Retraining and Upgrading of the Staff						
Decrease		0.4	2.0	1.9	1.3	0.6
No effect	97.4	96.8	90.7	86.0	88.8	95.3
Increase	2.6	2.8	7.3	12.1	9.8	4.1
Amount of Subcontracting						
Decrease		0.0	2.3	0.4	1.6	0.4
No effect	98.3	98.0	93.9	95.2	92.7	97.3
Increase	1.7	1.9	3.9	4.4	5.7	2.4
Staff Turnover						
Decrease		5.5	1.7	4.1	8.8	3.3
No effect	99.0	89.8	89.0	86.2	79.3	92.0
Increase	1.0	4.7	9.3	9.8	11.9	4.7
Industrial Relations						
Decrease		1.3	1.3	2.2	1.3	0.9
No effect	97.8	96.9	94.0	93.5	89.1	96.3
Increase	2.2	1.8	4.7	4.3	9.6	2.7

SOURCES OF INFORMATION ABOUT THE MINIMUM WAGE

Finally, firms were asked about sources by which they received information about the minimum wage. We see in Table 4.15 that about three-quarters said they had got information about the minimum wage from television advertising, and the same proportion had done so from newspaper advertisements. About two-thirds had received information from radio advertising, and half had done so from information leaflets or booklets. About one-third had received information from employers' organisations, and 44 per cent had received information from the Department of Enterprise, Trade and Employment.

Table 4.15: Firms Classified According to Whether or not they Have Received Information on the Minimum Wage from a Number of Sources

Source	%		
	Yes	No	Total
TV Advertisement	73.3	26.7	100.0
Radio Advertisement	66.6	33.4	100.0
Newspaper Advertisement	74.0	26.0	100.0
Information leaflets/booklets	45.9	54.1	100.0
Employees	12.5	87.5	100.0
Employer/Business Organisation	35.0	65.0	100.0
Department of Enterprise, Trade and Employment	44.0	56.0	100.0
Other Source	9.5	90.9	100.0

4.4 Conclusions

In this chapter we have presented the responses of firms in the recent survey to questions about their knowledge of the minimum wage and their perception of its effects. While virtually all had heard about the minimum wage, significant proportions did not know exactly when it had been introduced or the exact level at which it was set. Overall only a small minority had availed of the reduced rates payable for young/inexperienced workers, though about one-quarter of firms with employees paid IR£4.50 or less per hour had done so – most often, the reduced rate for those under 18 years of age.

About 85 per cent of firms said none of their employees had received an increase in pay as a direct result of the minimum wage. However, almost half the firms with employees paid IR£4.50 or less said some employees had received such an increase. Overall, about 5 per cent of employees were said to have received such an increase; in textiles and clothing, retailing and hotels/restaurants/bars that figure was in the 7-12 per cent range. About 13 per cent of firms said that they had to increase pay rates for some employees above the minimum wage to restore differentials.

However, over 80 per cent of firms said that, in the light of trends in the Irish labour market, they would have had to increase wage rates anyway up to the minimum wage level.

Correspondingly, only 16 per cent of firms said that the minimum wage directly increased their labour costs, and for half of these the increase was less than 5 percentage points.

When asked about the impact on employment, only 5 per cent of respondents (16 per cent in firms with significant numbers of low paid employees) said they would be employing more people today in the absence of the minimum wage. This additional employment would represent an extra 5,000 employees across all firms in the population. However, almost half of this total was in firms which did not actually employ anyone paid IR£4.50 or less. This, and the extent of the general pressure on wage levels, suggests that the figure of 5,000 extra jobs is if anything an over-estimate.

5. Changes in Pay Structures Between the Two Surveys

5.1 Introduction

Up to this point in the report our focus has been primarily on the business enterprise, its characteristics and its perceptions of the impact of the minimum wage on employment levels etc. In this chapter we now change the emphasis somewhat from the enterprise *per se* to a consideration of pay structures and changes in those structures over the period 1999 to 2001 – i.e. between the first and second rounds of the survey. The objective of the chapter is to present a profile of employees according to their basic hourly pay rate and how this varies between full-time and part-time staff; males and females; industrial sector; and age cohort. The main focus throughout the chapter rests on the important IR£4.50 per hour basic pay threshold. Although the emphasis is on the employee profile as depicted by the 2001 survey we also provide comparative figures throughout in respect of the pre-minimum wage situation as captured in the first round of the survey at the end of 1999.[1, 2]

In Section 5.2 we look at the workforce in terms of ranges of hourly pay rates, including differences by gender and age. Section 5.3 briefly outlines the breakdown of employees below IR£4.50 per hour according to occupation. Finally, Section 5.4 provides a brief summary of the main findings presented in the chapter.

5.2 Distribution of Workers by Hourly Pay

In this section we consider changes in the distribution of workers according to their hourly basic pay scales. In the course of the questionnaire respondents were asked to provide a breakdown of all persons engaged in their enterprise according to a four-fold

[1] Note that in this chapter we present the data from the two rounds of the survey as two independent cross-sections, in contrast to the longitudinal analysis presented in Chapter 6 below.

[2] In deriving the employment distributions presented in this chapter we used the *employment-based* weight described above. This essentially treats each enterprise as a cluster of employees and assigns to each a weight in proportion to the breakdown of its workforce.

classification of hourly rates, namely IR£4.50 or less per hour; IR£4.51 to IR£5.50 per hour; IR5.51 to IR£6.50 per hour; more than IR£6.50 per hour. These basic breakdowns were further disaggreated in terms of gender and also broad age cohort.[3] Our principal focus throughout is on changes relative to the all-important threshold of IR£4.50 per hour.

BREAKDOWN OF STAFF BY PAY SCALE AND SECTOR

Table 5.1a provides summary details on the percentages of full-time, part-time and all workers who fell into each of the four pay grades in both 1999 and 2001. The detailed sectoral breakdowns are presented in Table 5.1b.

Table 5.1a: Summary Details on Persons Engaged Classified According to Broad Pay Scale and Whether or Not Engaged on a Full-Time or Part-Time Basis for 1999 and 2001

	IR£4.50/hr or Less		IR£4.51 - £5.50		IR£5.51 - £6.50		IR£6.51 or Over		Total	Total	Total N	Total N
	1999	2001	1999	2001	1999	2001	1999	2001	1999	2001	1999	2001
Full Time	13.7	2.2	15.8	10.6	17.6	16.1	52.9	71.1	100	100	741,000	1,048,100
Part Time	64.4	16.9	17.8	36.1	10.4	16.6	7.4	30.4	100	100	126,700	174,500
All Persons	21.1	4.3	16.1	14.2	16.5	16.2	46.3	65.3	100	100	867,700	1,222,600

Table 5.1a shows that a total of 21 per cent of all persons engaged in 1999 were paid a basic hourly rate of IR£4.50 or less. By 2001 this figure had fallen to just over 4 per cent of all workers. Details on comparable percentages for full-time and part-time workers are also given in the table. One can see, for example, that in 1999 a total of 14 per cent of full-time workers were paid IR£4.50 or less per hour. By 2001 this percentage had fallen to a little over 2 per cent. Similarly, in 1999 a total of 64 per cent of part-time workers were paid less than IR£4.50 per hour. This figure was reduced to 17 per cent by 2001. By any standards chosen these changes would appear to represent very substantial reductions in the "risk" of falling into the lowest pay grade outlined in the table. Notwithstanding the improvements made over recent years, however, one should note that the 4.3 per cent of persons engaged who currently receive IR£4.50 or less represents approximately 52,600 persons, 23,000 of whom are employed on a full-time basis. This is a substantial reduction, particularly in the context of a rapidly expanding labour force from the estimated 183,000 persons paid less than IR£4.50 per hour in the 1999 survey.

[3] Almost all respondents were able to provide good information on basic pay grades disaggregated by gender. A small number were less forthcoming regarding the cross-classification of staff into pay grade and age cohort, which required quite a degree of collating of information from personnel files especially in larger firms. Standard imputations were made for the disaggregation of basic pay grades into broad age cohort in respect of the relatively small number of cases (approximately 40) where details were not provided by the respondent.

One can also see from the table that the percentage of full-time workers in the basic pay scale IR£4.51 – £5.50 also fell over the period in question – from 16 per cent to 11 per cent. In contrast, the percentage of part-time workers in this pay scale increased from 18 per cent to 36 per cent. This may suggest that upward trends in hourly rates resulted in a substantial proportion of part-time workers moving from IR£4.50 or less to the slightly higher category of IR£4.51 – £5.50 per hour. This observation must also be balanced, however, by noting the substantial growth in the percentage of part-time workers being paid IR£6.51 or more – from 7 per cent in 1999 to 30 per cent in 2001.

A detailed sectoral breakdown of the information contained in Table 5.1a is provided in Table 5.1b. If one focuses on all persons engaged in the lowest pay category (the bottom section of the table) one can see that in 1999 the "risk" of falling into this group was highest in the Hotel/Restaurant/Bar sector (49 per cent). This was followed by the Retail sector (39 per cent) and Manufacture of Textiles and Apparel (33 per cent). These three sectors stood out in the earlier survey as having particularly high rates of low paid employees. It is clear from the table that by 2001 the situation has improved dramatically across all sectors. One can see, however, that the "risk" of low pay in the Hotels/Restaurants/Bars sector (14 per cent) and also the Retail sector (10 per cent) is still substantially above that in all other sectors.

This means, for example, that the "risk" or probability of being paid IR£4.50 or less per hour in the retail sector is 2.3 times the aggregate average probability for all sectors combined. The chances of persons engaged in the Hotels/Restaurants/Bars sector of being paid IR£4.50 or less per hour is 3.2 times the aggregate average of all workers in general. These trends reflect a substantial fall in the absolute number of persons paid at IR£4.50 per hour or less in both sectors. The figure in retailing fell from an estimated 57,000 in 1999 to 19,000 in 2001. Comparable figures for the Hotel/Restaurant/Bar sector are 47,500 persons in 1999 to 15,000 in 2001. To greater or lesser degrees the same overall trends in regard to the Retail and Hotel/Restaurant/Bar sectors are apparent among both part-time and full-time staff. Although part-time workers in the Wholesale sector appear to be relatively disadvantaged, it should be noted that this group accounts only for an estimated total of 4,800 persons. This means that the 28.7 per cent of part-time workers in the sector who are paid IR£4.50 or less represent in the order of 1,400 persons.

Table 5.1b: Persons Engaged Classified According to Broad Pay Scale; Sector and Whether or not Engaged on a Full-Time/Part-Time Basis, 1999 and 2001

	IR£4.50 per Hour or Less		IR£4.51 - £5.50		IR£5.51 - £6.50		IR£6.50 or More		Total	
	1999	2001	1999	2001	1999	2001	1999	2001	1999	2001
Full Time										
Build/Con	9.0	2.3	10.9	3.2	20.4	9.2	59.7	85.4	100.0	100.0
Man Te/Ap	32.2	2.9	23.0	23.0	14.9	40.6	29.9	33.5	100.0	100.0
Oth Man	8.9	1.9	17.6	10.6	20.2	22.8	53.3	64.8	100.0	100.0
Retail	24.0	3.5	23.6	20.0	20.8	22.6	31.7	53.8	100.0	100.0
Wholesale	14.2	0.8	19.7	9.2	19.0	19.0	47.1	70.9	100.0	100.0
Ban/Fin/Bus	5.9	0.8	7.6	5.2	10.9	11.3	75.6	82.7	100.0	100.0
Hot/Res/Bar	31.3	8.5	27.1	39.2	15.2	24.2	26.3	28.1	100.0	100.0
Per & Other	11.9	1.3	8.8	4.0	16.8	6.8	62.5	88.0	100.0	100.0
All Sectors	13.7	2.2	15.8	10.6	17.6	16.1	52.9	71.1	100.0	100.0
Part Time										
Build/Con	12.2	2.2	3.0	7.2	40.9	9.3	43.9	81.4	100.0	100.0
Man Te/Ap	42.6	6.2	34.7	26.0	16.5	57.0	6.2	10.7	100.0	100.0
Oth Man	22.1	6.0	24.2	26.8	45.0	31.5	8.7	35.7	100.0	100.0
Retail	80.8	22.4	13.3	36.3	3.0	14.2	2.9	27.1	100.0	100.0
Wholesale	67.2	28.7	21.2	35.2	4.6	9.7	6.9	26.4	100.0	100.0
Ban/Fin/Bus	57.8	11.9	17.6	24.1	10.4	14.0	14.1	50.1	100.0	100.0
Hot/Res/Bar	79.0	23.0	16.7	63.7	4.1	10.8	0.2	2.6	100.0	100.0
Per & Other	38.0	5.3	25.5	12.8	12.3	24.4	24.2	57.5	100.0	100.0
All Sectors	64.4	16.9	17.8	36.1	10.4	16.6	7.4	30.4	100.0	100.0
All Persons										
Build/Con	9.1	2.3	10.6	3.3	21.2	9.2	59.1	85.2	100.0	100.0
Man Te/Ap	33.2	3.3	24.1	23.3	15.0	42.6	27.7	30.8	100.0	100.0
Oth Man	9.7	2.1	18.0	11.5	21.6	23.2	50.7	63.2	100.0	100.0
Retail	38.8	9.9	20.9	25.1	16.2	19.8	24.2	44.8	100.0	100.0
Wholesale	22.5	3.4	19.9	11.6	16.7	18.2	40.8	66.8	100.0	100.0
Ban/Fin/Bus	10.7	1.6	8.5	6.7	10.8	11.5	69.9	80.3	100.0	100.0
Hot/Res/Bar	49.3	13.8	23.2	48.1	11.0	19.3	16.5	18.8	100.0	100.0
Per & Other	14.9	1.8	10.8	5.1	16.3	9.0	58.0	84.1	100.0	100.0
All Sectors	21.1	4.3	16.1	14.2	16.5	16.2	46.3	65.3	100.0	100.0

The detail of Table 5.1b also clearly shows that not only does the Hotel/Restaurant/Bar sector have substantially higher percentages in the lowest pay category but they also have correspondingly lower percentages in the highest category of IR£6.50 or more. Only 19 per cent of persons in the sector receive a basic hourly rate of IR£6.50 or more. This compares, for example, with sectoral totals of 80 per cent in Banking/ Finance/Business Services, 85 per cent in Building and Construction and 84 per cent in Personal and Other Services.

Table 5.2 further explores the issue of the sectoral incidence of low pay. The figures presented in the table shift the focus from the "risk" of low pay to its "incidence" or concentration within each of the sectors in question. We can begin by concentrating on the bottom segment of the table relating to all persons. Columns A, B and C present figures in respect of 2001. These indicate, for example, that Building & Construction accounted for just under 12 per cent of all relevant workers (Column B); Manufacture of Textiles & Apparel accounts for 1.2 per cent of all workers; Other Manufacturing for 23.3 per cent and so on. Column C shows the distribution by sector of the 4.3 per cent of all workers in 2001 who are paid IR£4.50 or less. In other words, it provides a

Table 5.2: Persons Paid IR£4.50 or Less Per Hour Classified by Sector and Whether or Not Engaged on a Full-time or Part-time Basis

	2001			1999	
	All Persons	Per Cent All Persons	Per Cent of IR£4.50 or Less/Hour	Per Cent All Persons	Per Cent of IR£4.50 or Less/Hour
	(A)	(B)	(C)	(D)	(E)
Full Time					
Building & Construction	139,700	13.3	13.6	8.7	5.7
Manf. Textiles and Apparel	13,100	1.2	1.6	2.2	5.2
Other Manufacture	268,800	25.6	21.5	28.4	18.5
Retail	126,300	12.1	19.3	14.8	25.9
Wholesale	47,700	4.6	1.7	5.1	5.3
Banking/Finance/Business	200,100	19.1	6.5	17.4	7.5
Hotels/Restaurants/Bars	69,900	6.7	25.5	8.1	18.6
Personal & Other Services	182,500	17.4	10.2	15.4	13.4
All Sectors	1,048,500	100	100	100	100
Part Time					
Building & Construction	5,300	3.0	0.4	1.8	0.3
Manf. Textiles & Apparel	1,800	1.0	0.4	1.3	0.9
Other Manufacture	15,700	9.0	3.2	10.2	3.5
Retail	64,500	37	49	30.4	38.1
Wholesale	4,800	2.8	4.7	5.5	5.8
Banking/Finance/Business	16,200	9.3	6.5	10.3	9.3
Hotels/Restaurants/Bars	40,100	23.0	31.2	28.6	35.1
Personal & Other Services	26,100	15.0	4.7	11.8	7.0
All Sectors	174,500	100	100	100	100
All Persons					
Building & Construction	145,000	11.9	6.2	7.7	3.3
Manf. Textiles & Apparel	14,900	1.2	0.9	2.1	3.3
Other Manufacture	284,500	23.3	11.3	25.8	11.8
Retail	190,800	15.6	35.9	17.0	31.3
Wholesale	52,500	4.3	3.4	5.1	5.5
Banking/Finance/Business	216,300	17.7	6.5	16.4	8.3
Hotel/Restaurants/Bars	110,000	9.0	28.7	11.1	26.0
Personal & Other Services	208,600	17.1	7.1	14.9	10.5
All Sectors	1,222,600	100	100	100	100

breakdown of the 4.3 per cent (52,600) of all workers who are paid IR£4.50 or less across the industrial sector. If workers in the lowest paid category were distributed evenly across sectors as a *pro rata* basis with total employment, the percentage figures in Columns B and C of Table 5.2 would be the same. The degree to which the figure in Column C is different from that in Column B is a measure of the concentration or otherwise of low paid workers in the sector in question. On this basis, we can see that Building & Construction; Other Manufacturing; Banking/Finance/Business and Personal & Other Services are all substantially "under-represented"

in terms of their "share" of low paid workers. In contrast, Retailing has 2.3 times as many as it would have if low paid workers were distributed as a *pro rata* basis with all employees. Similarly, the Hotels/Restaurant/Bar sector has 3.2 times "too many" low paid staff.

It is interesting to note that according to this simple measure of concentration the Retailing and Hotel/Restaurant/Bar sectors have both experienced an *increase* in the degree of over-concentration of low paid staff over the period 1999 to 2001. The figures in Table 5.2 show that in 1999 Retailing had an over-representation of low paid staff of the order of 1.8 (17 per cent of all persons engaged compared with 31.3 per cent of low paid workers). By 2001 this had increased to 2.3 times. Similarly, in 1999 the Hotel/Restaurant/Bar sector had an overconcentration of the order of 2.3 times. By 2001 this had increased to 3.2 times. In summary, therefore, although the risk of being low paid fell substantially in both the Retailing and Hotel/Restaurant/Bar sector the share of low paid workers accounted for by each of the sectors in question rose slightly over the period.

BREAKDOWN OF STAFF BY PAY-SCALE, SECTOR AND GENDER

Table 5.3 provides details on the breakdown of employees in 2001 classified according to broad pay-scale, sector and gender. We can see that the risk of being in the lowest pay category is 2.7 per cent for males compared with a figure of 7.3 per cent for females. This means that a female's probability (in aggregate across all females) of being in the lowest pay group is 2.7 times that of her male counterpart. One can see from the table that this gender differential is marginally higher for females who are engaged on a full-time basis as compared with those engaged on a part-time basis. The rate among full-time females is 2.2 times the comparable male figure (3.6 and 1.6 per cent respectively).

The gender ratio for part-time workers is only 1.3, with a male rate of 14.1 per cent and a female rate of 19.1 per cent. This would seem to imply that part-time status takes precedence over gender in determining differences in low pay risk probabilities. In other words, if one is engaged on a part-time basis one will be seriously disadvantaged in terms of risk of low pay regardless of gender. Indeed, a part-time female worker has a risk of being in the low pay category which is 5.3 times that of her full-time female counterpart. A part-time male worker has a risk of being in the low pay category which is 8.8 times that of his full-time counterpart.

Table 5.3: Persons Engaged Classified According to Broad Basic Pay Scale; Gender; Whether Full-time/Part-time and Sector

SECTOR	Males						Females					
	£4.50 or Less	£4.51-5.50	£5.51-6.50	£6.50+	Total	Total N	£4.50 or Less	£4.51-5.50	£5.51-6.50	£6.50+	Total	Total N
	Per Cent						Per Cent					
Full Time												
Build. & Construction	2.3	3.2	9.4	85.0	100.0	130,400	0.3	2.8	8.2	88.7	100.0	9,300
Manf Textile & Apparel	1.2	21.7	41.8	35.3	100.0	7,000	4.9	24.4	39.2	31.5	100.0	6,100
Other Manufacturing	1.4	8.6	19.1	70.9	100.0	174,700	2.8	14.3	29.6	53.3	100.0	94,100
Retail	3.8	15.9	17.8	62.6	100.0	66,200	3.7	21.6	25.3	40.2	100.0	60,100
Wholesale	1.1	7.4	17.5	74.0	100.0	34,100	0.2	13.8	23.1	62.9	100.0	13,600
Banking/Business Services	0.4	7.0	10.2	82.5	100.0	114,500	1.3	2.9	12.7	83.1	100.0	85,600
Hotel/Restaurant/Bar	5.4	28.5	26.8	39.3	100.0	28,500	10.6	46.6	22.4	20.4	100.0	41,400
Personal & Other Services	0.5	3.8	6.6	89.2	100.0	120,100	4.0	8.0	13.3	74.7	100.0	62,400
TOTAL	1.6	8.2	14.1	76.0	100.0	675,400	3.6	15.8	21.5	59.1	100.0	372,600
Part Time												
Build & Construction	2.0	8.3	9.7	79.9	100.0	4,200	2.7	2.7	8.1	86.5	100.0	1,100
Manf Textile & Apparel	22.7	50.0	27.4	0.0	100.0	100	4.9	24.0	59.5	11.6	100.0	1,700
Other Manufacturing	9.0	30.8	35.8	24.4	100.0	5,700	4.3	24.5	29.0	42.1	100.0	10,000
Retail	27.9	50.2	11.7	10.2	100.0	15,000	22.9	34.5	15.2	27.3	100.0	49,400
Wholesale	30.7	38.0	8.0	23.2	100.0	2,600	26.3	32.1	11.7	30.0	100.0	2,200
Banking/Business Services	13.0	26.9	28.9	31.1	100.0	4,900	11.4	22.8	7.4	58.4	100.0	11,300
Hotel/Restaurant/Bar	13.2	71.2	12.9	2.7	100.0	15,500	29.2	58.9	9.4	2.5	100.0	24,600
Personal & Other Services	0.9	14.5	23.5	61.0	100.0	10,700	8.3	11.6	25.0	55.0	100.0	15,400
TOTAL	14.1	41.7	17.8	26.4	100.0	58,800	19.1	34.1	16.3	30.5	100.0	115,700
ALL PERSONS												
Build. & Construction	2.3	3.4	9.4	84.9	100.0	134,600	0.6	2.8	8.2	88.5	100.0	10,400
Manf Textile & Apparel	1.6	22.2	41.6	34.6	100.0	7,100	4.9	24.4	43.5	27.2	100.0	7,800
Other Manufacturing	1.6	9.3	19.6	69.4	100.0	180,400	2.9	15.3	29.5	52.2	100.0	104,100
Retail	8.3	22.3	16.6	52.7	100.0	8,200	12.7	28.7	22.1	36.5	100.0	109,400
Wholesale	3.2	9.6	16.8	70.4	100.0	36,600	3.9	16.4	21.4	58.2	100.0	15,900
Banking/Business Services	0.9	7.8	11.0	80.3	100.0	119,400	2.4	5.2	12.1	80.2	100.0	96,900
Hotel/Restaurant/Bar	8.2	43.5	21.9	26.4	100.0	44,000	17.5	51.2	17.6	13.8	100.0	66,000
Personal & Other Services	0.5	4.9	8.4	86.2	100.0	130,700	5.1	8.9	16.2	69.8	100.0	77,800
TOTAL	2.7	11.0	14.4	71.9	100.0	734,200	7.3	20.2	20.3	52.2	100.0	488,400

When one considers male/female differences by sector one can see that the absolute percentage point difference is largest in respect of the Retail and Hotel/Restaurant/Bar sectors. When measured as a ratio of females to males, however, one finds that the maximum differential is in the Personal & Other Services sector. A total of 5.1 per cent of females compared with 0.5 per cent of males in Personal & Other Services fall into the lowest pay category. This means that females in the sector have 10 times the risk of males of being in the lowest pay category. The sector contains an estimated total of 131,000 males and 78,000 females.

Table 5.4 provides comparative details on the percentage of males and females in each broad basic pay category in the 1999 and 2001 surveys. From the bottom segment in the table one can see that the percentages of both males and females in the lowest basic pay category (IR£4.50 or less per hour) have fallen substantially between the two rounds of the survey. The figures for males fell from 15 per cent in 1999 to 2.7 per cent in 2001, while that for females fell from 30.5 per cent in the earlier year to 7.3 per cent in the most recent survey. Similar substantial falls in the percentages of both full-time and part-time staff who fall into this low pay category are evident from the table.

Table 5.4: Comparison of Percentages of Males and Females in Each Broad Basic Pay Scale in the 1999 and 2001 Survey

		Basic Hourly Pay Scale				
		£4.50 or Less	£4.51 - £5.50	£5.51 - £6.50	£6.50 +	Total
Full Time				Per Cent		
Males	1999	10.3	12.4	17.8	59.5	100
	2001	1.6	8.2	14.1	76	100
Females	1999	19.8	20.9	17.4	41.9	100
	2001	3.6	15.8	21.5	59.1	100
Part Time						
Males	1999	59.2	18.8	11.3	10.7	100
	2001	14.1	41.7	17.8	26.4	100
Females	1999	67.7	17.2	9.8	5.3	100
	2001	19.1	34.1	16.3	30.5	100
All Persons						
Males	1999	15	13	17.2	54.8	100
	2001	2.7	11	14.4	71.9	100
Females	1999	30.5	20.1	22	41.9	100
	2001	7.3	20.2	20.3	52.2	100

BREAKDOWN OF STAFF BY PAY-SCALE, SECTOR AND AGE COHORT

In Table 5.5 we consider the percentages of persons engaged in each pay grade classified by broad age group in 2001. The figures show that there are very substantial differences within the three age cohorts in terms of the percentage of workers classified in the lowest pay category. From the bottom row of the table one can see, for example, that almost 50 per cent of the 37,900 persons

Table 5.5: Employees by Pay Category 2001

SECTOR	18 Years or Less						19-25 Years						26 Years or More					
	£4.50 or Less	£4.51-5.50	£5.51-6.50	£6.50+	Total	Total 18 Years or Less	£4.50 or Less	£4.51-5.50	£5.51-6.50	£6.50+	Total	Total 19-25 Years	£4.50 or Less	£4.51-5.50	£5.51-6.50	£6.50+	Total	Total 26 Years or More
	Per Cent						Per Cent						Per Cent					
FULL TIME																		
Build & Construction	47.5	25.9	21.9	4.8	100	3,000	6.0	10.9	26.7	56.5	100	29,100	0.0	0.5	4.1	95.5	100	107,600
Manf Textile & Apparel	46.2	30.8	11.5	11.5	100	200	1.6	36.1	50.5	11.7	100	3,500	2.6	18.0	37.5	41.9	100	9,500
Other Manufacturing	19.7	28.6	24.9	26.8	100	2,200	4.7	20.5	32.2	42.6	100	67,400	0.7	7.1	19.6	72.7	100	199,200
Retail	31.6	54.2	10.0	4.1	100	4,000	4.8	38.2	33.7	23.3	100	32,700	1.8	11.8	19.1	67.2	100	89,600
Wholesale	34.7	30.5	27.1	7.6	100	400	1.6	20.7	32.3	45.4	100	10,200	0.3	5.8	15.2	78.6	100	37,100
Banking/Business Services	5.1	10.2	20.4	64.3	100	500	0.5	6.1	17.8	75.7	100	43,000	0.8	5.0	9.4	84.8	100	156,500
Hotel/Restaurant/ Bar	46.4	51.1	2.1	0.4	100	5,200	8.4	57.7	24.5	9.5	100	30,200	2.8	21.3	27.3	48.6	100	34,500
Personal & Other Services	67.2	3.1	18.2	11.5	100	1,500	1.7	7.4	11.8	79.1	100	38,100	0.5	3.1	5.3	91.1	100	142,900
TOTAL	39.9	38.3	13.1	8.7	100	17,100	4.0	21.9	25.6	48.5	100	254,100	0.8	6.3	13.1	79.9	100	776,800
PART TIME																		
Build & Construction	10.9	89.1	0.0	0.0	100	400	7.4	2.5	7.4	82.7	100	600	0.7	0.3	10.4	88.6	100	4,300
Manf Textile & Apparel	100.0	0.0	0.0	0.0	100	0	5.2	19.0	58.7	17.2	100	400	4.0	28.5	58.1	9.4	100	1,400
Other Manufacturing	37.2	52.6	10.1	0.0	100	600	7.7	39.6	34.5	18.2	100	5,000	3.3	19.0	31.3	46.4	100	10,100
Retail	57.8	42.2	0.0	0.0	100	12,300	25.6	54.5	13.8	6.2	100	17,400	8.4	25.2	19.4	47.0	100	34,800
Wholesale	51.5	45.5	3.0	0.0	100	300	33.8	42.6	21.5	2.1	100	900	25.2	32.3	7.2	35.3	100	3,600
Banking/Business Services	0.0	100.0	0.0	0.0	100	100	20.1	58.4	2.9	18.6	100	4,800	8.5	9.2	18.7	63.6	100	11,400
Hotel/Restaurant/ Bar	61.9	36.7	1.5	0.0	100	5,900	22.7	66.0	10.4	0.9	100	22,300	3.9	72.8	16.2	7.2	100	11,800
Personal & Other Services	59.9	25.1	0.0	15.0	100	1,200	4.5	19.0	45.6	30.8	100	3,900	2.4	11.0	21.9	64.7	100	21,100
TOTAL	57.4	41.0	0.8	0.8	100	20,800	20.7	54.7	15.9	8.7	100	55,300	6.3	24.6	20.4	48.8	100	98,500

Table 5.5: Employees by Pay Category 2001 (cont.)

SECTOR	18 Years or Less						19-25 Years						26 Years or More					
	£4.50 or Less	£4.51-5.50	£5.51-6.50	£6.50+	Total	Total 18 Years or Less	£4.50 or Less	£4.51-5.50	£5.51-6.50	£6.50+	Total	Total 19-25 Years	£4.50 or Less	£4.51-5.50	£5.51-6.50	£6.50+	Total	Total 26 Years or More
	Per Cent						Per Cent						Per Cent					
ALL PERSONS																		
Build & Construction	43.3	33.2	19.3	4.2	100	3,400	6.0	10.7	26.3	57.0	100	29,600	0.0	0.4	4.3	95.2	100	111,900
Manf Textile & Apparel	56.3	25.0	9.3	9.3	100	200	2.0	34.5	51.3	12.3	100	3,800	2.8	19.4	40.1	37.7	100	10,900
Other Manufacturing	23.5	33.8	21.7	21.0	100	2,800	4.9	21.8	32.3	41.0	100	72,400	0.8	7.7	20.1	71.4	100	209,300
Retail	51.3	45.2	2.5	1.0	100	16,300	12.0	43.9	26.8	17.3	100	50,100	3.7	15.6	19.2	61.5	100	124,400
Wholesale	42.4	37.3	16.1	4.1	100	700	4.3	22.5	31.4	41.7	100	11,200	2.5	8.2	14.5	74.8	100	40,600
Banking/Business Services	4.6	18.5	18.5	58.4	100	600	2.4	11.4	16.3	69.9	100	47,800	1.3	5.3	10.1	83.3	100	167,900
Hotel/Restaurant/ Bar	54.6	43.4	1.8	0.2	100	11,200	14.5	61.2	18.5	5.8	100	52,500	3.1	34.4	24.4	38.1	100	46,300
Personal & Other Services	64.0	12.7	10.3	13.0	100	2,700	1.9	8.5	14.9	74.6	100	42,000	0.7	4.1	7.4	87.7	100	163,900
TOTAL	49.5	39.7	6.3	4.4	100	37,900	7.0	27.8	23.9	41.4	100	309,400	1.4	8.3	13.9	76.4	100	875,300

aged 18 years or less earn an hourly basic of less than IR£4.50. The comparable figure for 19-25 year old workers is 7 per cent falling to only 1.4 per cent for persons aged 26 years or more. Similar trends are apparent for both full-time and part-time workers. One can see that as many as 57 per cent of part-time workers aged 18 years or less receive a basic hourly salary of IR£4.50 or less. This compares with 40 per cent among young full-time staff.

Table 5.6 provides comparable information on the percentages of each age cohort at both rounds of the survey which fall into each of the four hourly basic pay scale categories. If one first considers the situation relating to all persons engaged, one can see that the risk of falling into the lowest pay category has fallen for persons in all age cohorts since the first survey in 1999. For example, one can see that for persons aged 18 years or less the risk has fallen from 81 per cent to 49 per cent between 1999 and 2001. The figure for 19-25 year old workers has fallen from 34 per cent to 7 per cent over the period in question and from 11 per cent to just over 1 per cent for those aged 26 years or more. Although the largest percentage point difference between the two years in question is apparent in the 18 year old or less group, the largest percentage reduction in risk levels is in the older two age cohorts. It is apparent from the table that these trends are repeated among both full-time and part-time workers.

Table 5.6: Comparison of Percentages of Each Broad Age Cohort in the 1999 and 2001 Surveys which Fell into the Four Hourly Basic Pay Scale Categories

		Basic Hourly Pay				
		£4.50 or Less	£4.51-£5.50	£5.51-£6.50	£6.50 +	Totals
Full Time				(Per Cent)		
18 yrs or less	1999	62.6	11.9	2.2	23.3	100
	2001	39.9	38.3	13.1	8.7	100
19-25 years	1999	24.2	26.5	20.3	29	100
	2001	4	21.9	25.6	48.5	100
26 yrs +	1999	7.7	11.4	17	63.9	100
	2001	0.8	6.3	13.1	79.9	100
Part Time						
18 yrs or less	1999	97.9	2.1	0	0.1	100
	2001	57.4	41	0.8	0.8	100
19-25 years	1999	74.2	14.4	9.5	1.9	100
	2001	20.7	54.7	15.9	8.7	100
26 yrs +	1999	42.1	27.1	15.3	15.5	100
	2001	6.3	24.6	20.4	48.8	100
All Persons						
18 yrs or less	1999	80.6	6.9	1.1	11.5	100
	2001	49.5	39.7	6.3	4.4	100
19-25 years	1999	34.5	24	18.1	23.4	100
	2001	7	27.8	23.9	41.4	100
26 yrs +	1999	11	12.9	16.9	59.2	100
	2001	1.4	8.3	13.9	76.4	100

5.3 Occupational Grade and Level of Pay Among Low Paid Workers

In this section we briefly consider two aspects of those who receive a basic hourly rate of IR£4.50 or less. We first discuss their distribution according to occupational grade before moving on to examine in broad terms their level of pay.

OCCUPATIONAL GRADE OF WORKERS RECEIVING IR£4.50 OR LESS PER HOUR

Table 5.7 presents details on the distribution of those who receive IR£4.50 or less per hour by occupational grade for 1999 and 2001. For both years we show the distribution of low paid workers and also the distribution of all workers according to occupational categories. By comparing both sets of figures one can identify grades in which low paid workers are over- or under-represented.

The figures in respect of 1999 clearly show that low paid staff are substantially over-represented in Sales categories and Personal Services. The former grades accounted for just over 13 per cent of all persons engaged in 1999. It also accounted for 31 per cent of those paid IR£4.50 or less per hour. Similarly, the Personal Service category (which includes catering workers, domestics, cleaners, laundry workers etc.) accounted for only 8 per cent of all persons engaged in 1999 while also accounting for 24 per cent of low paid workers. These figures clearly represent substantial concentrations of low paid workers in the grades in question. The table also shows a less substantial over-representation of low paid workers among labourers (accounting for 6 per cent of all workers and 9 per cent of low paid workers).

The figures in respect of 2001 indicate that the distributions of both low paid and all workers by occupational grade have not changed substantially between 1999 and 2001. But it is clear that in 2001 we still have substantial over-concentration of the low paid in Sales and Personal Services occupations with a less significant concentration among labourers. Notwithstanding some minor fluctuations in the distributions in other grades the figures are relatively consistent for other occupations between the two years in question.

Table 5.7: Distribution by Occupational Grade of Persons who Fall into the Lowest Basic Pay Category (IR£4.50 Per Hour or Less) in 1999 and 2001

Occupational Grade	1999		2001	
	IR£4.50 or Less	All Engaged	IR£4.50 or Less	All Engaged
Managers/Proprietors	3.4	15.7	3.7	13.5
Eng/Sci/Computer/Other Professional	0.2	6.2	0.2	7.0
Eng/Sci/Comp/Associ Professional	0.2	3.8	0.7	4.8
Clerical/Secretarial	4.9	13.7	2.4	12.0
Skilled Main/Skilled Production	7.0	10.1	12.1	11.4
Production Operatives	16.9	17.1	10.3	15.1
Transport/Communications	2.3	5.9	2.1	6.1
Sales	31.4	13.3	28.3	13.1
Personal Services	24.4	8.1	27.5	8.5
Labourers	9.4	6.1	12.7	8.6
TOTAL	100.0	100.0	100.0	100.0

LOW PAID WORKERS CLASSIFIED BY BROAD LEVEL OF PAY

Finally, Table 5.8 presents details on the distribution of persons who receive IR£4.50 or less per hour classified according to broad category of amount in both 2001 and 1999. From the top section of the table one can see that in 2001 a total of 77 per cent of persons paid IR£4.50 or less per hour receive between IR£4.00 and IR£4.50. Perhaps somewhat surprisingly, slightly higher proportions of part-time than full-time workers fall into the IR£4.00 -£4.50 per hour than fall below IR£4.00 per hour. The table shows that this represents a fairly substantial change from the situation which pertained in 1999, when 60 per cent of persons paid less than IR£4.50 per hour were paid between IR£4.00-£4.50.

Table 5.8: Employees Receiving IR£4.50 or Less Per Hour in 2001 and 1999 by Full-Time/Part-Time and Pay Level

			2001			
	Full Time		Part Time		TOTAL	
Basic per/hour	(n)	Per Cent	(n)	Per Cent	(n)	Per Cent
IR£4.00-£4.50	16,900	72.7	24,00	81.0	40,900	77.4
Under IR£4	6,300	27.3	5,600	19.0	11,900	22.6
TOTAL	23,200	100.0	29,600	100.0	52,800	100.0
			1999			
	Full Time		Part Time		TOTAL	
Basic per/hour	(n)	Per Cent	(n)	Per Cent	(n)	Per Cent
IR£4.00-£4.50	72,300	67.4	41,300	50.6	113,600	60.2
Under IR£4	34,900	32.6	40,200	49.4	71,100	39.8
TOTAL	107,200	100.0	81,500	100.0	188,800	100.0

The main concentrations of sub-minimum workers in both 1999 and 2001 were in occupations related to Sales and Personal Services. The Retail and Hotel/Restaurant/Bar sectors were the ones which had the highest concentration of low paid workers. These are also the sectors with the highest concentrations of persons who fall into the Sales and Personal Services occupational grades. We also noted that just over three-quarters of low paid workers in 2001 were paid between IR£4.00-£4.50 per hour. This represents a substantial increase as compared to the situation in 1999 when only 60 per cent of low paid workers were in this hourly income range.

5.4 Summary

In this chapter we have considered several aspects of the structure of employment both before and after the introduction of minimum wage legislation. Our primary focus throughout was on the percentage of workers who were paid a basic hourly rate of IR£4.50 when the surveys were carried out in early 1999 and 2001.

We began by considering general changes in the structure of employment over the period in question. Overall, we found that there was a remarkable degree of constancy in terms of structures according to grade; full-time/part-time breakdowns etc. Within the context of overall stability one could identify some shifts in certain

sectors. Most notable among these was a reduction in the relative proportion of full-time males engaged in the retailing sector. This reduction in the proportion of males was compensated for by an increase in the proportion of female part-time workers. Finally, although there was no substantial shift in terms of age distributions we saw that the percentage of workers in the youngest age cohort fell slightly from 5 to 3 per cent between 1999 and 2001. It would seem reasonable to assume, however, that this possibly reflects the tightness of the labour market over recent years and is driven more by re-entry and increased participation rates among those in older cohorts rather than by the effects of the minimum wage.

Having considered general changes in the structure of employment we moved on to focus, in particular, on the risk and incidence of low paid workers in 1999 and 2001. We saw that there was a very substantial reduction in the percentage of workers who earned IR£4.50 per hour or less – from 21 per cent in 1999 to just over 4 per cent in 2001. The risk of being low-paid was differentiated according to full-time/part-time status; sector; gender and age.

Full-time staff had a substantially lower risk of being low paid than their part-time counterparts. Those engaged in the Hotel/Restaurant/Bar and Retail sectors also had a much higher risk of being low paid than those involved in other areas of economic activity. Notwithstanding major reductions in risk figures in all sectors between 1999 and 2001, both Retail and Hotels/Restaurants/Bars still display very high risk levels relative to other sectors.

Gender differences in terms of risk of being low paid were also in evidence. Males had a lower risk than their female counterparts – 2.7 per cent compared with 7.3 per cent of females. We noted that when full-time/part-time status was taken into account gender differences were largely maintained, especially in respect of full-time workers. The differentials, although still apparent, were not as strong for part-time workers. This suggests to the authors that, at least to some degree, part-time status takes precedence over gender effects and can ameliorate the latter to the disadvantage of both sexes.

We saw that the percentage of persons in the lowest hourly basic pay category was strongly related to age cohort. As many as 50 per cent of workers aged 18 years or less were in the lowest basic pay category in the 2001 survey. The comparable figure for the 19-25 year old group was 7 per cent and 1.4 per cent for those aged 26 years or more.

Finally, we saw in the last section that the main concentrations of workers below IR£4.50 were in occupational grades which were related to Sales and Personal Services.

6. Changes in the Common Sample of Firms Between the Two Surveys

6.1 Introduction

In this chapter we consider some aspects of change in the size and structure of individual firms at the micro level. As explained in Chapter 2 above, we included two components in the target sample for the survey. In addition to the "new" sample of 1,160 firms which was not previously approached in the first round of the survey, we also included all 1,062 firms which had successfully completed a questionnaire in the 1999 survey. A total of 605 of this latter category participated in the second round of the survey and are included in the final 1,072 cases which are used in the analysis outlined in this report.

The information provided by the 605 firms which were common to both years can be used to provide a so-called "longitudinal" analysis of the data where the focus is on change at the individual or micro-level of the firm. Hitherto, in the report we have provided details on net change in the overall population between the two years of the survey. This net change may mask, to some degree, compensating changes in different directions as experienced by individual firms in the sample. For example, some firms may experience an increase in the proportion of minimum wage workers whom they employ, others may experience a decrease. The analysis presented to this point in the report uses the two sample surveys as so-called independent cross-sections. The figures on change are net in the sense that, as described above, they represent the net experience of the often divergent fortunes of individual firms.

Whilst this type of analysis is extremely revealing and provides very important insights to the overall change which has taken place in the workforce, it is particularly helpful to complement it with the so-called longitudinal analysis at the level of the individual firm. This is what we provided in this chapter, based on the subset of 605 respondents who were common to both rounds of the survey.

Two main aspects of the experience of firms are considered. The first aspect is a consideration of the characteristics of firms which have gone out of business between the first and second rounds of the survey. It is of particular interest in the overall context of the report to consider whether or not the introduction of the minimum wage itself was a factor in their closure. Second, we examine trends in the structure of the workforce *at the level of the individual firm,* focusing on changes in the proportion of the workforce which is sub-minimum wage at both rounds of the survey.

6.2 Interpretation and Re-weighting the Data for Longitudinal Analysis

As noted in Chapter 2 above, one should re-weight or statistically adjust survey data prior to analysis to ensure that they are representative of the totality of the population from which they have been selected. In analysing the 605 firms which are common to both rounds of the survey, it is necessary to reach a meaningfully interpretable adjustment or re-weighting of the data. For the current chapter we have developed two sets of weights for the subset of cases which were common to both rounds of the survey. The first of these is based on the *enterprise,* the second on the *employee.* These are exactly analogous to the firm-based and employee-based weights discussed in Chapter 2 in respect of the main body of the sample.

To implement the two sets of weights for the longitudinal sub-sample we have grossed the results to the population which existed in 1999 at the first round of the survey. Accordingly, one should interpret the results based on the adjusted subset of questionnaires as if one had been able in 1999 to record prospective details on the situation of the firm in 2001. This, therefore, gives us a measure of change over the two-year period at the level of the individual company. By definition this type of analysis excludes "births" of new firms over the study period. It focuses on the stock of firms *which existed in 1999 and which continued to exist into 2001.* Of these firms it then asks the question where are they now in terms of employment structure etc.

It is worth noting that the sample for analysis in this chapter is substantially reduced from the total of 1,072 firms used throughout the rest of the report to the common set of 605 firms which responded in both rounds of the survey. Because of this reduction in sample size, variances and related confidence intervals around statistical estimates are correspondingly wider than in early chapters.

6.3 Factors Affecting Firms Going Out of Business

A total of 57 firms from the 1,062 which successfully completed the first round of the survey did not participate in the second round because they had gone out of business. This represents an unweighted total of 5.4 per cent. When the weights derived for the full 1999 survey are applied we find that the grossed estimate of the percentage going out of business over the study period is 8.2 per cent. These were firms which were definitively identified by interview as having gone out of business by the time the 2001 fieldwork took place, and we look at their characteristics in this section.

Table 6.1 presents details on the information recorded at the time of the first survey in 1999 in respect of trends in business volumes and profit levels over the 12 months preceding that survey. The information is then classified in terms of whether or not the firm was subsequently found to be out-of-business by the later survey in 2001. From Section A of the table one can see that those firms which were identified as having gone out of business by 2001 had a much higher probability of having experienced a fall in business volumes in the 12 months preceding the first round of the survey than did their counterparts who were still in business by the end of the period in question. One can see, for example, that just under 28 per cent of the group of companies which had gone out of business by 2001 had recorded in the earlier survey that their business volumes had decreased over the preceding 12 months. The comparable figure for firms which were still in business by 2001 was only 7 per cent.

Table 6.1: Firms Which Participated in the First Round (1999) of the Survey Classified According to Their Business Status in 2001 and Trends in (a) the Value of Their Business; (b) Their Over All Profit Level in the 12 Months Preceding the 1999 Round of the Survey

Trends in 1998-99 in:	In Business in 2001 Per Cent	Out of Business by 2001 Per Cent	All Firms Per Cent
(a) Business Volumes			
Increased	56.1	40.2	54.8
Stayed the same	36.9	32.1	36.5
Decreased	7.0	27.7	8.7
Total	100.0	100.0	100.0
(b) Profit Levels			
Substantial Loss	0.8	12.7	1.8
Moderate Loss	5.1	15.8	6.0
Broke Even	21.4	29.8	22.1
Moderate Profit	67.6	41.7	65.5
Substantial Profit	5.1	0.0	4.7
Total	100.0	100.0	100.0

Section (b) of Table 6.1 presents similar details in respect of the trend in profit levels over the period preceding the first survey in 1999. From this one can see that almost 28 per cent of firms which went out of business by 2001 had recorded a recent loss in the 1999 survey. The comparable figure for the group of companies which were still in business by 2001 was just under 6 per cent.

Table 6.2 considers the risk according to industrial sector of going out of business in the period between the two rounds of the survey. From this one can see that the sectors with the highest risk were Manufacturing of Textiles & Apparel; Banking/Finance/ Business Services (both 13 per cent) and Building & Construction (11 per cent). Risk levels in other sections were clustered in the region of 4-7 per cent.

Table 6.2: Firms which Participated in the First Round (1999) of the Survey Classified According to Their Business Status in 2001 and Sector in 1999

Sector in 1999	In Business in 2001 Per Cent	Out of Business by 2001 Per Cent	All Firms Per Cent
Building & Construction	89.0	11.0	100.0
Manufacture of Textiles & Apparel	86.6	13.4	100.0
Other Manufacturing	95.0	5.0	100.0
Retail	93.0	7.0	100.0
Wholesale	95.5	4.5	100.0
Banking/Finance/Business Services	86.7	13.3	100.0
Hotels/Restaurants/Bars	93.0	7.0	100.0
Personal & Other Services	93.8	6.2	100.0
Total	91.8	8.2	100.0

Tables 6.3a and 6.3b consider the relationship between going out of business and (a) total number of persons engaged at the time of the 1999 survey and (b) percentage of persons engaged who are paid less than IR£4.50 per hour. From Section A one can see there appears to be a relationship between going out of business and the size of the company.

Table 6.3a: Firms which Participated in the First Round (1999) of the Survey Classified According to Number of Employees in 1999 and Business Status in 2001

Number of Persons Engaged in 1999	In Business in 2001 Per Cent	Out of Business by 2001 Per Cent	All Firms Per Cent
3 or less engaged	33.7	58.3	35.7
4-9 engaged	51.0	35.2	49.7
10-34 engaged	7.2	4.7	7.0
35-99 engaged	5.0	1.4	4.7
100+ engaged	3.1	0.5	2.9
Total	100.0	100.0	100.0

Table 6.3b: Firms Which Participated in the First Round (1999) of the Survey Classified According to (a) Percentage of Employees in 1999 Who Were Below an Hourly Basic Pay of IR£4.50 or Less and (b) Business Status in 2001

Percentage Below IR£4.50 Per Hour in 1999	In Business in 2001	Out of Business by 2001	All Firms
	Per Cent	Per Cent	Per Cent
None	52.6	61.2	53.3
Less than 15 per cent	4.2	1.0	4.0
15 per cent or more	43.2	37.7	42.7
Total	100.0	100.0	100.0

It is clear from the table that a substantially higher percentage of firms which went out of business were small – with three or less persons engaged. A total of 58 per cent of those which went out of business were in this size category compared with only 34 per cent of other firms. Table 6.3b provides details on the breakdown of firms according to whether or not they went out of business and also the percentage of their workforce paid less than IR£4.50 per hour at the time of the 1999 survey. The table shows that a higher percentage of firms which went out of business (61 per cent) had no minimum wage workers. The comparable figure for firms remaining in business over the period in question was only 53 per cent. This would seem to suggest that the presence of minimum or sub-minimum wage employment in the firm in 1999 was not a factor in determining whether or not it went out of business within the subsequent two years.

6.4 Changes in the Intensity of Minimum Wage Workers

The longitudinal nature of a component of the sample allows us to classify firms according to their intensity of workers paid about the minimum wage or less at both surveys. What we have measured in the surveys is the numbers below IR£4.50, and we will call this for convenience in the following discussion "minimum wage employment". This information allows one to consider the transitions from minimum wage concentrations in 1999 to the corresponding position in 2001. The results are shown in Table 6.4. The figures in the table are percentages based on all firms and

Table 6.4: Reweighted Longitudinal Sub-Sample of Firms Classified According to the Intensity of Minimum Wage Workers in Their Workforce in 1999 and 2001

Intensity of Minimum Wage Workers, 1999	Intensity of Minimum Wage Workers, 2001			
	None	Less than 15%	15% or More	Total
	(Per Cent of Total)			
None	50.3	0.4	3.0	53.7
Less than 15 per cent	4.7	0.4	0.1	5.1
15 per cent or more	25.8	3.8	11.5	41.2
TOTAL	80.8	4.7	14.6	100.0

so the sum of figures in all cells comes to 100 per cent. One can see, for example, that just over 50 per cent of all firms had no minimum wage workers when the surveys were carried out. A further 0.4 per cent of firms had less than 15 per cent of their workforce made up of employees paid IR£4.50 or less at both survey observations while a further 11.5 per cent were paying 15 per cent or more of their workforce less than IR£4.50 in both 1999 and 2001. This means that a total of just over 62.2 per cent of businesses lay along the so-called "leading diagonal" in Table 6.4. This implies that they did not change the intensity of the minimum wage component of their workforce over the period in question. The table shows the trend in terms of minimum wage intensities for the remaining 37.8 per cent of firms. One can see that only 3.5 per cent of firms lay above and to the right of the "leading diagonal" while the remaining 34.3 per cent lie below the leading diagonal. This means that just over one-third of all firms reduced their intensity of minimum wage employment over the study period while 3.5 per cent increased the proportion of sub-minimum wage employees whom they engaged.

It is clearly of interest to consider which types of firms retained their high concentration of minimum wage employees over the period in question. In other words, in which sectors are the 11.5 per cent of firms located which paid 15 per cent or more of their workforce at sub-minimum rates in both rounds of the survey. The figures in column A of Table 6.5 provides the percentage breakdown by sector of this group of firms. The column shows that 42 per cent of firms with a persistently high rate of sub-minimum wage employees are in the Retail sector. Column C in the table provides details on the percentage breakdown of all firms by sector. Comparison of the figures in Columns A with C provides a measure of sectoral over- or under-representation of firms relative to the situation which would pertain were the group with persistently high levels of minimum wage employment distributed across sectors on a *pro rata* basis with the distribution of all firms in the population. On this basis, the figures in the table imply an over-representation of the order of 32 per cent for firms with persistently high levels of minimum wage workers in the retail sector. One can further see from the table that 22 per cent of the firms in question are in the Hotel/Restaurant/Bar Sector – indicating an over-representation of 49 per cent in that sector relative to the overall population distribution.

One can similarly ask where are the 3.5 per cent of firms located which experienced an *increase* in the intensity of minimum wage employees in their workforce. Column B of Table 6.5 shows that almost 69 per cent of the small proportion of firms in question are located in the Retail Sector. This suggests an over-representation in that sector of the order of 115 per cent.

Table 6.5: Sectoral Distribution of Firms Which (a) Longitudinally had 15 Per Cent or More Persons Engaged Paid IR£4.50 or Less Per Hour (11.5 Per Cent of All Firms from Table 6.4 Above); and (b) Displayed an Increase in the Percentage of Persons Engaged Who Were Paid IR£4.50 or Less Per Hour (3.5 Per Cent of Table 6.4 Above)

Sector	(a) Firms with Persistently High Level of Sub-Minimum Workers Per Cent	(b) Firms with an Increase in Per Cent of Sub-Minimum Workers Per Cent	(c) All Firms Per Cent
Building & Construction	4.9	1.6	9.7
Manufacture of Textiles & Apparel	0.6	0.5	0.5
Other Manufacturing & Production	2.2	10.8	5.2
Retail	42.4	68.8	32.0
Wholesale	4.2	0.0	5.6
Banking/Finance/Business Services	11.0	3.8	17.4
Hotels/Restaurants/Bars	22.5	13.0	15.1
Personal & Other Services	12.2	0.0	14.4
Total	100.0	100.0	100.0

One can see an over-concentration of 108 per cent in Other Manufacturing. It is clear that the trends shown in Tables 6.4 and 6.5 are wholly consistent with the cross-sectional trends in the data as outlined in the previous chapter.

6.5 Summary

In this chapter we considered some changes in the structure of employment at the level of the individual firm by concentrating on the sub-sample of cases which successfully participated in both rounds of the survey. In particular we discussed the characteristics of firms which were identified as having gone out of business over the study period and also considered the sectoral distribution of firms which maintained persistently high levels of sub-minimum employment over the period in question.

In regard to the characteristics of firms which had gone out of business over the study period we found that this was most strongly related to their having experienced a fall in their profit levels over the preceding 12 month period. The number of workers in their workforce paid about the minimum wage did not appear to be a factor in determining their going out of business.

We further saw that, as one would expect in the light of the cross-sectional results of earlier chapters, only small percentages (11.5 per cent) of firms remained with persistently high levels of minimum wage employees over the period in question and only 3.5 per cent actually increased the percentage of their workforce paid at this level. The firms in question appeared to be concentrated principally in the retail sector with some lesser concentrations in the Hotel/Restaurant/Bar sector.

7. Econometric Estimates of the Employment Effects of the National Minimum Wage

7.1 Introduction

The firm surveys on which this study relies have first provided cross-sectional pictures of the population of Irish firms before and after the introduction of the national minimum wage, and previous chapters have described the pattern of change in pay and employment levels over this period in these cross-sections. Second, the fact that a substantial proportion of the firms in the original survey were re-interviewed in 2000/2001 also means that the changes in pay and employment structure for these specific firms could also be examined, and this was the focus of Chapter 6. For this sub-set, on average employment increased by approximately 18 per cent over the period, but 30 per cent of the firms experienced a *decline* in employment. To examine the relationship between wage changes and employment among these firms more formally, in this chapter we employ econometric techniques to relate employment growth between the two surveys to measures capturing the effective "bite" of the minimum wage.

7.2 Modelling the Employment Effects of the Minimum Wage

To examine the link between the introduction of the minimum wage and the employment changes in the (sub-)set of firms interviewed both before and after introduction, we estimate the following equation:

$$\Delta \ln(N_{it}) = \beta_0 + \beta_1 \, MinW_{t,t-1} + \beta_2 X_{it-1} + e_{it} \qquad (1)$$

where N measures employment, MinW seeks to capture the effective "bite" of the minimum wage for the firm in question and X controls for other observable characteristics of the firm. To estimate this equation, the crucial ingredient is a measure of MinW, in other words the openness of one firm versus another to being affected by the minimum wage. What we are trying to test is whether firms that *ex ante* look more likely than others to be

affected by the minimum wage are seen *ex post* to have worse employment outcomes, taking into account all their other characteristics.

Given the design of the survey, a number of possible measures of minimum wage "bite" are available for investigation. The first is a simple indicator denoting whether the firm employed workers below the national minimum wage prior to its introduction (which we label Mwage99). Half the firms in our sample (present in both surveys) reported in the first survey that they had at least one employee paid under IR£4.50. Taking this as indicator of minimum wage "bite" in effect simply allows us to compare firms with and without such an employee in 1998/99, and ask whether employment growth was lower in the former than the latter.

The second indicator is the proportion of the firm's labour force below IR£4.50 in the first survey (which we call PropMw99). As well as comparing firms with and without employees potentially affected by the minimum wage, we are then in effect also seeing whether those with a large proportion of employees potentially affected experienced lower growth than those with a small proportion potentially affected.

The results of estimating an equation simply relating the percentage change in employment from 1998-2000 to either of these two measures are given in the first two columns of Table 7.1. They show that neither measure of the minimum wage "bite" is significantly related to employment growth in the firm over the period.

Table 7.1: *The Impact of the Minimum Wage on Employment* (Standard Errors in Parentheses)

Explanatory Variable	(1)	(2)	(3)	(4)
Constant	.19	.17	.27	.26
	(.04)	(.03)	(.12)	(.13)
Mwage99	-.01		.01	
	(.05)		(.05)	
PropMw99		.04		.06
		(.09)		(.09)
Irish			-.13	-.13
			(.09)	(.09)
Export			-.04	-.03
			(.06)	(.06)
Profit			.08	.08
			(.06)	(.06)
Union			.01	.02
			(.07)	(.07)
Wage Bill			-.001	-.002*
			(.001)	(.001)
Totemp99			-.0001	-.0001
			(.0001)	(.0001)
R^2	.001	.004	.016	.016
Sample Size	*587*	*587*	*440*	*440*

The results in the first two columns take no account of any differences between firms other than the number of workers below IR£4.50 in 1998/99. However, it is likely that these firms

would have experienced different employment patterns between then and the second survey even without the minimum wage legislation, because as we have seen in previous chapters they differ systematically across a range of dimensions. Failure to control for these differences could distort the estimated impact of the minimum wage, and the surveys allow us to identify some important characteristics of the firms that may be included as control variables in the equation (the set of X variables in Equation (1). Among the control variables we use are whether the firm was Irish or foreign owned (which we label Irish), whether the firm exported or not (Export), an indicator of the profitability of the firm in the year prior to the minimum wage (Profit), an indicator variable denoting whether or not at least 50 per cent of the firm's non-managerial employees were in a trade union (Union), as well as the percentage of the company's total operating costs that are accounted for by their total wage bill (Wage Bill). We also included the firm's initial employment level (TotEmp99).

The results from this specification are given in columns (3) and (4) of Table 7.1. We now see that more profitable firms experienced faster employment growth, while companies for which labour constituted a large fraction of the wage bill had lower employment growth, as did Irish compared with foreign owned firms. None of the other characteristics approached statistical significance. However, in the current context our primary interest is in the coefficients on the minimum wage variable. We see that including this range of controls had little effect on the minimum wage estimates, and for both the measures used the minimum wage effect is still small and statistically insignificant.

An alternative to including all sample firms in the analysis is to concentrate on firms which had at least one minimum wage worker in the first survey, and then see whether the change in employment is systematically related to the proportion of the firm's labour force below the minimum wage. While this reduces the number of observations available, it should also reduce the extent of differences across the firms in potentially relevant characteristics that we have not been able to take into account because we do not have the necessary information – what is termed unobserved heterogeneity. The results from adopting this approach are given in Table 7.2. We find that restricting the sample to only firms potentially affected by the minimum wage makes little difference to our results. Again it appears as though the minimum wage has had little effect on employment growth for this sample of firms.

Table 7.2: The Impact of Minimum Wages on Employment – Minimum Wage Firms Only (Standard Errors in Parentheses)

Explanatory Variable	(1)	(2)
Constant	.13	.26
	(.06)	(.19)
PropMw99	.10	.11
	(.12)	(.12)
Irish		-.20
		(.15)
Export		.01
		(.08)
Profit		.14
		(.09)
Union		.10
		(.10)
Wage Bill		-.002
		(.002)
Totemp99		-.0006*
		(.0003)
R^2	.002	.03
Sample Size	301	227

7.3 Alternative Models

Our results so far are consistent with US and UK studies by Card and Krueger (1995) and Dickens, Machin and Manning (1999) respectively, which failed to find a negative impact on employment levels from raising the minimum wage. However, one needs to be careful in interpreting these findings. A criticism that has often been levelled at these types of studies is their inability to distinguish between potential and actual "bite" of the minimum wage. Even in an economy that was not growing rapidly, some of the workers receiving wages below the minimum wage in 1998/99 would have received a wage increase by 2000 in any case, and thus not have been affected by the introduction of the minimum wage. In an economy experiencing the rapid growth seen in Ireland over the period, this is even more relevant. We have seen in earlier chapters that, in a market characterised by labour shortages, many firms are saying that they have to raise the wage in order to attract a suitable supply of labour, and this is reflected in the CSO's average earnings series. Given these circumstances, the actual number of firms affected by the minimum wage would be substantially smaller than the number with employees below IR£4.50 in 1998/99. The question this raises is whether the measures of minimum wage "bite" we have used based on the number of such employees in the 1998/99 survey are likely to be adequate.

As we saw in Chapter 4, to try to capture this underlying growth in wages over the period, firms in the survey were asked if, given trends in the labour market, they would have had to increase wages anyway up to the level set out in the minimum wage. Of the firms in the second wave who said that they had workers below the minimum wage when it was introduced, 84 per cent said that they would have increased these wages in any case.

To allow for this we create a new minimum wage "bite" variable which takes the value 1 only if the firm had minimum wage workers *and* said they would not have increased wages were it not for the minimum wage (Mwage993). The results of redefining the minimum wage variable are striking. In contrast to the 50 per cent of firms who had minimum wage workers in the first wave, only 23 per cent of firms retrospectively recorded having minimum wage workers by the time the law was introduced. As noted above 84 per cent of these indicated that they would have raised wages even without the minimum wage. Using these criteria, only 4 per cent of our firms were actually directly affected by the minimum wage legislation.

We then re-estimate Equation (1) using this redefined measure of the minimum wage bite, and the results from this analysis are presented in Table 7.3. None of the estimates on the firm characteristics entered as control variables change much as a result of redefining the minimum wage variable profitable firms, foreign-owned companies and firms for which wage costs are less important still appear to have had faster employment growth. However, there is a striking change in the estimated minimum wage effect. Whereas in previous specifications the minimum wage "bite" variable was small and insignificant, it is now statistically significant and negative. Firms that had workers subjected to the minimum wage legislation *and who say they would not have increased wages (as much) were it not for the legislation* have significantly smaller increases in employment than other firms.

Table 7.3: The Impact of Minimum Wages on Employment Using Self-Reported Measure of Minimum Wage Bite

Explanatory Variable	(1)[a]	(2)
Constant	.17	.26
	(.03)	(.13)
Mwage993	-.26*	-.30*
	(.14)	(.14)
Irish		-.12
		(.09)
Export		-.04
		(.06)
Profit		.08
		(.06)
Union		.02
		(.07)
Wage Bill		-.002*
		(.001)
Totemp99		-.0001
		(.0001)
R^2	.01	.024
Sample Size	581	434

(Dependent Variable – percentage change in employment form 1998-2000; Standard Errors in parentheses).

[a] We have also estimated the model in this column on the restricted sample used in columns (2) and this has little effect on the results. This is also true when we use the same sample that was used for the results in Table 7.1.

This self-reported measure of minimum wage "bite" also has to be interpreted with care, of course. It could be simply or primarily identifying firms that are performing poorly, so the estimated employment effect being attributed to the minimum wage may in fact reflect characteristics that are associated with both poor employment growth and low wages that are not captured by the characteristics included in the model.[4] To assess whether this seems to be the case we look first at what firms reported about the percentage of the company's total operating costs accounted for by wages. We might expect that the firms most affected by the legislation should see the largest increases in their wage bill. This seems to be the case. Firms without a minimum wage worker in 1998/99 report that the proportion of total costs accounted for by labour *fell* by approximately 1 percentage point. For firms with at least one minimum wage worker in 1998/99 the proportion of total costs accounted for by labour *increased* by 2.5 percentage points. Finally firms who reported having a minimum wage worker *and* who stated that they would not have increased wages in the absence of the legislation saw the proportion of costs accounted for labour increase by over 7 percentage points. It seems therefore that the redefined measure of minimum wage bite is capturing firms for whom the wage bill increased substantially relative to other costs during the period the minimum wage was introduced.

One could still argue that this reflects unobserved inefficiencies within the firm that could be correlated with employment losses. If our redefined minimum wage variable is simply a proxy for firms with poor "employment-creating characteristics" then we would expect to see these firms perform poorly even in the absence of the minimum wage legislation. Since the employment records in our survey are limited to one observation before and after the minimum wage legislation we cannot calculate actual employment changes for the firms in other periods. However, in the first wave of the survey firms were asked to record "if compared to the same period in 1997 their labour force had increased, stayed the same or fallen". If the redefined minimum wage "bite" variable is simply capturing firms with unfavourable unobserved characteristics, then we might expect to see these firms also displaying relatively poor employment performance in the earlier period. This did not seem to be the case to any pronounced degree, suggesting that the self-assessed minimum wage "bite" indicator is more than just a proxy for unobserved firm-level characteristics.

[4] A traditional approach to correcting for this type of problem would be to instrument the minimum wage variable. However, it is difficult to construct satisfactory instruments in this example – that is variable that is correlated with the self-reported minimum wage bite but uncorrelated with the unobserved measures affecting a firm's performance.

7.4 The Impact of the Minimum Wage on Other Outcomes

While the impact of minimum wages on employment changes has attracted most attention in the literature, there have also been some studies looking at the minimum wages on other non-wage characteristics.[5] As discussed in Chapter 4, the second survey asked firms to indicate the impact the minimum wage had on several other aspects of their company's operations, including hours worked, recruitment of younger/less experienced staff, increase in output prices, use of technology/machinery, improved quality of product, staff morale, productivity, subcontracting, staff turnover, and industrial relations. To statistically estimate the effect of the minimum wage legislation, we now relate the responses to these questions to the minimum wage variables defined in this chapter,[6] and the results are given in Table 7.4.

Table 7.4: The Impact of Minimum Wage on Non-Wage Outcomes Using Ordered Probits

Dependent Variable	Minimum Wage Effect (Standard Errors in parentheses)
Reduced Hours	.79* (.22)
Less Experience	.05 (.27)
Prices	.95* (.19)
Machines	.41* (.23)
Quality Output	.40* (.20)
Morale	.69* (.19)
Productivity	.61* (.22)
Subcontract	.81* (.24)
Turnover	.71* (.22)
IR	.29 (.28)

We see from these results that firms most affected by the minimum wage are more likely to have reduced hours, increased output prices and substituted capital for labour. However, the effects are not all negative. These firms are also more likely to report that the quality of their product had improved, that productivity had increased and that morale was now significantly higher. However, these changes seem to have had little effect on industrial relations. These results indicate that firms reacted to the minimum wage in a variety of ways, and that employment levels are just part of a larger adjustment process. A somewhat surprising result is that firms most affected by the minimum wage are more likely to report an increase in staff turnover as a result of the legislation. This is in contrast to much of the monopsony literature

[5] Holtzer *et al.* (1998) look at minimum wages and vacancies, Card and Krueger (1995) look at a number of issues including fringe benefits, output prices and profits, Neumark and Wascher (1998) look at training and Aaronson (2001) looks at the price pass-through effects of minimum wages. Walsh (2001) extends recent monopsony models of employment to situations where jobs are characterised by two components (a wage and non-wage component). He shows that firms' respond to minimum wages by reducing the non-wage component of the job, which in turn may reduce employment even when the labour supply is upward sloping in wages.

[6] Due to the nature of the dependent variable we used an ordered probit for this part of the analysis.

that cites *reductions* in turnover as a potential positive side-effect of minimum wages. However, firms may have found it difficult to distinguish the impact of the minimum wage effect on turnover from the general trend towards increased turnover over the period, particularly in certain sectors of the economy.

7.5 Conclusion

This chapter had sought to statistically estimate the effects of the national minimum wage, notably on employment levels, using data for the firms included in both the survey carried out before introduction and the more recent one at the end of 2000/early 2001. The results showed that employment growth among firms which had low-wage workers in the first survey was not significantly different to that for firms which had no such workers.

However, it was noted that the number of workers below the minimum wage in the first survey may be an unsatisfactory measure of the "bite" of the minimum wage. Some workers, initially below the minimum wage are likely to have their wages increased over time irrespective of the legislation. This is likely to be a particular problem in Ireland where wages have been growing significantly in the years prior to the legislation. To account for this we redefined the minimum wage variable to include only firms who had low wage workers *and who stated that they would not have increased wages by as much were it not for the minimum wage legislation*. When we used this redefined measure of the minimum wage bite we did find a significant negative employment effect. Further analysis suggested that this result was not driven by unobserved firm-level characteristics associated with poor employment growth and self-reported wage restraint. It therefore appears that employment growth may indeed have been reduced among the small number of firms most severely affected by the minimum wage legislation.

8. CONCLUSIONS

8.1 The Purpose of the Study

The National Minimum Wage was introduced in Ireland in April 2000. This study has looked retrospectively at the impact of the introduction of the minimum wage. It has been based on a survey of firms carried out in late 2000/early 2001, commissioned by the Department of Enterprise, Trade and Employment, which interviewed both a substantial proportion of firms already interviewed in 1999 – for whom the situation "before and after" the minimum wage can be directly compared – and some other firms. These surveys have been used to assess the impact of the minimum wage on employment and wage levels and other aspects of work organisation among Irish firms. A comprehensive assessment of the impact of the minimum wage, and its success in meeting its aims, would require complementary analysis of individual and household-level data: here our narrower focus is determined by the use of information from firms.

8.2 Key Characteristics and Trends

In considering the potential impact of the minimum wage, it is worth emphasising first that most firms in most sectors in the survey carried out after the introduction of the minimum wage said they had no employees paid IR£4.50 or less per hour. The only sectors where a substantial number of firms had a significant proportion of their workforce at that pay level were textiles and clothing manufacture, retailing, and hotels/bars/restaurants. Furthermore, wage costs accounted for about 37 per cent of total operating costs on average, but for many less than that in firms with a significant number of low-paid workers.

When asked about trends in their business over time, most sectors and firms were doing well, but certain sectors and types of firm were doing less uniformly well or facing particular problems. Overall twice as many firms said their workforce had increased as decreased, but the latter was more common in textiles and clothing. Staff turnover had increased in retail and personal services, and firms with some low-paid employees were less likely than others to say that volume had increased. Textiles and clothes manufacturers and firms with a significant proportion of low-paid employees were also less likely than others to say they were making profits.

When firms were asked what aspects of their operations they felt to be most difficult, recruiting staff was by far the most frequently identified. Basic labour costs were also identified as important by a substantial proportion of firms, and this proportion

had risen since the survey in late 1998/early 1999. This highlights once again the tightness of the labour market around the time the minimum wage was introduced, a crucial consideration in the impact it is likely to have had on wages and employment.

8.3 Perceptions of the Impact of the Minimum Wage

Firms in the recent survey were also asked a range of questions about their knowledge of the minimum wage and their perception of its effects. While virtually all had heard about the minimum wage, significant proportions did not know exactly when it had been introduced or the exact level at which it was set. Overall only a small minority had availed of the reduced rates payable for young/inexperienced workers, though about one-quarter of firms with employees paid IR£4.50 or less per hour had done so – most often, the reduced rate for those under 18 years of age.

About 85 per cent of firms said none of their employees had received an increase in pay as a direct result of the minimum wage. However, almost half the firms with employees paid IR£4.50 or less said some employees had received such an increase. Overall, about 5 per cent of employees were said to have received such an increase; in textiles and clothing, retailing and hotels/restaurants/bars that figure was in the 7-12 per cent range. About 13 per cent of firms said that they had to increase pay rates for some employees above the minimum wage to restore differentials.

However, over 80 per cent of firms said that, in the light of trends in the Irish labour market, they would have had to increase wage rates anyway up to the minimum wage level. Correspondingly, only 16 per cent of firms said that the minimum wage directly increased their labour costs, and for half of these the increase was less than 5 percentage points.

When asked about the impact on employment, only 5 per cent of respondents (16 per cent in firms with significant numbers of low-paid employees) said they would be employing more people today in the absence of the minimum wage. This additional employment would represent an extra 5,000 employees across all firms in the population. However, almost half of this total was in firms which did not actually employ anyone paid IR£4.50 or less. This, and the extent of the general pressure on wage levels, suggests that the figure of 5,000 extra jobs is an over-estimate.

8.4 Changes in Pay Structures

There was a very substantial reduction between the two surveys in the percentage of workers earning IR£4.50 per hour or less – from 21 per cent in 1999 to just over 4 per cent in 2001. Full-time employees continued to have a substantially lower risk of being low paid than their part-time counterparts. Those engaged in the Hotel/Restaurant/Bar and Retail sectors had a much higher risk of being low paid than those involved in other areas of economic activity. Notwithstanding major reductions in risk figures in all sectors between 1999 and 2001, both Retail and Hotels/

Restaurants/Bars still displayed very high risk levels relative to other sectors. Women had a higher risk than men, even when full-time/part-time status was taken into account.

The percentage in the lowest hourly basic pay category was strongly related to age. As many as 50 percent of workers aged 18 years or less were in the lowest basic pay category in the 2001 survey. The comparable figure for the 19-25 year old group was 7 per cent and 1.4 per cent for those aged 26 years or more. Finally, the main concentrations of minimum wage workers in both surveys were in occupational grades which were related to Sales and Personal Services.

8.5 Changes in the Common Sample of Firms

We then considered changes in the structure of employment at the level of the individual firm for the sub-sample of cases which participated in both rounds of the survey. The probability of going out of business over the period was most strongly related to their having experienced a fall in their profit levels over the preceding 12-month period. The intensity of minimum wage workers in the workforce did not appear to be a factor influencing that probability.

As one would expect in the light of the cross-sectional results, only a small percentages of firms remained with persistently high levels of minimum wage employees over the period in question and very few actually increased the percentage of their workforce paid at this level. The firms in question appeared to be concentrated principally in the retail sector, with some lesser concentrations in the Hotel/Restaurant/Bar sector.

8.6 Econometric Estimates of the Employment Effects

Statistical analysis of firms present in the two surveys showed that employment growth among firms which had low-wage workers in the first survey was not significantly different to that among firms which had no such workers. However, the number of workers below the minimum wage in the first survey may not be a satisfactory measure of the "bite" of the minimum wage, because some of those workers would have seen their wages increase over time irrespective of the legislation. Including only firms who had low wage workers *and who stated that they would not have increased wages by as much were it not for the minimum wage legislation,* employment growth may have been reduced among the small number of firms most severely affected by the minimum wage legislation.

8.7 Recent Developments and Future Prospects

Since its original introduction in April 2001, the minimum wage was increased from IR£4.40 to IR£4.70 for experienced adult workers, with corresponding increases in the sub-minimum rates. In the context of the Programme for Prosperity and Fairness (PPF), as part of the agreement on pay and conditions of employment between unions and employer organisations, the ICTU and IBEC

agreed to put to the Government the position that the minimum wage be adjusted to IR£4.70 from 1 July 2001 and to IR£5 from 1 October 2002. The legislation introducing the minimum wage gives discretion to the Minister for Enterprise, Trade and Employment to decide on changes in the level specified for the Minimum Wage, having consulted appropriately. There is thus no procedure or agreed policy with respect to indexation of that level as prices and earnings increase. While the increases envisaged in the PPF may have the effect of indexation broadly in line with average earnings, the issue remains entirely open as to how the minimum wage will be adjusted over time in the future. Experience in other countries suggests that this will be absolutely critical to its long-term impact. It also suggests that a policy of relatively small changes at for example annual intervals is much less disruptive than major up-ratings implemented with long gaps in between. In many respects the introduction of the minimum wage in Ireland was relatively smooth primarily because it took place at a most unusual time, when wage growth was so rapid; the challenge is now to design a way of increasing it smoothly over time so that it has the desired effects at minimum cost.

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