WHAT FUTURE FOR NEW ZEALAND'S MINIMUM WAGE LAW?

Prepared by

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FOREWORD

To newcomers, some of the claims and counter-claims made about the effects of a minimum wage may seem astounding.

For example, in February 1991 the newsletter *World Money Analyst* carried a striking article which linked both racism and the drug problem in the United States to minimum wage laws. Written by the newsletter's editor, Mark Tier, the article was stimulated by a chance meeting on a Hong Kong harbour ferry with a black musician from Seattle. What most impressed the musician about Hong Kong was that "everybody has a job". (Hong Kong's unemployment rate is a mere 1.5 percent.)

Tier argued that the musician's impressions owe much to the fact that Hong Kong has no minimum wage laws. One reason people turn to drugs, he said, is the sense of despair which comes from not being able to find a job. Minimum wage laws prevent the unskilled from obtaining on-the-job-training – the best type of education – because, at the higher wage rates employers are then required to pay, junior staff cannot be taken on. This condemns young people – in the United States young blacks in particular – to soul-destroying unemployment, embedding in them a feeling that they are worth 'nothing'. A free labour market, by contrast, provides people with continuous information about their worth.

Advocates of minimum wage laws argue that even if such laws push some unskilled workers on to social benefits, they are still 'good policy' because their overwhelming effect is to boost workers' wages, especially those at the bottom end of the scale. Moreover, the argument goes, by counteracting monopsony (that is, where buyers of labour – employers – have market power) a minimum wage can boost total jobs and national income. Finally, as some Clintonites in the United States are currently saying, by providing a spur for workers to become better trained so that they warrant the higher pay, a minimum wage can form part of a strategy for upgrading the skills of the workforce – which will help the country meet foreign competition.

In their own ways, the arguments on both sides seem plausible to their adherents. Which view best fits the New Zealand situation?

The purpose of this study was to explore that question, bringing to bear the available local facts and the lessons of experience from elsewhere. As a policy issue the matter has some relevance because, with the passage in May 1991 of the *Employment Contracts Act* which freed up the labour market - with benefits for productivity and employment growth which are now very evident - the minimum wage has stood out as a possibly anomalous and unjustified restriction on the terms of employment contracts. Some employer and business organisations have suggested it should be abandoned or substantially modified. For the meantime, however, other pressure groups have prevailed, and in February 1994 the coverage of the minimum wage in New Zealand was extended to cover teenagers

The study was undertaken for the New Zealand Business Roundtable by ACIL over a two-year period from 1992. ACIL is grateful to the many people who provided advice and encouragement during the project, but ACIL alone is responsible for the final product.

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PREFACE

There are few things about which economists generally agree, but the fact that demand curves are negatively inclined is one. In lay language this is to say that we buy less of things as they become more expensive. This is true of guns and butter, and is also true of the number of employees hired by firms. The widespread adoption of minimum wage laws is, therefore, one of the more difficult phenomena for economists to appreciate. Without such laws we may be concerned or even distressed that some would earn so little but on reflection it becomes clear that our concern is not alleviated by simply passing a law requiring that some workers either receive higher wages or no wages at all.

Faced with such a choice a worker can either find a job at a higher wage, become self-employed (since there are no minimum wages for the self-employed), or simply not work. If we recognise that workers try to find the highest wage they can, then we also recognise that the fact that someone would earn less is itself a statement that nothing better is available. Since minimum wage laws do nothing to increase workers' productivities, the laws present obstacles that may be hard to surmount.

Firms and consumers, the employers' employer, face analogous choices when wage floors are imposed but they have a much broader set of options than workers. First, in reaction to a newly imposed minimum, they can substitute in favour of workers who are already more productive in that they would earn more than the minimum in any case. After all, proposed minimums are always so low that the vast majority earns more. Secondly, firms can outsource by going abroad for some of their product or by subcontracting (perhaps to self-employed people who were displaced by the minimum). Third, they can automate by using machines to do the greater part of what employees otherwise would do. Finally, if firms cannot avoid increased costs and raise prices, then the purchasers of their products can buy less as they, in turn, substitute in favour of cheaper alternatives.

It follows that it is difficult to argue that laws of this sort are designed to help those who would otherwise earn less than the minimum. The often cynical remarks on the politics of minimum wage laws quoted in this admirable study make the point: the major support typically comes from those who would otherwise earn more and who also view themselves as substitutes for low (minimum) wage labor.

The description of the issues and the summaries of research findings included here are both representative and balanced. The presentation gives a clear state-of-the-art description. As one who has been a frequent participant in the discourse surrounding minimum wages (at last count I had testified eight times before various committees of the US Congress) and into the research into employment displacement effects, I find it easy to recommend this as an excellent background for those wanting a comprehensive view of the issues and the evidence, and also for those who would consider initiating their own research into the effects of these laws.

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EXECUTIVE SUMMARY

This report addresses the question of what should become of New Zealand's minimum wage law. It analyses:

- the history of the current law and its administration;
- the economics of minimum wage laws generally and how they are applied in different countries;
- previous studies overseas of minimum wage effects;
- the available evidence of the effects of the New Zealand minimum wage; and
- options for the future of the minimum wage in New Zealand and possible alternatives for addressing the labour market prospects of disadvantaged groups.

The study's main findings are twofold. First, the overseas evidence is overwhelming that minimum wage laws are counter-productive. They disadvantage the groups they aim to help – such as young people, women, ethnic groups, and the disabled. The results are seen not only in the form of reduced employment (typically between 1 and 3 percent for each 10 percent rise in the minimum wage – higher for teenagers than adults), but also in less favourable working conditions and fringe benefits, and greater difficulties for industries and regions already struggling.

Secondly, while the results of the study's quantitative assessment of New Zealand data have been restricted to some extent by data inadequacies, the overseas findings appear to hold in New Zealand's case as well. The evidence available indicates that employees in the 20-24 year old age bracket have suffered unemployment as a result of the minimum wage and the effect has been three times more pronounced on the unskilled portion of that group. In addition, the evidence suggests that the lowest wage earners (whose wage rates would be affected by the minimum wage) are not proportionately more represented in low than in high income households, suggesting that if the intention of the minimum wage is to selectively assist the poorer sections of society it is a poor instrument for achieving that goal.

On both grounds then, the principal recommendation of the study is that the *Minimum Wage Act* should be repealed. A possible first step to this end would be to reduce the current statutory minimum wage to the level of the single unemployment benefit rate.

HISTORY OF THE MINIMUM WAGE IN NEW ZEALAND

New Zealand's first formal minimum wage legislation was passed in 1945. Thereafter:

- the minimum wage fell from a high of 78 percent of the average wage in 1948 to 30 percent in 1984, then rose to 53 percent in 1987; and
- since 1990 it has remained fixed at $245 a week (or $6.125 per hour), and in 1993 was about 44 percent of the average wage.

Following the passing of the *Employment Contracts Act* in May 1991, the former national award system has been largely abandoned in favour of collective and individual contracts at an enterprise or business unit level. This has left the minimum wage as the country's only compulsory wage floor.

Certain trainees and disabled people working in nominated sheltered workshops or those covered individually by an 'under-rate certificate' are exempted from the Act. So too are self-employed people. Until early 1994, teenagers were also exempt. As of 31 March 1994, the minimum wage was extended to cover 16 to 19 year old workers, at the lower rate of $3.68 per hour rather than the $6.125 per hour applying to adults (i.e. at 60 percent of the adult minimum rate). The decision was made amidst controversy and coincided with the announcement of a Prime Ministerial task force to review employment policies generally. The task force has been asked to report on the issue of the minimum wage.

THE ECONOMICS OF THE MINIMUM WAGE

Many economists and policy analysts have criticised minimum wage laws because they:

- push the unskilled, and thus especially the youngest eligible group of employees, into unemployment;
- disadvantage low-wage regions and industries already struggling;
- discourage on-the-job training;
- encourage people to enter into, or stay on, training schemes outside the workplace and to remain at school; and
- lead to heightened political pressure to 'deal with' unemployment via largely ineffective make-work schemes, or job subsidy programmes, at considerable expense to taxpayers.

There is widespread appreciation of these effects among economists in most countries. The definitive employment conclusion was reached by the US Minimum Wage Study Commission which found that the 46 percent rise in the minimum wage between 1977 and 1981 destroyed 644,000 jobs among teenagers alone. It concluded:

> "The evidence is now in, and the findings of dozens of major economic studies show that the damage done by the minimum wage has been far more severe than even the critics ... predicted."

Similarly, in his recent book *Forbidden Grounds: The Case Against Employment Discrimination Laws*, Richard Epstein refers to evidence that:

> "Minimum wages seem to shift much of the burden of variation in aggregate employment from adults to teenagers, from males to females, from whites to nonwhites; in each case the destabilising effect is upon those with lower average wages."

The typical finding from many overseas quantitative studies is that a minimum wage rate change of 10 percent causes an employment response of up to 3 percent in the case of teenagers (in countries where they are covered by the minimum) and about half that response for adults.

EFFECTS ON WORK CONDITIONS AND FRINGE BENEFITS

The effects of minimum wage laws extend well beyond job losses. When the *price* of labour is artificially increased by law, employers tend to adjust the *non-price* attributes of the job in an attempt to retain their lower-skilled staff. In net terms even employees who retain their jobs may end up worse off. Thus, on-the-job training often becomes a casualty of minimum wages. In addition:

- other job attributes, such as management supervision, the expected pace of work, safety, hours, recreation facilities and health and retirement benefits, become less generous;
- fringe benefits including, where relevant, health insurance, subsidised food and accommodation, time off for study, year-end bonuses, commission payments, holiday pay and sick leave are more difficult to obtain or maintain; and
- unions and government departments of labour become preoccupied with trying to preserve or restore the non-wage conditions that minimum wage laws are serving to erode.

THE POVERTY ISSUE

Some have argued that a minimum wage law is an appropriate tool for redistributing income to the poorer members of society. However:

- both local and overseas evidence indicates that low wage jobs are not concentrated amongst low income families; poverty is associated with not working rather than with low pay; and
- while a 'high' minimum wage will raise the pay rates of some low-wage workers who retain employment, their total job packages may be worth less to them than their previous arrangements if other conditions of employment have been tightened. Those who lose their jobs will, of course, be worse off.

It follows that minimum wage legislation is a quite inappropriate instrument for poverty alleviation.

IMPLICATIONS FOR THE GOVERNMENT

The effects on employment of an operative minimum wage flow on to governments in the following ways:

- higher social welfare expenditure to support those priced out of the labour market;
- additional spending on education and training; and
- constant pressure to introduce and police minimum employment conditions where employers seek to make economies if a minimum wage is enforced.

THE POLITICAL ECONOMY OF THE MINIMUM WAGE

Given the weight of evidence against minimum wage legislation, it is relevant to ask who advocates such legislation and why. The answers are somewhat disturbing. Articulate, relatively well-paid and well organised groups outside the low wage worker group have traditionally been the main lobbyists for minimum wages. For example:

- skilled and experienced employees, and their representatives (such as unions) benefit from having less competition at the lower paid end of the labour market;
- suppliers of some types of capital equipment which can substitute for labour may also fall into this category; and
- industries in regions with higher cost structures may attempt to use the minimum wage to price out competition from other areas where labour costs are lower.

In some cases, such as South Africa and parts of the United States in earlier times, overt ethnic or racial overtones have been evident in the advocacy of minimum wage laws.

In essence, as one researcher has put it, minimum wage laws involve "regulating markets in order to give some of the have-nots somewhat more by depriving other have-nots of their jobs." Another expert in the field made the sobering assessment that "perhaps the most powerful explanation for the political acceptance of wage minimums is that people who support them are simply ignorant of their effects."

Despite this view, there is increasing evidence worldwide that minimum wage legislation is falling out of favour, either through explicit changes or by virtue of nominal minimum wage levels remaining static. In Europe recently the president of the European Commission has included the minimum wage among the subjects to be examined as part of a detailed assessment of why Europe is losing competitiveness.

IMPACT OF THE NEW ZEALAND MINIMUM WAGE

During this study three empirical tests were carried out.

- A graphical analysis of Household Expenditure and Income Survey (HEIS) data showed no sign that changes in the minimum wage since 1983 had made any difference to the shape of the frequency distribution of annual average wage rates - even for minority groups considered likely to be most affected. A number of possible reasons can be adduced for this null result.
- An econometric comparison of how teenagers and young adults were affected by minimum wage rate shifts was undertaken using 33 quarters of data from the Household Labour Force Survey (HLFS). This produced results similar to those commonly obtained in overseas research. Young adults, who have long been covered by the minimum wage, were shown to have suffered disemployment when the real minimum wage increased. Meanwhile, their closest rivals in the job market, teenagers who until recently have not been covered, appeared to enjoy a small rise in employment when the minimum wage applying to others was increased. The disemployment result for young adults was especially severe for workers without qualifications – again in line with overseas findings. The analysis suggests that in the youngest age bracket covered by the minimum wage - 20 to 24 year olds - some 2,500 to 5,000 jobs were lost during the 1980s, and that about three quarters of this burden fell on the unskilled portion of them. There may have been similarly adverse job impacts on older groups.

- Finally, HEIS data showed that, disemployment effects aside, the minimum wage does not selectively deliver income support to people who are at the relatively poor end of the income scale. This confirms an earlier New Zealand finding by Cumming and matches the results obtained across OECD countries generally.

Amongst policy analysts, there is likely to be a good deal of interest in extending the research reported in this study.

THE FUTURE

The future of the *Minimum Wage Act* is an important policy issue. In the increasingly flexible era ushered in by the *Employment Contracts Act*, the minimum wage legislation remains a rigid anachronism. The ECA is contributing to a fall in New Zealand's relatively high rate of unemployment. Further liberalisation of the employment market could reinforce this trend.

The government's decisions not to increase the minimum wage and to allow its real value to decline have been steps in the right direction. However, it should not have been extended to teenagers either on the grounds of consistency with the existing regime for those over 20 years of age or to deal with alleged cases of exploitation.

Low pay for teenagers does not necessarily imply that exploitation is occurring. Teenagers themselves recognise, as do their parents, that the key initial benefit is gaining the experience of working, with some on-the-job training, rather than the amount they are paid.

On the very infrequent occasions where exploitation is thought to occur, non-legislative alternatives should be sought, such as representations by parents, guardians or local figures of authority (e.g. members of parliament), media investigations and possibly the establishment of a hot-line to investigate complaints.

The principal recommendation of this study is that the *Minimum Wage Act* should be repealed. An intermediate step towards this end would be for the minimum to be reduced to the level of the single unemployment benefit rate, which is about half the present minimum wage level.

As part of a broader focus on combating unemployment, the complex interactions between social welfare, taxation and employment protection need to be addressed. The major lessons from overseas experience are that:

- safety net measures which involve direct payments to supplement low incomes (analogous to New Zealand's Guaranteed Minimum Family Income scheme) are preferable to measures such as unemployment benefits; and
- the unconditional payment of benefits for an indefinite period has been a major cause of high unemployment in Europe, hence benefits should be time-limited.

1. INTRODUCTION

1.1 Purpose of this Study

This study, undertaken by ACIL Economics and Policy Pty Ltd (ACIL) over a two-year period from 1992, was commissioned by the New Zealand Business Roundtable in late 1991. Its purpose was to review the findings of theoretical and empirical economic studies of minimum wages and examine the effects of the *Minimum Wage Act 1983* on employment and other variables in New Zealand.

The wider context of the study is that, since the passing of the *Employment Contracts Act* in May 1991, the national award system, which set a vast array of pay rates for different industries and crafts, has been abandoned by most employers and employees in favour of contracting at an enterprise level. The statutory minimum wage thus remains New Zealand's only centrally determined labour price. Its relevance within an employment relations framework based on the principle of freedom to contract is an important policy issue

1.2 Origins of New Zealand's Minimum Wage Provisions

The history of legally-enforced minimum wages in New Zealand stretches back well before an Act of 1945 which was the first to have the term 'minimum wage' in its title. Indeed the Fortune Encyclopedia of Economics describes minimum wage laws as being "Invented in Australia and New Zealand with the admirable purpose of guaranteeing a minimum standard of living for unskilled workers." The first legal wage minima emerged with the *Industrial Conciliation and Arbitration Act* of 1894 and related labour laws which were introduced following a general maritime strike during the depression in the early 1890s.[1] The 1894 Act provided for people over the age of 18 years in certain occupations to be paid according to awards. A blanket provision to cover all people under the age of 18 years, the *Employment of Boys or Girls Without Payment Prevention Act*, was passed in 1899 setting minimum rates at 4 shillings per week for girls and 5 shillings a week for boys.

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1 These laws established the Arbitration Court and a government apparatus to register trade unions and employer organisations and to police awards. Negotiations could only be triggered by a 'dispute'. If a subsequent 'conciliation' phase, sponsored by government-funded mediators, failed, the process would move to the compulsory 'arbitration phase' in which the Arbitration Court would establish an 'award' which set out minimum wages and conditions. During this phase and immediately afterwards, strikes or lockouts would be prohibited.

These late 19th century laws, at the time celebrated as pathbreaking state experiments,[2] became the basis for a more elaborate award system whereby centrally-determined pay and other work conditions for progressively more occupations and crafts were enforced across the country. The parts of the legislation requiring certain minimum rates of pay to apply nationwide were arguably the key elements of an elaborate set of provisions which established when and how certain parties were permitted to become involved in determining wages and other work conditions.

The new system endorsed the right of mainstream employer organisations to represent all employers. Equally, the place of unions in the new system was partly guaranteed by their right to bargain on behalf of all workers whom they could claim to represent or 'conveniently cover'. Their claims were progressively reinforced by the inclusion of provisions in awards compelling employers to hire union members in preference to non-unionists. Union membership became compulsory in 1936.

Centralisation of the bargaining process underpinning the minimum wage rates set in awards was further strengthened by the fact that only bargains reached with registered workers' organisations had legal force. For their part unions, to be registered, had to abide by certain requirements to treat members fairly. In turn, as their standing as the sole representatives of particular crafts became enshrined in statutes, registered unions became immune from certain common law liabilities, just as explicit exemptions had granted immunities to their counterparts in the United Kingdom and some other countries.

During its first fifty years, the so-called 'compulsory arbitration system,' and its minimum wage provisions, had a stormy existence. In 1922, well before the onset of the Great Depression, the Arbitration Court introduced the first general wage orders and imposed a general wage cut (of 5 shillings per week). This was followed by another of 3 shillings per week. In 1932, as public outlays on relief schemes for the unemployed increased, compulsory arbitration was abandoned. The system replacing it became known as 'compulsory conciliation and optional arbitration'. Some awards lapsed and those which continued had less force.[3]

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2 William Pember Reeves, author of the two-volume *State Experiments in Australia and New Zealand*, is said to have been the driving force behind the radical industrial legislation of the period (see, for example, John E. Martin *Glimpses of the Past: The First Fifty Years of the Department of Labour*, Department of Labour, Wellington, 1991). Commentators from America, Britain and France visited New Zealand to view the new system of compulsory arbitration.

3 While in 1932 there were 445 awards, by 1934 there were 396.

The first Labour government reintroduced compulsory arbitration (and introduced compulsory unionism) in 1936 during the period of economic recovery. It also extended compulsory arbitration for the first time to many of the agricultural (and later the forestry) industries.

Besides making these changes, the *Industrial Conciliation and Arbitration Amendment Act* of 1936 also directed the Arbitration Court to fix a 40 hour week where requested without reduction of award payments. In addition, the Act directed the Court: "... after taking into consideration the economic conditions, to fix a basic wage for male and female workers." For male workers the Court was directed to "take into consideration what will be adequate to supply the needs of a man, his wife and three children up to a reasonable standard of comfort".

1.3 The First Separate Minimum Wage Law

With the advent of World War II, emergency powers were passed to enable labour laws to be superseded so workers could be directed to essential industries. In 1942, a statutory minimum wage was introduced to 'protect' the wages of directed workers.[4] It was formalised in the *Minimum Wage Act 1945*. This was amended in 1952 to provide for regular revisions without new legislation via Orders-in-Council. The Act then, as now, covered workers in all industries.

As a proportion of average wages, the legal minimum wage has varied considerably. In 1948 it was 78 percent of the average wage, its highest rate ever. The rate fell below 60 percent in the 1960s and below 40 percent at the beginning of the 1980s. The Labour government raised it from 30 percent to 53 percent of the average wage in 1987 and by 1988 it was higher than, and therefore generally superseded, the minima established in 20 percent of the awards then prevailing. The precise dates of all the changes since 1981 are set out in Table 1.1 below. A longer series showing the relationship between the minimum wage and the weekly wage each year since 1960 is shown in Table 1.2.

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4 Penelope Brook, *Freedom at Work*, Oxford University Press, Auckland, 1990, p36.

Table 1.1: Changes in the Minimum Wage Since 1981

Date of change	New level ($)	
	per week	per hour
11 June 1981	84.17	2.10
5 February 1985	100.00	2.50
2 September 1985	170.00	4.25
9 February 1987	210.00	5.25
8 February 1988	225.00	5.625
15 May 1989	235.00	5.875
17 September 1990	245.00	6.125
31 March 1994 (teenage rate)	147.20	3.60

Source: Department of Labour

1.4 Interplay of Awards and the Minimum Wage Law

Following its introduction during World War II, the minimum wage law, together with other so-called 'minimum conditions' (such as those governing standard hours, holidays, how wages are to be paid, the right to strike, grievance and dispute procedures and, more recently, equal pay for the sexes) came to be seen in some circles as an important underpinning for the award system. These provisions were seen to cover aspects of labour relations not subject to negotiation. The relevance of the minimum wage waxed and waned through the 1960s, 1970s and 1980s as various, mainly minor, changes to industrial relations legislation were made by successive governments.

There was some relaxation of the award system by the Labour government in 1987 when the *Industrial Relations Act* was replaced by the *Labour Relations Act*. The new Act retained compulsory unionism but shifted responsibility for enforcing awards from the Department of Labour to unions.

Notwithstanding these developments, the Labour government also initiated moves which extended regulation of the labour market. The *Employment Equity Act* of July 1990, together with the *Equal Pay Act* of 1972, the *Human Rights Commission Act* of 1977 and subsequent provisions for maternity leave (1980) and parental leave (1987), established statutory employment conditions and new wage minima for some groups for whom the minimum wage was previously operative. The *Employment Equity Act* established an 'Employment Equity Commissioner' with powers to set pay rates for a range of 'designated groups' – women, Maori, Pacific Islanders, workers with physical or mental disabilities or any other group determined by the Commissioner. The Act was repealed by the National government

Table 1.2: Relationship of Minimum Wage to Average Weekly Wage, 1960-1993

Year (a)	Minimum Wage (b) (c) $	Avg Ordinary Time Weekly Earnings (d) $	Minimum Wage/ Average Wage %
1960	19.75	27.70	71.3
1961	19.75	28.71	68.8
1962	20.33	29.85	68.1
1963	20.33	30.99	65.6
1964	21.67	31.73	68.3
1965	21.67	34.30	63.2
1966	21.67	35.36	61.3
1967	22.25	37.55	59.3
1968	23.50	39.38	59.7
1969	26.00	41.90	62.1
1970	26.00	44.87	57.9
1971	27.00	53.61	50.4
1972	27.00	60.97	44.3
1973	45.00	67.89	66.3
1974	48.40	77.07	62.8
1975	54.88	91.61	59.9
1976	60.76	102.84	59.1
1977	64.41	118.16	54.5
1978	73.75	132.18	55.8
1979	77.07	153.45	50.2
1980	80.16	178.37	44.9
1981	84.17	215.89	39.0
1982	84.17	252.45	33.3
1983	84.17	274.36	30.7
1984	84.17	279.33	30.1
1985	100.00	296.74	33.7
1986	170.00	346.67	49.0
1987	210.00	399.99	52.5
1988	225.00	440.69	51.1
1989	235.00	478.32	49.1
1990	245.00	505.99	48.4
1991	245.00	529.40	46.3
1992	245.00	549.44	44.6
1993	245.00	555.72	44.1

(a) Pre-1967 rates have been converted into decimal currency;
(b) Minimum wage rates prior to the implementation of equal pay are the male rates;
(c) In 1973, 1974, 1975 and 1985, when the minimum wage was increased more than once during the year, the rate applying after the first increase has been used;
(d) Rates expressed are those for the April half year from 1960 to 1979 and for the February quarter from 1980 to 1993.

Source: Department of Labour, pers. comm.

1.5 The *Employment Contracts Act*

Without doubt, the labour market reform with the greatest effect on the ambit of minimum wage legislation has been the *Employment Contracts Act* of May 1991. The Act is based on the principles of freedom of contract and freedom of association, and it removed most statutory restrictions on wage bargaining. Following a transition period in which occupational and craft awards were preserved until replaced with specific contracts, the new Act has seen the virtual disappearance of the national award system. In this environment, minimum wage provisions have become a more significant restriction on the terms of contracts.

Some observers have seen the advent of the *Employment Contracts Act* and the demise of the national award system as a reason why New Zealand should now strengthen minimum employment conditions such as the minimum wage. Advocates of this have included Brosnan and Rea[5] who argue, *inter alia*, that the minimum wage should be increased to cover a wider range of age groups and be subject to regular assessment and modification through a consultative process.

In February 1994 it was announced that a minimum youth wage, at 60 percent of the adult rate, would be introduced. The new rate of $3.68 per hour would apply to 16 to 19 year olds and apply from 31 March 1994.[6]

At the same time, the prime minister and the minister of employment announced jointly that there would be a Prime Ministerial Task Force on Employment to review employment policies generally. Its terms of reference included a requirement to report on the minimum wage issue.[7]

Two other commentators have argued that, through its impact on awards, the *Employment Contracts Act* can be expected to interfere with the conditions enjoyed by disabled people working on under-rate workers' permits.[8] The *Labour Relations Act* provided for under-rate

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5 Peter Brosnan and David Rea, "An Adequate Minimum Code: A Basis for Freedom, Justice and Efficiency in the Labour Market," *New Zealand Journal of Industrial Relations*, 16(3), August 1991, pp143-158.

6 Hon Doug Kidd, "Youth Minimum Wage by end of March," *Media Release*, Wellington, 9 February 1994.

7 Rt Hon Jim Bolger and Hon Wyatt Creech, *Press Statement*, Wellington, 9 February 1994.

8 Phillipa Bascand and Stephen Frawley, "Possible Consequences of the Employment Contracts Act for People with Disabilities," *New Zealand Journal of Industrial Relations*, 16(4), December 1991, pp309-315.

permits to be negotiated into awards and agreements. The authors considered it likely that the disappearance of blanket coverage of these and other people by the award would cause disabled people to lose any wage or non-wage conditions included in the award which were in excess of the minimum conditions specified in legislation such as the *Holidays Act 1981* or the *Minimum Wages Act 1983* and the *Parental Leave and Employment Protection Act 1987*. The authors' concern was with both wage and non-wage aspects.[9]

It is important not to exaggerate the extent to which the *Minimum Wage Act* has acquired a new status following the other reforms to labour law. National awards and agreements covered only around 6 out of every 10 employees in the New Zealand workforce. Moreover, exceptions applied to people with disabilities for two reasons. First, historically, sheltered workshops have been exempted from union coverage and minimum industrial conditions by the *Disabled Persons Employment Promotion Act 1960* (the DPEP Act).[10] Second, income support benefits for disabled people often exceed the minimum wage rates (as is true of several categories of non-invalid social security recipients).[11] These are important aspects of

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9 For instance, noting that disability is not recognised in the *Employment Contracts Act* as grounds for a personal grievance, Bascand and Frawley observed that public service unions have made provision in their new agreements with departments for disability to be recognised as grounds for grievance. This is said to be:

> "a positive example of how collective strength by a progressive union has assisted its disabled members, but it also highlights the way in which the new Act sets conditions at the lowest legal minima, and any conditions above that have to be negotiated into the collective agreement" (*op. cit.* p312).

10 The DPEP Act has enabled approved organisations operating sheltered workshops in registered premises to obtain, among other things, blanket exemptions from awards and agreements and entitlements in the *Minimum Wage Act 1983*, the *Holidays Act 1981* and other elements of the "Code of Employment Conditions." A 1991 report by a Working Party whose task was to consider an alternative to the DPEP Act is discussed in the next chapter of this report.

11 Quite apart from the exemption from minimum wage provisions available to sheltered workshops, minimum wage rates are rendered less significant as determinants of disabled people's incomes by institutional features such as:

- Workbridge – a Department of Social Welfare initiative which offers subsidies for up to six months under the heading of Job Plus, specially to help employers take on disabled people;
- *ad hoc* allowances and disbursements supporting the employment of intellectually handicapped people (and especially children);
- a social security benefit abatement regime which has been said to provide no incentive for more than 11 hours of work at the minimum hourly wage (according to an August 1991 report to the Minister of Employment by a Working Party on Employment and Training Policies for People with Disabilities); and

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the incentive environment surrounding the minimum wage provisions. They are discussed further in the next chapter.

1.6 Outline of the Report

The next chapter reviews the administration of the *Minimum Wage Act*. The Act's main provisions, the role of the Inspectorate in the Department of Labour, relationships between the minimum wage and social welfare benefits, the issuing of under-rate permits, and exemptions for disabled people are described. The conclusions of a recent postgraduate thesis are noted (and analysed in more detail in Appendix 3).

Chapter 3 considers the general economic principles involved in minimum wage regulation and the interaction of minimum wages and the position of ethnic groups, work conditions and fringe benefits. Categories of people who are proponents of a minimum wage are noted. The current minimum wage position in various countries is described.

Chapter 4 reviews relevant overseas empirical studies, the detail of which appears in Appendix 5. Most of the major studies involve the United States but studies in a range of other countries are reported.

Chapter 5 presents empirical analysis for New Zealand undertaken as part of this study. Data problems have made this part of the study difficult but the results generally support the findings overseas.

Chapter 6 contains the conclusions of the study. A number of policy recommendations are made concerning the minimum wage legislation and related measures.

- additional (non-means tested) support which is available for (single) blind people.

2. ADMINISTRATION OF THE *MINIMUM WAGE ACT*

2.1 The Statute

The current minimum wage law is the *Minimum Wage Act 1983*, most recently amended by the *Minimum Wage Amendment Act 1987*. The 1987 changes, which were relatively minor, essentially entailed:

- the addition of a requirement for a review by the minister of labour in each year ending 31 December of any minimum rates applying, following which adjustments might be recommended to the Governor-General;
- the addition of a requirement that employers keep wage and time records with fines of up to $2,000 for not doing so; and
- an upgrading of the summary penalty on employers for underpayment ("up to $1,000") and of the provisions for imprisonment and fines for defaults in relation to compliance orders (up to 3 months and/or up to $5,000).

A copy of the Act is included for convenience at **Appendix 1.** Its essential features can be summarised as follows:

- it allows rates to be set by the Governor-General by Order-in-Council for any class or classes of workers;
- all workers of relevant age are covered by the Act, except:
  - apprentices;[12]
  - persons undergoing training in some nominated professions (including architecture students, optical students, surveying students, pharmacy students, articled clerks, teacher trainees and full-time university students employed during holidays to obtain practical experience related to their studies);[13]

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12 With the repeal the apprenticeship legislation, blanket exemption has been replaced by the Minimum Wage (Training in the Nature of Apprenticeship) Regulations 1992, which list 145 trades where people undergoing a registered training programme would be exempt from the minimum. The list of trades seems arbitrary. It contains none of the newer 'computer-age' occupations, for example.

13 These provisions are contained in the Minimum Wage Regulations 1946. They take the following form and, as can be seen, they include some rather old-fashioned terminology:

/cont.

- inmates of any charitable institution (though not those there solely as workers); and
- holders of an under-rate workers' permit issued by an Inspector;

- at section 7, the legislation says that the cash value of any board or lodging provided (up to the amount specified in other relevant legal provisions or otherwise no more than would reduce wages by 15 percent for board or 5 percent for lodging) will be taken into account when measuring the wage paid. This section also says that an employer is not entitled to make any deductions for downtime that is not the employee's fault;

CLASSES OF PERSONS EXCEPTED

3. The following classes of persons shall be excepted from the provisions of the Act:

(a) Female apprentices employed under awards or industrial agreements;

(b) Apprentices serving under articles of apprenticeship of any of the classes referred to in section II of the Pharmacy Act, 1939;

(c) Pupil-nurses, pupil-aids, and maternity trainees under the *Nurses and Midwives Act, 1945;*

(d) Persons employed under contracts of service under which they are required to undergo any training, instruction, or examination for the purpose of becoming qualified for the following professions - namely, accountancy, architecture, engineering (civil, electrical, mechanical, or structural), law, optical, surveying - where the employer is himself practising the particular profession in respect of which the person is undergoing such training or instruction;

(e) Any of the following classes of person in the employ of the Department of Education or of any Education Board, Board of Governors, Board of Managers, or other authority having immediate control of any public school, Native school, or secondary school within the meaning of the Education Act, 1914, or of any technical high school, combined school, or teachers' training college established under that Act:

(i) Training college students;

(ii) Kindergarten trainees;

(iii) Student teachers in technical and combined schools;

(iv) Homecraft trainees;

(v) Male junior assistants in Native schools;

(f) The following employees of the Crown:

(i) Female student dental nurses;

(ii) Rural field cadets, while attending Lincoln or Massey College;

(iii) Urban field cadets, while attending any University college as full-time students;

(iv) Officers granted special leave while attending any University college as full-time students;

(g) Any other full-time students of any University college employed during any vacation period for the purpose of obtaining practical experience to supplement the theoretical knowledge obtained as a result of their studies."

- section 8, which discusses under-rate workers' permits, says that it does not "abrogate" any other provisions (in awards or agreements) for under-rate payments. The implication is that categories of people other than those listed under the second dot point above could be exempt from the minimum rates specified under the Act;[14] and
- section 11 says the Labour Court or the District Court "as the case may be" may order that an employer comply with the Act.

The current (pre-tax) minimum wage rate for adults is $6.125 per hour (for hourly work or piecework), $49 a day (if paid by the day), or $245 a week in all other cases. These rates have applied since an Order-in-Council, termed a "Minimum Wage Order", took effect on 17 September 1990. A copy is included in Appendix 2. The Order makes it clear that workers are entitled to the prescribed minimum rate for each hour per day worked in excess of eight and for each hour per week worked in excess of 40.

As noted in Chapter 1, a minimum wage was introduced for 16 to 19 year olds as from 31 March 1994. Their minimum wage rate is to be $3.68 an hour or $147.20 for a forty hour week – which is 60 percent of the adult minimum wage. The Minimum Wage Order by which this change was introduced is included in Appendix 2.

The 1945 legislation initially covered people 21 years of age or more (it was reduced to 20 years and above in 1970 to conform with the *Age of Majority Act*). The rate, then two shillings and nine pence per hour for "workers" and one shilling and eight pence per hour for "females", was specified in section 2(2) and 2(3) of the Act. Section 2(6) allowed for exemptions to be granted by an Inspector of Awards. These two sections were replaced in 1952 by a provision for a Minimum Wage Order to be issued by the Governor-General.

Section 3 of the original Act exempted not only apprentices but also "[p]ersons of any class prescribed by regulations under this Act who are employed under contracts of service under which they are required to undergo training/instruction or examination for the purpose of becoming qualified for the occupation to which the contract of service relates" (s3(b)). An exemption for "inmates of any charitable institution" was added in 1946.

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14 The *Labour Relations Act 1987* provided for under-rate workers' permits to be negotiated into awards and agreements.

2.2 Administration of the Act

The *Minimum Wage Act* is administered by the Department of Labour with policing of the minimum wage provisions being one of the functions of a unit within the Department known as the Labour Inspectorate. The Department has in part an advisory role, viz "it provides advice on the right mix of policies for achieving the government's goals in the labour market".[15] A background paper for the annual review of the minimum rate by the minister is prepared by the Department each year. Other departments (notably Treasury and the Department of Social Welfare) routinely comment on the paper.[16]

Criteria for review of minimum rates are not specified in the Act. The Department of Labour's background paper for the 1990 review ("Background Paper on the Minimum Wage - 1990") contained the following descriptive material:

(a) *the relationship between the minimum legal wage and the "Minimum Printed Adult Award Rates" registered at 17 July 1990.*

- only two awards from the so-called "1989/90 round" – those with minimum rates in the range $240.00 to $249.99 per week – "would be affected by any increase in the statutory minimum wage";

(b) *the relationship between youth rates and the minimum wage.*

- lowering the age for the statutory minimum wage to 19 years would affect 13 out of the 25 awards with a youth wage at that age while lowering it to 18 years would affect 22 of the 50 awards with a youth wage at that age (assuming no change in the minimum wage);[17]

(c) *the relationship between the average wage and minimum rates.*

- the minimum wage had been around 50 percent of the average wage since 1986; and

(d) *the relationship between benefit rates and the minimum wage.*

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15 Extract from a statement of the Department's Mission and Operating Environment, *Report of the Department of Labour for the Year Ended 30 June 1991*, Department of Labour, Wellington, October 1991, p6.

16 Other parties, such as the union movement and the Employers Federation, also usually make submissions to the minister at the time of the review.

17 These figures only related to awards with age-related youth wages, not those with years-of-service-related 'youth' wages.

- the gross (pre-tax) minimum wage was above social security benefit rates (for example, sickness benefits) for single persons, as had mostly been the case since 1960, and below the married person benefit rate since 1978; and
- the minimum wage had been consistently above the single unemployment benefit rate since 1980 and was just below the married person rate, although it had been below this rate in the first half of the 1980s.

Relevant figures are reproduced in Tables 2.1 and 2.2 .

2.3 Policing of Minimum Rates

The day-to-day enforcement of the minimum rates is the responsibility of the Labour Inspectorate. Its role is set out in section 143 of the *Employment Contracts Act*. Since 1987 inspectors have been concerned solely with monitoring holidays, methods of pay and provisions of the *Minimum Wage Act*. The Inspectorate has nine inspectors, three in Auckland, two in Christchurch, and one each in Wellington, Hamilton, Palmerston North and Dunedin.

Officers of the Department have reported that, given limited resources, the Inspectorate does not conduct routine inspections and only reacts to written complaints (of underpayment).[18]

The number of complaints has been low. In the years to 30 June 1991, 1992 and 1993, there were 4, 25 and 56 complaints respectively. There have been no prosecutions over this period, but several complaints have been resolved through collection of alleged arrears of wages (amounting to $695, $4321 and $9302 in the respective years). At 30 June 1993, there were 27 cases outstanding.

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18 Visiting premises to address employees about minimum employment conditions has apparently taken a significant amount of inspectors' time. One inspector reported in late 1991 that he had been giving about two addresses per week.

Table 2.1: Relationship of Minimum Wage to Social Security Benefits

Year (a) (c)	Minimum Wage (Gross) (b) (d)	Single Benefit (Adult) Currently termed "widows & domestic purposes benefit"	Single Benefit/ Minimum Wage	Married Dependent Partner Currently termed "sickness benefit"	Married Benefit/ Minimum Wage
	$	$		$	
1960	19.75	9.50	0.481	17.00	0.861
1961	19.75	9.50	0.481	17.00	0.861
1962	20.33	9.75	0.480	17.50	0.861
1963	20.33	10.00	0.492	18.00	0.885
1964	21.67	10.60	0.489	19.20	0.886
1965	21.67	10.60	0.489	19.20	0.886
1966	21.67	11.50	0.531	21.00	0.969
1967	22.25	11.75	0.528	21.50	0.966
1968	23.50	12.25	0.521	22.50	0.957
1969	26.00	13.26	0.510	24.00	0.923
1970	26.00	13.75	0.529	25.00	0.962
1971	27.00	16.00	0.593	29.00	1.074
1972	27.00	21.00	0.778	35.00	1.296
1973	45.00	22.50	0.500	37.50	0.833
1974	48.40	24.50	0.506	40.70	0.841
1975	54.88	28.75	0.524	47.90	0.873
1976	60.76	33.20	0.546	55.32	0.910
1977	64.41	38.40	0.596	64.00	0.994
1978	73.75	44.28	0.600	73.80	1.001
1979	77.07	48.77	0.633	81.28	1.055
1980	80.16	56.82	0.709	94.70	1.181
1981	84.17	66.00	0.784	110.00	1.307
1982	84.17	76.37	0.907	127.28	1.512
1983	84.17	88.06	1.046	146.76	1.744
1984	84.17	91.22	1.084	152.04	1.806
1985	100.00	99.82	0.998	166.36	1.664
1986	170.00	115.05	0.677	191.76	1.128
1987	210.00	139.25	0.663	232.08	1.105
1988	225.00	151.48	0.673	252.46	1.122
1989	235.00	155.11	0.660	258.52	1.100
1990	245.00	162.26	0.662	270.44	1.104
1991	245.00	135.22	0.552	245.86	1.004
1992	245.00	136.57	0.557	248.32	1.014
1993	245.00	138.37	0.565	251.60	1.027

(a) Pre-1967 rates have been converted into decimal currency;
(b) Minimum wage rates prior to the implementation of equal pay are the male rate;
(c) Where the benefits were increased more than once in the year, the rate after the first increase has been specified;
(d) In 1973, 1974, 1975 and 1985, when the minimum wage was increased more than once during the year, the rate applying after the first increase has been used.

Source: Department of Labour, Department of Social Welfare

Table 2.2: Relationship of Minimum Wage to Unemployment Benefits

Year(a)	Minimum Wage (Gross) (b)	Single Benefit (Adult) Currently the rate for a single person 25 years and over	Single Benefit/ Minimum Wage	Married Dependent Partner	Married Benefit/ Minimum Wage
	$	$		$	
1980	80.16	48.78	0.609	82.72	1.032
1981	84.17	56.58	0.672	96.54	1.147
1982	84.17	65.47	0.778	107.80	1.281
1983	84.17	75.45	0.896	120.32	1.429
1984	84.17	78.15	0.928	123.15	1.463
1985	100.00	88.46	0.885	136.85	1.369
1986	170.00	101.94	0.600	153.87	0.905
1987	210.00	123.20	0.587	185.52	0.883
1988	225.00	134.02	0.596	201.80	0.897
1989	235.00	137.24	0.584	211.30	0.899
1990	245.00	143.57	0.586	223.22	0.911
1991	245.00	129.81(108.17)(c)	0.530(0.442)(c)	216.34	0.833
1992	245.00	131.11(109.25)(c)	0.535(0.446)(c)	218.50	0.883
1993	245.00	132.84(110.69)(c)	0.542(0.452)(c)	221.38	0.904

(a) Where benefits were increased more than once in the year, the rate after the first increase has been specified;

(b) In 1985, when the minimum wage was increased more than once during the year, the rate applying after the first increase has been used;

(c) For illustration, these figures refer to the unemployment benefit rate for 18 to 24 year olds, i.e. the rate applying to 20 to 24 year olds, the youngest category to which the minimum wage currently applies.

Source: Department of Labour, Department of Social Welfare

2.4 Granting Under-Rate Workers' Permits

The other main activity of inspectors is issuing under-rate workers' permits. Unions were once able to issue them, as well as approve below-award payments, and amongst union-approved permits some were below the minimum legal wage.

Examination of a sample of about 40 under-rate workers' permits revealed that while most were above the minimum wage, several involved rates markedly below the minimum, and were signed by the relevant union official. Each involved approval for a period of six months, after which renewal would usually be sought.

Prior to the *Employment Contracts Act*, under-rate certificates tended to be dealt with as exemptions to awards rather than as exemptions to the minimum wage. One consequence of the dismantling of the award structure since the *Employment Contracts Act* has, therefore, been that under-rate certificates now relate to the minimum wage law alone.

Certificates are now generally issued for a year rather than six months. In the 18 months after the Act came into effect on 15 May 1991, only 20 applications for under-rate certificates were processed by the Inspectorate. However, the number of inquiries has since increased considerably. One inspector, for example, reported that he received 28 calls about the minimum wage in August 1992 alone. About half were from employers and half from employees. Most inquirers simply wanted background information, but seven entailed potential breaches. An officer in the Inspectorate remarked on the new interest in the Act saying that "five years ago, the minimum wage was hardly mentioned".

2.5 Exemptions for Disabled People

The Inspectorate has no role in the administration of the *Disabled Persons Employment Act* which, in the opinion of Inspectorate representatives, probably accounts for more than 2000 exemptions to minimum pay rates each year.

An insight into the practical side of exemptions can be gained from a 1991 report by a Working Party on Employment and Training Policies for People with Disabilities.[19] The Working Party's main responsibility was to advise on what provisions should be put in place when the *Disabled Persons Employment Promotion Act* was repealed as scheduled in 1992. As noted earlier, sheltered workshops have been able to obtain blanket exemptions under that Act from minimum wage and other industrial provisions. The report was largely about the pros and cons of different ways of selectively exempting disabled people from the minimum wage law.

It indicated that some two-thirds of the IHC's centres had not obtained the blanket exemption required[20] and insufficient under-rate workers' permits seemed to be in

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19 "Developing an Integrated Policy to Facilitate Employment and Training of People with Disabilities", Report of the Working Party on Employment and Training Policies for People with Disabilities to the Minister of Employment, August 1991.

20 The report says "Eighty-six of the 129 Orders-in-Council registered under the DPEP Act since 1960 provided industrial relations exemptions for specific sheltered workshops operated by different branches of IHC. Recent enquiries by the Working Party established that 45 of those 86 workshops no longer had valid exemptions because the building had been sold, the address had changed or the organisation no longer ran a sheltered workshop on the premises. There were also 39 new operations operating without an exemption, bringing the total to 108.

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existence. Some 400 people in sheltered workshops and supported employment outside workshops may have been illegally employed at rates of pay below the minimum legal rate.

The Working Party also looked at means of providing disabled people with opportunities for 'open' employment (that is, not in workshops or in employment supported outside them by community organisations). It observed that:

> the major practical difficulty which people with significant and lasting incapacity and low productivity face in finding paid employment in the open labour market is that, at the market wage rates, their low level of productivity makes them unattractive to employers (p 82);

and that:

> Existing industrial legislation does offer a means of overcoming this barrier to employment. The Minimum Wage Act 1983 provides Labour Inspectors with the power to issue such an individual an under-rate workers' permit ... (p 82).

However, the report said that very few (20) permits were lodged at 30 June 1991, and only half were for rates below minimum wages. In fact, many more under-rate certificates may have existed than the Working Party realised. While the award structure continued, the unions continued to issue them and did not always notify the Inspectorate.

In its conclusions, the Working Party opted for issuing under-rate workers' permits alone (while allowing disabled people to keep their social security allowances), or for long-term partial wage subsidies for all disabled people (whether in sheltered workshops, supported employment or open employment). But it could not unanimously agree which was superior until further research on the fiscal costs and jobs impact of different benchmark and social security variations had been carried out. No such research results have been published since the Working Group's August 1991 report and indeed no new provisions have appeared as a result of the report.

Interestingly, in April 1994 there were reports that the Council of Trade Unions "had been asked to support a nationwide campaign for an increase in the minimum wage of thousands of disabled workers in sheltered workshops"[21]. A CTU spokesperson was quoted as saying that thousands of disabled workers were being exploited by charities and private enterprise on a wage less than a third of the newly introduced minimum youth wage.

In all, two-thirds were operating without an exemption or a valid exemption" (p84).

21 See, for example, Toni McRae, "CTU to take up fight for disabled," *Sunday Star-Times*, 17 April 1994.

2.6 Views on the Impact of the Act

The Department of Labour has publicly offered an opinion on the impact of the minimum wage on at least one occasion – in May 1992. Its view was that the statutory minimum wage was benign. In the Department's words:

> It is hard to estimate how great the impact removal of the minimum wage would have on unemployment. If it were likely to have a substantial impact, one would expect to see a relatively large number of workers currently being paid at or near the minimum and this does not appear to be the case, although we don't have accurate figures on the distribution of wage payments. Another fact which suggests that the minimum wage may exert only a small influence on employment is that the unemployment rate of 15-19 year olds – for whom no minimum applies – is the highest for any age group. There may, of course, be other factors accounting for this but it does suggest that – at least down to the youth rate of benefit ($109.25 net for 18 and 19 year olds) – removal of the statutory minimum is unlikely to greatly increase employment.[22]

There have been few formal studies of the impact of New Zealand's *Minimum Wage Act* on particular groups and the New Zealand economy. A relatively recent exception was a post-graduate thesis by Cumming.[23] Cumming had been employed at the Department of Labour's Low Pay Unit and was thus familiar with available statistics on the subject. The thesis put forward the minimum wage issue as a question of whether the "neoclassical" theoretical framework or an alternative, termed "segmentation theory", offered a better analysis of low pay.

While the thesis presented some useful background data, in the main it relied on *a priori* reasoning. The author adopted a positive view of minimum wages, without presenting any objective evidence in support. The principal conclusion – that young people, women and ethnic minorities (and New Zealand society) would be adversely affected by removal of the minimum wage legislation – was merely asserted. A critique of the thesis is presented in Appendix 3.

It is understood that there have been at least two other New Zealand studies in recent times, though the extent to which they have included analysis is not clear. For example, in material

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22 Department of Labour, "Unemployment – Policy Issues", *Submission to the Enterprise Council*, Wellington, 7 May 1992.

23 Jacqueline Margaret Cumming, "A Theoretical and Empirical Analysis of Minimum Wage Legislation and Its Impact on Low Pay : A New Zealand Perspective," *Thesis presented to University of Auckland in partial fulfilment of the requirements for the degree of Master of Arts in Economics*, unpublished, Auckland, February 1988.

obtained by the Business Roundtable from the Ministry of Youth Affairs under the *Official Information Act* in February 1994, reference is made to a 1993 study by Professor Allison Wellington who is said to have reviewed the time series evidence on the teenage employment response to minimum wages, finding it to be "0.6 percent".[24]

Another study mentioned in an earlier Ministry of Youth Affairs document is "in-depth research" by the Industrial Relations Centre at Victoria University in August 1993.[25] This was said to have suggested that reducing the age of the adult minimum wage to 18 would have a limited effect on the majority of young people's pay with 75 percent of contracts containing youth rates on the Centre's database already paying in excess of the minimum adult wage. The Ministry referred to this work in a paper which supported the introduction of a minimum wage for employees under 20 years of age. In the paper the Ministry also said it did not support referring the issue of a youth minimum wage to the proposed Prime Ministerial Task Force on Employment because:

> There is a danger the work of this task force becomes too broad. Agreeing on the basic minimum employment requirements for all employees should be reached before the task force begins its work. Transferring the debate to the task force is likely to slow down the process of deciding on the minimum wage issue for young people.

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24 Heather Roberts (for the Chief Executive), "Comments on Business Roundtable Paper on Youth Minimum Wage", *Briefing note to the Minister of Youth Affairs prepared by David Hanna*, Wellington, 14 January 1994.

25 Heather Roberts, "Minimum Wage for Young Workers," *Report to the Minister of Youth Affairs prepared by David Hanna*, Wellington, 15 December 1993.

3. AN OUTLINE OF THE ECONOMICS OF MINIMUM WAGES AND THEIR RECENT HISTORY

As noted in the previous Chapter, the effects of the statutory minimum wage rates specified in New Zealand's *Minimum Wage Act* have not been extensively studied by economists. Minimum wages have, however, been closely examined in many of the other countries where they apply – such as the United States, Canada, the United Kingdom, France, and Central and South America. In this chapter, the economics of minimum wages and surveys of economists' opinions about their effects are considered. In addition, the origins and recent history of minimum wages in selected countries are discussed as a prelude to the empirical research reviewed in Chapter 4.

3.1 The Orthodox View of Statutory Minimum Wages

3.1.1 Labour as a Factor of Production

Economists generally look upon labour as a factor of production whose price, in terms of rates of pay and other hiring costs, influences how much employers are prepared to buy. As minimum wage laws intentionally and artificially raise the price of labour, their effect is to reduce the total quantity of labour which businesses are willing to hire. Thus, enforcing higher-than-market wages causes a loss of employment.

Researchers have argued that employment losses will be concentrated in the sections of the labour market where productivity, or perceived productivity, is lowest – that is, amongst the untrained, the inexperienced, the young, the weak and the disabled. The standard analysis allows that there may be some offsetting increase in the employment or pay rates of older, better trained and more experienced employees. But the usual prediction is that the net effect of minimum wage laws is a waste of resources (or deadweight loss) because, as an accompaniment to the change in shares of work and pay, resources are pushed into activities where their rewards are below their marginal product.

Much of the interest of economists in minimum wage laws has been the apparent conflict between their effects and their stated intention to safeguard workers' welfare. Indeed, the orthodox analysis suggests that only in the perverse sense that they disqualify a vulnerable segment of the workforce from taking up work, while not reducing the average pay rates of the rest, can it be said that the lot of the average worker is improved.

Serious reviews of the literature on the effects of the minimum wage generally recognise Stigler's 1946 article as a landmark contribution.[26] Stigler outlined what has become the standard partial equilibrium model which predicts a decline in employment as a result of the setting of a minimum wage. He also identified the special case of monopsony (see section 3.1.6 below), discussed the disincentive provided by minimum wage laws for on-the-job training, and recognised that a minimum wage imposed a higher relative wage floor in regions with lower average wages.

3.1.2. Refinements since Stigler's 1946 Review

Economists who have studied minimum wages closely have argued that, besides their adverse implications for the general level of employment and the distribution of employment opportunities, minimum wages have a range of more subtle effects on labour decisions which are no less deserving of attention. Especially important have been predictions that they:

- permanently reduce productivity by discouraging on-the-job training (and increasing school enrolments);
- cause a shift of marginal workers to self-employment and 'underground' activity;
- increase social security expenditures; and
- institutionalise racial discrimination.

An important review of the United States literature on the employment effects of the minimum wage was published by Brown, Gilroy and Kohen in 1982.[27] The review was a revision of work undertaken originally for a United States Minimum Wage Study Commission which reported in 1981.[28] It followed a broad assessment of some of the Canadian and American literature by West and McKee in 1980.[29]

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26 George Stigler, "The Economics of Minimum Wage Legislation," *American Economic Review*, 36, June 1946, pp 358-65.

27 Charles Brown, Curtis Gilroy and Andrew Kohen, "The Effect of the Minimum Wage on Employment and Unemployment," *Journal of Economic Literature*, Vol XX, June 1982, pp 487-528.

28 *Report of the Minimum Wage Study Commission*, Washington DC, US GPO, 1981.

29 E.G. West and Michael McKee, *Minimum Wages: the New Issues in Theory, Evidence, Policy and Politics*, Economic Council of Canada and the Institute for Research on Public Policy, Ottawa Canada, 1980.

Though principally a survey of empirical work (the findings of which are summarised in the next chapter), the 1982 review article also canvassed theoretical developments. Following an outline of the simple competitive supply/demand model, the monopsony exception and the notion of 'shock effects' (see section 3.1.6 below), the authors introduced a two sector model developed by Welch in 1974 involving a *covered* sector and an *uncovered* sector. In this model, workers displaced from the covered sector may seek work in the uncovered sector or drop out of the workforce. The total *employment* effect "depends on the elasticity of labour supply and the reservation wages of those who do not obtain covered sector work as well as more obvious factors such as the size of the covered sector and the elasticity of labour demand." In Chapter 5 of this study an application of the basic Welch model[30] to New Zealand data is described.

A refinement to the Welch model was presented by Brown *et al.* which included workers choosing unemployment while seeking covered employment if this offered the highest expected wage. Job turnover in the covered and uncovered sectors was one determinant of the probability of success in each.[31] The reviewers explained how this model could be extended to allow workers the option of seeking covered work while employed in the uncovered sector.[32] Such models have the added dimension of offering predictions of the effects on *unemployment* of minimum wages.

Models allowing explicitly for differences in workers' skills were then discussed. A two-skill model was cited where workers possessing more or less of each would be paid a wage in the sectors requiring one or the other skill. The introduction of a minimum wage would truncate the wage distribution. Refinement to allow for continuous distributions of worker skill allowed the possibility that a minimum wage would, by eliminating the lowest quality labour, alter the entire wage distribution – so that, for example, the lowest quality worker remaining employed enjoyed a higher wage than before. Extending the model further to allow workers to increase their effort would generate predictions of a spike in the wage distribution at the minimum wage, rather than simply a truncation. This is the shape of observed wage distributions.

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30 Brown *et al.*, *op. cit.* p490 (after Finis Welch, "Minimum Wage Legislation in the United States," *Economic Inquiry* , 12(3) September 1974, pp 285-318).

31 *ibid,* p491 (citing Mincer/Gramlich).

32 *ibid,* p492 (citing Mincer/Gramlich).

3.1.3 Statutory Minimum Wages and Ethnic Groups

The likelihood that minimum wages will disproportionately affect particular ethnic groups deserves separate discussion. The typical case has been described by one writer as follows:

> Most people think of minimum wage policy as a means to improve the market opportunities of disadvantaged workers. The following analysis will help us decide whether it can have other motivations, as well.
>
> "Assume that 100 yards of identical fence per day can be produced by either a black worker or a white worker. The black worker offers his or her services for $10 per day while the white worker demands $15. The fence-building firm that is seeking to maximise profits – even if its executives prefer white people to black – will find that their profits are higher if they choose the black worker. If the employer discriminates against the equally productive black worker, it will cost the firm an additional $5 per day in labour costs. Discrimination exposes this employer to competitive market pressures from employers who have chosen not to indulge their racial preferences and who are only too anxious to undercut their rivals.
>
> "Under open market competition, demanding $15 per day would price the white worker out of the market. One strategy for the white workers is to seek legislation that mandates a minimum wage of $15 per day in the fencing industry. After the law's enactment, the firm's cost in discriminating against the equally productive black worker is zero. The law of demand predicts that the employer will then have greater incentive to act out his racial preferences and to discriminate against the black worker.[33]

The country which has made the most widespread use of minium wage legislation is South Africa:

> The *Wage Act* of 1925, by applying the 'standard rate' to spheres of employment where no labour unions existed, sought to help the poor whites by restricting non-white competition. The Act's wording was rich in humbug about non-discrimination, and its sponsors claimed to be protecting the 'higher civilisation', as well as preventing 'sweating' and encouraging efficiency through higher earnings.[34]

Many of the same considerations motivated the establishment of minimum wage regulation in the United States. One episode is described by Williams as follows:

> In 1909, the Brotherhood of Locomotive Firemen called a strike against the Georgia Railroad. One of their demands called for the complete elimination of blacks from the employment rolls. Instead of eliminating blacks, however, the arbitration board decided that black firemen, hostlers, and hostlers'

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33 Walter E. Williams, *South Africa's War Against Capitalism*, Praeger, 1989, p70.

34 W. H. Hutt, "Summary of the Economics of the Colour Bar," initially published in1964, reprinted in *Apartheid: Capitalism or Socialism*, Hobart Paperback 22, Institute of Economic Affairs, 1986.

> helpers should be paid wages equal to the wages of white men doing the same job. The white unionists were delighted with the decision; they said, 'If this course of action is followed by the company and the incentive for employing the Negro thus removed, the strike will not have been in vain.' [35]

A more recent discussion of how minimum wage laws can lead to racial discrimination can be found in Epstein's important 1992 book on employment discrimination. Epstein categorised the minimum wage as one of an array of obstacles to mutually advantageous work arrangements.[36] Of particular relevance to this study is the following quotation from an earlier piece of research by Kosters and Welch:

> As expected, minimum wages are estimated to have a destabilizing effect upon teenagers and a stabilizing effect on adults. In a sense, minimum wages seem to shift much of the burden of variation in aggregate employment from adults to teenagers, from males to females, from whites to nonwhites; in each case the destabilizing effect is upon those with lower average wages.

3.1.4 *Adverse Impact on Fringe Benefits and Work Conditions*

Another widely accepted conclusion is that fringe benefits of employment (besides on-the-job training), such as work safety, courteousness of management, the absence of production demands by supervisors, the locational convenience of the workplace, or physical comforts such as airconditioning – all of which could, by agreement, be part of the package obtained by low wage employees – will tend to be withdrawn if money-wage minima are enforced. From a wider perspective, such changes represent some of the shifts in the mix of capital, labour and working conditions which could be prompted by a minimum wage. The prospect of such responses is both a reason why the adverse effects of minimum wages are unlikely to be represented solely by changes in the number of people employed and a reason why accommodation to minimum money wages may sometimes cost less than expected in terms of reduced productivity.[37]

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35 Williams, *op. cit.* p74.

36 Richard A. Epstein, *Forbidden Grounds: The Case Against Employment Discrimination Laws*, Harvard University Press, London, England, 1992. See especially pp125-126 which explains how the minimum wage encourages racial discrimination and pp261-262 where the author cites research findings by Marvin Kosters and Finis Welch.

37 Such effects of statutory minimum wages are emphasised in the refinement of the standard text book analysis offered by Richard B. McKenzie in *The Fairness of Markets*, Lexington Books Lexington, Mass. 1987 and *The American Job Machine*, Cato Institute, Universe Books, New York 1988 (especially Chapter 9, "Minimum Wages: Revisions in the Conventional Wisdom," pp198-217).

3.1.5 *Who Supports Compulsory Minimum Wages?*

Surprised that minimum wages have remained so popular in the face of these problems, some analysts have looked closely at the political economy of such legislation.[38] Likely supporters of minimum wages identified in such studies include skilled and experienced employees who benefit from having less competition from the lower paid end of the market. The volume of union membership may be adversely affected by the unemployment caused by minimum wages, meaning that union officials may be lukewarm about such laws (as seems to have been the case in the United Kingdom for many years). However, rank and file support within unions, and that of the vocal, entrenched majority in particular, may be quite strong. Suppliers of capital equipment, such as vending machines, are also among those predicted to be supporters of minimum wage laws as their goods could be a substitute for low-paid labour.

The losers from minimum wage laws are apt to be politically weak. The youngest workers affected in some countries may not even have the vote. Displaced marginal people may need to resort to charitable institutions and welfare agencies, all of which, in a sense, have a career interest in the proliferation of patch-up solutions as distinct from lasting reforms.

Most statements in support of minimum wage regulation are based on notions of a class struggle between workers and employers. Employers are portrayed as having the whip hand in the employee/employer relationship and thus as needing to be restrained through rules set by a central judge or governmental authority.[39] Seldom are assertions of this type backed by analysis or supporting facts; links with some widely publicised ideological position are usually deemed to be sufficient. Commenting on this view of how the labour market operates, Epstein has pointed out:

> If such an inequality did govern the employment relationship, we should expect to see conditions that exist in no labour market. Wages would be driven to zero, for no matter what their previous level, the employer could use his (inexhaustable) bargaining power to reduce them further, until the zero level was reached.[40]

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38 See, for example, Margaret Jane Hobson and S. Charles Maurice, "Minimum Wage Laws: Who Benefits, Who Loses?" *Series on Public Issues No 2*, Centre for Education and Research in Free Enterprise, Texas A and M University, 1983.

39 One example of a statement of this kind in New Zealand is the book by P. Brosnan and F. Wilkinson, *Low Pay and the Minimum Wage*, New Zealand Institute of Industrial Relations Research, Wellington, 1989.

40 Richard A. Epstein, "In Defense of the Contract at Will," *University of Chicago Law Review*, 51, 1984, p972.

A common feature of statements in support of the minimum wage is paternalism: notwithstanding standard common law protections and the evidence that people manage complex issues and other contractual relationships in their daily lives without third party interference, individuals are considered incapable of seeing what is good for them in the workplace. Finally, a good deal of the support for minimum wages comes from people with good intentions - a concern for those on low incomes - but who lack understanding of their harmful effects.

3.1.6 *Efficiency and Distributional Arguments for Compulsory Minimum Wages*

Notwithstanding the orthodox economic view as expounded by Stigler and others, there are some conditions which, if met, might constitute respectable economic arguments for keeping or instituting minimum wage legislation. In general, they relate to the notion that either:

- voluntary market processes are distorted and can be made more efficient with intervention; or
- the intervention will produce a fairer distribution of income and wealth.

The first may be termed an efficiency argument; the second is a distributional argument.

The most popular efficiency argument for a statutory minimum wage is the special case of monopsonistic labour demand recognised by Stigler. This may occur where buyers of labour collude or are so concentrated that fewer employees are hired, and those who are hired have lower wages than would be the case in an efficient, smoothly working market. In theory, a minimum wage set between the monopsonic wage and the wage at the intersection of the marginal cost of labour curve and the demand curve for labour will result in an expansion of employment (and an increase in total national well-being).

The main practical problem here is that, however well-intentioned, governments are unlikely to know enough to be able to apply such a measure accurately. The danger of over-reacting is very real. Monopsony is likely to be a transient phenomenon. More direct means of tackling it are likely to be available – especially (as is the case with employers in protected industries) where the root cause is some other government intervention. The answer would be to remove the offending intervention.

The question of whether the monopsony justification for minimum wages might hold true for New Zealand is briefly considered in Chapter 5.

Other efficiency arguments advanced for centralised wage fixing may be relevant to the case of statutory minimum wages. Brook has considered the general arguments for central wage fixing under two headings – the 'shock' theory that higher wages will prod businesses into

greater efficiency,[41] and the 'collective voice' idea that having a central spokesperson is an efficient way for workers to negotiate.[42] Neither argument stands up to Brook's analysis.

Distributional arguments require judgments on the objectives of such policies. While economists can claim no special expertise on matters of fairness, they can comment with some authority on:

- the extent to which a particular instrument will achieve particular objectives;
- whether the distributional effects of the instrument in question reinforce or conflict with those of other distributional instruments; and
- the relative cost, in terms of resources to society forgone, of different ways of achieving particular objectives.

Assessments are often frustrated by the absence of a clear statement by governments of the objectives of distributional instruments. That is true of statutory minimum wages in most countries. However, if redistributing income to the lowest income groups is the primary intention, a statutory minimum wage is almost certainly a poor instrument to achieve it. The first reason for this is the disemployment it causes and the loss of non-wage benefits it imposes on some low-wage people. The second is that there is no reason to think, in Western countries at least, that the lowest wages are earned by people in the poorest households.

In studies overseas it has been found that the minimum wage is a poorly targeted way to achieve society's distributional objectives because:

- poverty is associated with not working rather than with low pay – hence a statutory minimum wage policy is more likely to increase poverty than to reduce it; and
- many of those who earn an income around or slightly above the minimum wage come from households whose overall income is well above the minimum.

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41 Brook (*op. cit.* p62) notes this idea has been advanced in P. Brosnan and F. Wilkinson, *op. cit.*

42 This has been put forward as an argument for empowering unions to negotiate wages on behalf of workers. It may be similarly applied to the idea of a centrally determined wage minimum. Brook cites a 1979 article for a typical explanation, viz R.B. Freeman and J.L. Medoff, "The Two Faces of Unionism", *Public Interest*, 57, 1979, pp69-93.

The wage/income relationship in New Zealand's case has been examined by Cumming and found to be no closer than elsewhere.[43] This is elaborated upon by the study of available data in Chapter 5.

It has also been pointed out that as a result of the adjustment of fringe benefits, increases in statutory minimum wages can have the effect of raising the proportion of rewards for working which are paid in the form of money. Since the lowest paid groups are most likely to be affected, the net result is likely to be a proportionately larger payment of taxation by them, an effect which will reduce the progressivity of the income tax structure.[44] This would also be a risk in New Zealand, though it would be difficult to test empirically.

3.2 A Simple Diagrammatic Analysis

The preceding discussion can be usefully expressed with the aid of diagrams. Figure 3.1 represents a 'partial equilibrium' model of the labour market. The key assumption of partial equilibrium analysis is *ceteris paribus* – that the rest of the economy can be safely left out of the picture because it remains unaffected by the changes being examined. This is certainly convenient and, for small changes, is usually also realistic.

In the figure on the next page, DL represents the demand curve for labour. Its slope depends on: the elasticity of demand for the product; the (marginal) productivity of labour (in combination, where relevant, with other factors of production); and the share of labour costs in the total costs of production. SL represents the supply curve for labour. Its slope ultimately reflects the extent to which good alternative uses exist for wage earners' time – such as child care or reliance on social security benefits. A change in the benefits system (for example, a doubling in the level of unemployment benefits) will lead to a shift in the supply curve for labour (perhaps to SL').

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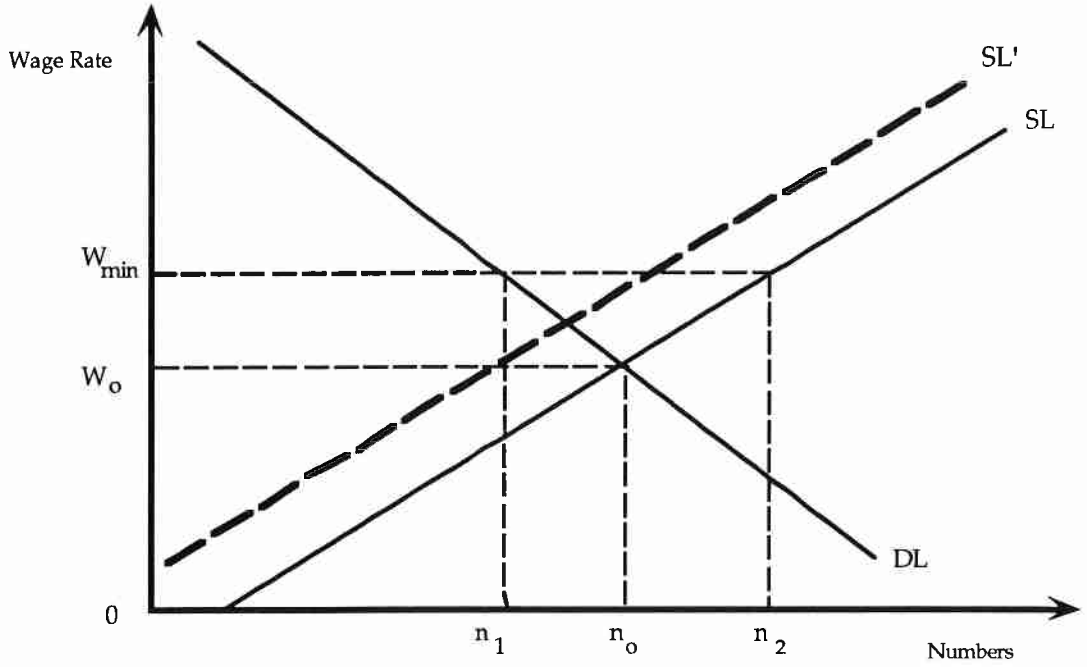
43 Cumming, *op. cit.* pp266-268.

44 Richard McKenzie, 1987, *op. cit.*

Figure 3.1: Simple Diagram of Minimum Wage Effects



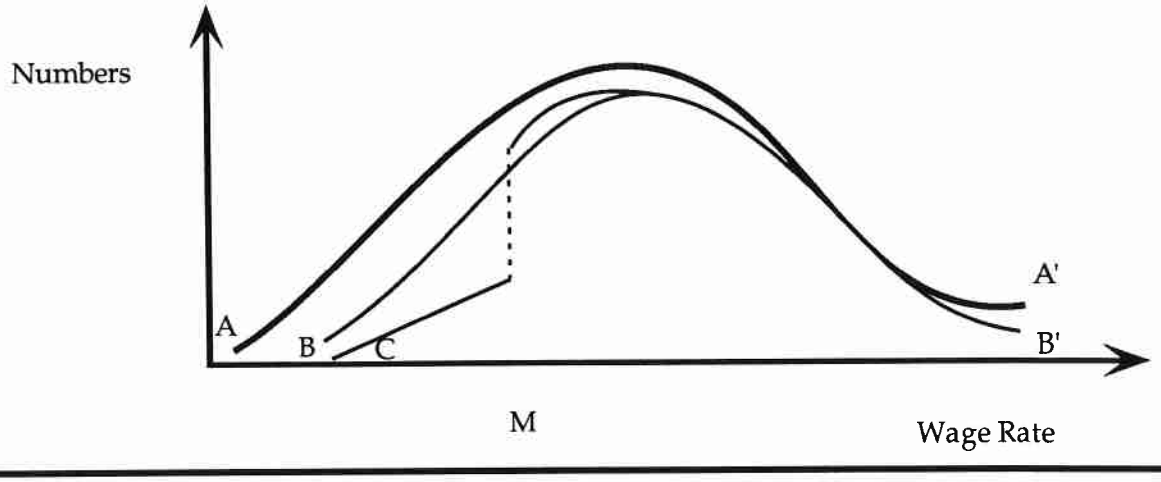
Equilibrium in the labour market results in wage w_o and employment n_o. Suppose now that a minimum wage is set at W_{min}. The demand for labour falls to n_1 but the supply of labour increases to n_2. A number of conclusions can be drawn:

- the effect of the minimum wage on employment depends on the shape of the demand curve for labour – the more inelastic it is, the smaller the negative employment effects;
- the effect of the minimum wage on the excess supply of labour depends on the shapes of both the supply and demand curves; and
- 'excess supply of labour' does not mean the same as unemployment because some people will choose to remain out of, or leave, the labour force, rather than being actively, if unsuccessfully, seeking employment.

An alternative way to look at the labour market is to consider individual differences in productivity. Consider a model in which the services of different individuals are perfect substitutes for one another but some individuals are more productive than others. In other words, individuals supply varying numbers of labour units per hour (depending on their productivity) but labour units are perfect substitutes for one another. Assume further that

individual productivity is normally distributed. To capture this situation, what is required is a diagram, different from Figure 3.1, which depicts not how the average wage varies with shifts in supply and demand, but the various wage rates being paid at a given point in time in given supply and demand circumstances. Such a diagram, showing the distribution of wage rates for *individuals* (not labour units) is presented in Figure 3.2 (note that the axes have been reversed from Figure 3.1).

Figure 3.2: Effect of Minimum Wage on Distribution of Wage Rates for Individuals



The normal curve AA' is the situation that would apply with no government intervention. A diagram like this is interesting because it can be used to explain how minimum wages are most likely to affect wage earners with low productivity who are attractive to employers only at low wages.

First, consider what effect taxes and social security payments would have. Their effect would be to reduce the number of labour units which would be provided at any given wage rate. The curve BB' represents this new situation. The reduction in labour supply may be drawn from persons at all productivity levels but (given the attractive alternative provided to them by the social security system) is likely to be particularly large for persons with low productivity.

Now it is possible to consider the impact of the statutory minimum wage at M. This is shown by the line CB' in Figure 3.2. Few people will earn a wage below M. (There may be some because of gaps in coverage, as provided in New Zealand for disabled people). On the other hand, the number of people earning wages slightly above M will increase and there is likely to be a sharp concentration very near, but on the upper side of, the minimum wage.

This bump would occur because of a reduction of the non-wage benefits of employment (and a rise in money wages) for those who were paid just below the minimum wage before, and because some of those who previously earned wages around the new minimum succeed in increasing their productivity sufficiently to make them attractive for employers to retain.

The diagram depicts, nonetheless, a change in the *total* number employed – indeed, in the case shown, the number pushed out of the workforce is larger than the number who succeed in being retained at a higher rate than before.

The 'in principle' effect of the minimum wage on employee numbers could be calculated by comparing the actual wage distribution with a hypothetical distribution which might have existed in the absence of the minimum wage. This is not an easy thing to do. It amounts to estimating the difference between the curves BB' and CB' in Figure 3.2. Meyer and Wise have attempted the task.[45] Their research is considered a landmark in the analysis of minimum wage effects.

Because the minimum wage can have adverse effects on non-wage conditions of employment, workers with incomes above, as well as those around, the minimum wage may be affected. It also means that a consideration of numbers of employed or unemployed alone will not tell the full story. The acceptability of any new work conditions to both the employer and employee would also need to be considered. This complex issue has only begun to be addressed in quantitative terms. Reference is made to such work in the next Chapter.

3.3 Surveys of Economists' Opinions on Minimum Wages

Economists are notorious – especially as far as non-economists are concerned – for their range of views on many topics. It is, therefore, interesting to see whether any consensus exists among economists on the subject of minimum wage legislation.

Beginning at home, the evidence indicates that in New Zealand nearly 75 percent of economists agree, or agree with reservations, that minimum wages increase unemployment among young and unskilled workers. In a 1990 survey of members of the New Zealand

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45 Robert H. Meyer and David A. Wise, "Discontinuous Distributions and Missing Persons : The Minimum Wage and Unemployed Youth," *Econometrica*, 51(6), November 1983, pp1677-98.

Association of Economists, fewer than 20 percent said they disagreed with that proposition.[46]

Survey results across other OECD countries have been similar overall. According to a 1978 article in the *American Economic Review*, the American Economic Association's main journal, fully 90 percent of the economists surveyed agreed that the minimum wage increases unemployment among low-skilled workers.[47] A majority of a sample of economists surveyed between 1981 and 1983 in Germany, Switzerland and the United States considered that minimum wage legislation increased unemployment among young and unskilled workers. However, in France and Austria a majority of economists surveyed in the early 1980s disagreed with this proposition and had more sympathy with an interventionist approach to economic policy generally.[48]

A survey of British economists in 1989 indicated that 76 percent agreed with the proposition that:

> A minimum wage increases unemployment among young and unskilled workers.[49]

Historically, the intellectual climate in the United Kingdom seems generally to have been more critical of wage regulation than has been the case in New Zealand. The respected newspaper, *The Economist*, has been steadfastly opposed to minimum wages since it began over 150 years ago. A recently published history of that journal records the following:

> In 1849 *The Economist* was reporting that a Factory Act 'which was to work so beneficially for the women and children, has thrown them ... out of employment, and increased the labour of the men without increasing their wages'. In 1989 it was explaining that: 'A minimum wage of 25 cents an hour was introduced by Franklin Roosevelt in 1938. It has since been raised 15 times and reached its present level of $3.35 by the start of the Reagan years. Throughout this period, two things have been clear: that a minimum wage

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46 William Coleman, "Concord and Discord Amongst New Zealand Economists: The Results of an Opinion Survey," Roneo, Economics Department, University of Tasmania, Hobart, September 1991.

47 Linda Gorman, "Minimum Wages", *The Fortune Encyclopedia of Economics*, David R. Henderson (ed), Warner Books, 1993.

48 Bruno S. Frei, Werner Pommerehne, Friedrich Schneider and Guy Gilbert, "Consensus and Dissension Among Economists: An Empirical Inquiry," *American Economic Review*, 74(5), December 1984, pp986-994.

49 Martin Ricketts and Edward Shoesmith, *British Economic Opinion*, Institute of Economic Affairs, London, 1990, p49.

> reduces job opportunities, especially for the young, the disadvantaged and minorities, and that its effect on poverty is tiny.[50]

A survey of the members of the Canadian Economics Association found that 85 percent of them agreed, or agreed with some reservation, with the same proposition.[51] Economics professors in Australia are also largely in agreement on this point.[52]

These surveys of the opinions of professional economists around the world constitute – with the exception of France and Austria in the early 1980s – a very consistent and quite unambiguous conclusion that minimum wage intervention is counter-productive to the interests of those it purports to assist.

3.4 Recent World Trends with Minimum Wage Regulation

A complete survey of countries has not been undertaken in the course of this study, but there are indications that, worldwide, minimum wage legislation is falling out of favour or at least is coming under increasing challenge. While there are few cases where statutory minimum wages have actually been abolished in recent years, the real value of the statutory minimum wage has been allowed to fall in several countries by leaving its nominal value static. This has been the case in New Zealand where, since 17 September 1990, the minimum rate has remained at $6.125 per hour.

Appendix 4 contains descriptive and analytical information on the minimum wage policies in a number of overseas countries. That material is briefly summarised here.

Several European countries still have statutory minimum wages, as do Japan, Canada and the United States. The European Union (EU) countries with statutory minima are Belgium, Holland, France, Spain, Luxembourg and Portugal. The remaining six members of the EU – the United Kingdom, Germany, Italy, Greece, Denmark and Ireland – do not.

The continuation of compulsory minimum wage rates in the EU has been increasingly questioned in the light of evidence that jobs growth there, on average, has been less than one quarter the rate observed in the United States during the 1980s. The president of the European Commission, Jacques Delors, has recently determined that minimum wage

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50 Ruth Dudley Edwards, "The Pursuit of Reason: *The Economist* 1843 - 1993", *The Economist*, London, 1994 p41.

51 Cited in Michael Walker, "Spring Rituals," *Fraser Forum*, April 1988.

52 Malcolm Anderson and Richard Blandy, "What Australian Economics Professors Think," *Australian Economic Review*, Fourth Quarter, 1992.

regulation should be one of the issues reviewed in a detailed study of why Europe is losing competitiveness.

In Belgium, Holland and France the minimum is fairly high (at about two-thirds male median earnings). By comparison, in the United States and Japan the level is much lower – just one-third of the male median earnings rate. Switzerland does not have a minimum wage and has enjoyed a very low unemployment rate. Canada's provinces have minimum wages and, significantly, the provinces with the lowest minima have generally experienced the lowest rates of unemployment.

Thailand is an example of a developing country with a legislated minimum wage. Indeed on 1 April 1993 it was raised by 9 percent in greater Bangkok (to US$5 per day), by 3 percent in six other provinces and by 8.5 percent in the remainder.[53] Being set at different levels for different regions, the effect of the Thai minimum wage on employment is somewhat attenuated. In Papua New Guinea (PNG) the urban minimum wage has been dramatically cut (by about two thirds) to bring it back to the rural sector level.

South American countries have long had minimum wage laws. They can be found in Chile, Brazil, Peru and Argentina, for example. In Central America, Mexico has a minimum wage, while Costa Rica has had a minimum wage system with rates varying across industry and regions.

The first minimum wage laws in the United States were introduced by individual states. A recent review by Thies, described in more detail in Chapter 4, cited a number of colourful objections made earlier this century to the policy of exempting slow workers from minimum wage provisions. Sidney Webb, one of the founders of the Fabian Society, was one commentator who was very critical of exemptions because of the way they allowed people who cannot earn their keep to compete for jobs.[54] In modern times, people who share Webb's politics would rarely be so blunt about the economics of wage minima.

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53 "Thailand: Minimum Wage Rise," *Far Eastern Economic Review*, 18 March 1993, p55.

54 "The unemployable, to put it bluntly, do not and cannot under any circumstances earn their keep. ... Of all ways of dealing with these unfortunate parasites, the most ruinous to the community is to allow them unrestrainedly to compete as wage earners for situations" (Sidney Webb, "Theory of Minimum Wages," *Journal of Political Economy*, 20 December 1912, pp973-98 cited in Thies, "The First Minimum Wage Laws," *Cato Journal*, 10(3), Winter, 1991, pp715-46).

The *Encyclopaedia Britannica* explains that Sidney Webb (1859-1947) was a prominent social reformer, 1st Baron Passfield, husband of Beatrice Potter, English social reformer, contributor to *Fabian Essays (1889)*, leading promoter of the London School of Economics, founder of *The*

/cont.

The coverage of the United States federal minimum wage was extended to retail trade and services in the 1960s, and between 1966 and 1978 its level in agriculture was increased in several steps to eventual parity with other sectors.

With President Clinton's election in late 1992, interest in the minimum wage issue in the United States has become more intense. Before the election, Clinton pledged to raise the federal minimum wage to $4.75 per hour. In the event, the Clinton administration has delayed its plans – administration officials have said the government would probably wait until 1994 and, even then, would propose an increase far smaller than the $1.00 per hour first contemplated. As of mid-1994 there still had been no increase.

New Statesman and author of the manifesto *Labour and the New Social Order* on which the British Labour Party fought the 1918, 1922 and 1924 elections.

4. EXAMPLES OF EMPIRICAL WORK OVERSEAS

As noted in Chapter 3, economists' thinking about minimum wage regulations has concentrated on their impact on employment, on their subtler effects on the work environment and such things as workers' educational and other decisions, and on the distribution of their effects on particular demographic and income groups.

This chapter concentrates on empirical issues, and in particular on statistical analysis. It presents a summarised version of what appears in more detail in Appendix 5.

The picture which emerges – notwithstanding the analytical complexities involved, the difficulties of always producing robust quantitative estimates, and some studies of indifferent quality – is an unambiguous one. Minimum wage legislation is counter-productive to the key groups whose interests it is seeking to advance.

Quantification can bring a measure of discipline to policy discussions provided proper procedures are followed. It is surprising how often the supporters of minimum wages seem not to appreciate that, in judging their effects, it is necessary to compare the current situation not with the past but with the situation which would have prevailed if the minimum wage had not existed. Many analyses are naive in that they make no systematic attempt to allow for wider influences.

The vast majority of the empirical studies of the effects of minimum wage laws have been undertaken in the United States. The Minimum Wage Study Commission, which reported in 1981,[55] is renowned for its finding that the 46 percent rise in the minimum wage between 1977 and 1981 destroyed 644,000 jobs among teenagers alone. It concluded:

> The evidence is now in, and the findings of dozens of major economic studies show that the damage done by the minimum wage has been far more severe than even the critics ... predicted.

4.1 The Brown, Gilroy and Kohen Review of Employment Effects

A major review of the United States literature was undertaken by Brown *et al.* for the Minimum Wage Study Commission.[56] This summary considers the findings under a number of headings.

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55 Minimum Wage Study Commission, *op. cit.*

56 Brown, Gilroy and Kohen, *op. cit.* p496.

– *Time-series studies on teenagers and youths*

Twenty-five time series studies of teenage employment effects undertaken between 1970 and 1981 were examined and the main conclusions were:

- on balance, a 10 percent increase in the minimum wage resulted in about a 1 to 3 percent reduction in total teenage employment and for the various age-sex-race sub-groups known to attract lower wage rates; and
- as regards unemployment, the response to a 10 percent increase in the minimum wage was generally 0-0.75 percent, implying that for a great many teenagers the response was to leave the workforce altogether.

– *Studies on adults*

From seven studies reported between 1971 and 1981 the reviewers found consistent estimates of disemployment and unemployment effects for 20 to 24 year olds, but smaller effects than on teenagers (generally less than 1 percent for a 10 percent increase in the minimum wage).

– *Studies on low-wage industries and areas*

Another set of studies reviewed related to low wage industries and areas. In the retail trade, the 1961 extension of minimum wages to retailing produced a significant curtailment of employment (5 percent) especially if expressed in terms of hours of work, though there were notable variations in the industry. Effects on department store employment were negligible, for example, while those on variety and food stores were particularly strong.

Several Department of Labor studies (on services, low wage manufacturing, and low wage areas) were reworked by the reviewers, who found more strongly negative effects of minimum wage legislation in each case than reported by the Department at the time.

Brown *et al.* concluded with a reminder that employment and unemployment effects, which were the exclusive focus of their article, are not the sole determinants of the welfare effects of the minimum wage. The remark is prescient because later research has concentrated more on explaining, if not quantifying, other effects.

A second reminder was that if poverty alleviation is the objective, any measure aimed at achieving this through raising the lowest wages may be misdirected. Two studies showing the weak correlation between low wages and membership of low income households were cited. If households are the relevant unit of concern, the authors noted that minimum wages could not be an efficient poverty alleviation device even in the best of circumstances.

Although it is now a decade old, the Brown *et al.* review remains as good an outline of the empirical issues associated with minimum wage laws as can be found.

4.2 1979 Conference on the Economics of Legal Minimum Wages

The late 1970s and early 1980s was an active period for investigation of the effects of legal minimum wages in the United States. A conference on the Economics of Legal Minimum Wages was held by the American Enterprise Institute in late 1979.[57]

– *Schooling*

Research has cast doubt on the traditional prediction that a minimum wage promotes higher school enrolments. The uncertainty of the impact of a minimum wage on schooling has come mainly from the realisation that it creates opposing incentives. One is a preference to remain at school, which arises from the new demand by employers for better trained employees whose productivity is more likely to match the minimum wage. With entry into the workforce initially blocked, extra schooling may be the only option for securing a job at the artificially increased rate of pay. The other is the disincentive for schooling, which arises from the reduced availability of part-time work (for which wage rates are generally lower), making the work-plus-school option less feasible.

Intuitively, the idea that the minimum wage encourages schooling is most persuasive. However, even if one accepts that governments have sought to offset the bias against training with education subsidies, it seems safe to say that minimum wage laws encourage an inferior pattern of human capital formation, which is the more important point.

This is a convenient place to dispute the view reportedly held by some supporters of President Clinton, and some New Zealander observers, that pushing up the minimum wage would be a useful way of promoting more education to meet the threat of Asian imports (see, for example, Appendix 4 Section 4.3). The ambiguity of minimum wage effects on schooling challenges this point of view. Furthermore, there is no reason to believe that formal schooling will always be more cost effective, or create more external benefits to society, than other types of education. On both counts, from an efficiency point of view it is difficult to see why governments would wish to interfere via a minimum wage with the training and education choices of parents and students. The most likely outcome is that the effects will be arbitrary and wasteful.

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57 Rottenberg, Simon, (ed), *The Economics of Legal Minimum Wages*, American Institute for Public Policy Research, Washington, 1981.

– *The political economy of minimum wages*

The conference gave particular attention to the political economy of minimum wage laws – the reasons why such laws are enacted despite their negative effects. Several authors offered suggestions for the persistence of minimum wage laws in the face of overwhelming evidence that they involve:

> ... regulating markets in order to give some of the have-nots somewhat more by depriving other have-nots of their jobs... .[58]

The answer to the political economy question was that articulate, relatively well paid and well organised groups outside the low wage worker group were the main lobbyists for minimum wages. One paper placed the emphasis on unions (though relevant employer groups were also recognised), while another stressed regional interests – attempts by industries to reduce competition from regions with lower labour costs.

Fellner said:

> ... minimum wages have helped the relatively well paid to raise their wages without having to face the difficulties of creating an even greater increase of the differentials in their own favour than those which they have already succeeded in securing for themselves in the bargaining process.

Fellner's observations are persuasive. Kau and Rubin found that representatives of the most poorly paid workers voted against minimum wage laws.[59] The more general point that poor people have played little part in the political support for regulation has been made, for example, by Stigler,[60] and seems likely to apply equally to minimum wage legislation.

4.3 Minimum Wage Studies in the 1980s

Since the early 1980s there has been a significant change in the focus of empirical work in the United States on the minimum wage. It has shifted perceptibly towards its impact on non-money work conditions and fringe benefits. However, as late as 1987 McKenzie argued:

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58 This is William Fellner's paraphrase of an expression in Finis Welch's 1978 study *Minimum Wages, Issues and Evidence,* American Enterprise Institute, Washington DC, 1978, pp 16-19.

59 J.B. Kau and P.H. Rubin, "Voting on Minimum Wages: A Time-Series Analysis," *Journal of Political Economy* , 86, 1978, pp337-42.

60 George Stigler, *The Economist as Preacher and Other Essays,* Basil Blackwell, Oxford, 1982, Ch.3.

> Perhaps the most powerful explanation for the political acceptance of wage minimums is that people who support them are simply ignorant of their effects.[61]

To demonstrate the quantitative significance of the impact of minimum wages on non-money variables, McKenzie cited examples of a growing body of research, including:

- under the 1967 minimum wage hike, one study found that workers gained 32 cents per hour in money income but lost 41 cents per hour in training – a net loss of 9 cents an hour overall;
- in two other studies, increases in the minimum wage reduced on-the-job training and, as a result, growth in long-run incomes;
- minimum wages caused retail establishments in New York to increase work demands. In response to a minimum wage increase, only 714 of the surveyed stores cut back store hours, but 4827 stores reduced the number of workers and/or their hours worked. Thus, in most stores, fewer workers were given fewer hours to do the same work as before; and
- minimum wage increases led to large reductions in fringe benefits and to worsening working conditions. Many retail stores reduced commission payments, eliminated year-end bonuses, and decreased paid vacation and sick leave. For every 1 percent increase in the minimum wage, restaurants reduced shift premiums by 3.6 percent, severance pay by 6.9 percent, and sick pay by 3.4 percent.

An interesting comment by McKenzie was that in view of their adverse effect on conditions of work, minimum wage laws may be one of several factors that induced federal and state governments in the United States to attempt to regulate health, noise and safety conditions.[62] This point is also relevant to recent calls to upgrade the so-called minimum conditions of employment in New Zealand.[63] For low wage workers at least, enforcement of the minimum wage component of those conditions will create pressures for employers to downgrade the rest, thus worsening the trade-off for employees and creating a dilemma for enforcement authorities.

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61 Richard B. McKenzie, *The Minimum Wage: A New Perspective on an Old Policy*, 1987, Ch.11.

62 Ibid, p167.

63 See, for example, Brosnan and Rea, *op. cit.*

4.4 Studies in the 1990s

– *The 1991 Cato Journal article by Thies*

The most recent United States literature includes a reassessment by Thies of the available data on the first minimum wage laws enacted by various states. These were often promoted by social reformers and the churches who helped popularise the idea that a decent living wage could only be established by some authority beyond the parties immediately involved.

Thies looked closely at one sub-category of workers where the impact of minimum wage laws can be clearly isolated. In 1912, Massachusetts introduced a board to set wages for women equal to the cost of living. Thies compared the frequency distribution of wage rates of all women employed in Massachusetts in the years 1911 to 1914 with those of women employed in the Massachusetts brush industry in the same years. Across manufacturing industries the frequency distribution was found to approximate a bell-shaped normal distribution. In the brush industry by contrast, which exhibited approximately a bell-shaped distribution in 1911 and 1912, the distributions in 1913 and 1914 following the imposition of wage minima reflected truncation, with the lower tail cut off. This, Thies concluded, was because women workers in the brush industry were either given wage increases or lost their jobs.

His finding differed from the Massachusetts Wage Commission's benign assessment in 1915. It said that the 14 cents per hour minimum set by decree in 1914 had been complied with and that:

- the wage increase had been large;
- the employment of women and minors had not given way to men; and
- the fall in women's employment had been "mainly due to the general business downturn rather than to the ... minimum wage."[64]

Thies differed on each of these points. Moreover, he presented evidence that the brush industry reacted to the 1914 minimum wage law before it was enacted – the most dramatic change in employment occurred in 1913, a year after a wage board was set up and an official survey of women's wages in this industry was conducted.

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64 Massachusetts Minimum Wage Commission, *2nd Annual Report of the Massachusetts Minimum Wage Commission for the Year Ending December 31, 1914*, Boston, 1915, p12, cited in Thies, *op. cit.*, p735.

The tendency to dismiss the disemployment effects of minimum wages in official reports was not confined to Massachusetts. Similar statements discounting the evidence on the reduced employment of women were made in the reports of relevant authorities in Oregon, Washington State and Washington DC at around the same time.

Thies's final empirical observation concerned the role of exemptions. Between 1919 and 1925 there was apparently no bunching of wages at the minimum and significant numbers of women employees were receiving less than the minimum wage. The reason, Thies suggested, was California's liberal policy of issuing exemptions. Licences were issued for some 2,400 sub-standard workers over the relevant period in California, but for just 87 in Washington DC and only 50 in Washington State. Apparently California's policy was adopted later in Massachusetts and other states, especially after the 1923 Supreme Court decision declared Washington DC's minimum wage law to be unconstitutional.

– *The Cornell Symposium in November 1991*

After a decade of no change, the 1989 amendments to the federal minimum wage in the United States prompted a new wave of research. In November 1991 a one-day symposium was held at Cornell University.[65] This and other recent research is receiving a great deal of attention in the current debate about whether the Clinton administration should honour its pledge to increase the federal minimum wage.

One paper by Katz and Kreuger found that a period of increasing minimum wages was associated with higher employment in fast food restaurants in Texas. However, the authors excluded from their survey businesses which ceased trading after the minimum wage had increased.[66]

A paper by Card looked at the proposition that a rise in the federal minimum wages will typically affect a larger fraction of workers in some states than others.[67] Card found no evidence that the minimum wage rise in April 1990 altered the state-by-state pattern of teenage unemployment or school enrolment.

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65 "New Minimum Wage Research," *Industrial and Labor Relations Review*, Vol.46 No.1, October 1992.

66 Lawrence F. Katz and Alan B. Kreuger, "The Effect of the Minimum Wage on the Fast Food Industry in Texas," *Industrial and Labor Relations Review*, 1992, op. cit. pp6-21.

67 David Card, "Using Regional Variation in Wages to Measure the Effects of the Federal Minimum Wage", *Industrial and Labor Relations Review*, 1992, op. cit. pp22-37.

A second paper by Card focused on the July 1988 increase in the California minimum wage from $3.35 to $4.35.[68] He found no empirical support for the conventional prediction for teenage employment; instead, hourly and weekly earnings of teenagers rose by 10 percent while the employment/population ratio for such people rose by 4 percent.

Unfortunately, Card did not highlight some of his findings which *were* consistent with the conventional view. Further, Card did not follow up on his point that under-reporting of weekly earnings is quite common – which means his results are clouded by suspect data. Other qualifications were added by authors at the symposium at which Card's unorthodox results were reviewed.

A paper by Neumark and Wascher re-evaluated cross-state data on minimum wages during the 1973-89 period.[69] Their estimates confirmed the traditional finding relating to federal minimum wages that a 10 percent increase in the minimum wage reduced young people's employment by 1 to 3 percent. Faults with Card's earlier modelling were indicated.

Observers who claim that Katz and Kreuger's and Card's results overturn earlier research often seem unaware of these subsequent refutations.[70]

4.5 Non-United States Studies

4.5.1 Puerto Rico and Chile

Three of the non-US studies presented at the 1979 Minimum Wage conference concerned countries in Central and South America.[71]

One offered stark evidence, perhaps the starkest ever, of the perverse regional effects of minimum wages. These have applied since 1938 in Puerto Rico. Initially, Puerto Rico had the same legal minimum wage as the rest of the United States. This led to massive unemployment and was changed to a system involving rates set by industry committees under United States Department of Labor auspices. But the committees continued to set

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68 David Card, "Do Minimum Wages Reduce Employment? A Case Study of California, 1987-1989," *Industrial and Labor Relations Review, 1992, op. cit.*, pp38-54.

69 Neumark and Wascher, *Industrial and Labor Relations Review, 1992, op. cit.*

70 In New Zealand, for example, a national union leader, Ms Rosslyn Noonan, wrote an article for the *Sunday Star* which quoted Katz and Kreuger and Card in support of her views with no reference to the researchers' own qualifications or those of later commentators (see "Teens held hostage to outdated policies", *Sunday Star, 30 January 1994).*

71 Rottenberg (ed), *op. cit.*

above-market wage rates which have, in effect, protected industries in the rest of the United States, while in Puerto Rico:

- very high unemployment rates have persisted;
- labour force participation rates have remained lower than in the mainland United States;
- a much higher percentage of employed workers in Puerto Rico is employed at the legal minimum wage than in mainland United States; and
- only high import duties enable Puerto Rican textile and clothing industries to compete with Asian suppliers in the United States market.

A second paper provided a crude estimate of the disemployment effects of the minimum wage in Chilean manufacturing in 1967 (Chile has had minimum wage legislation since 1937). The study did not investigate substitution amongst categories of workers, supply responses or other more subtle effects. Its main finding was that cutting the minimum wage by 10 percent would have increased manufacturing sector employment by 2.6 percent or, in the case of the lowest paid quartile of manufacturing workers, would have created in excess of 10 percent more jobs.

4.5.2 *France*

Another of the overseas studies reported at the 1979 Minimum Wage conference was one by Rosa on minimum wages in France.[72] The author found, in what was claimed to be the first rigorous empirical study in France of the subject, that the French minimum wage law, the 'SMIC', reduced employment and participation of young people, especially young men. A second Rosa study, using a longer series of annual data, showed that a 10 percent rise in the SMIC relative to the average hourly wage lowered the youth employment rate by 2 to 4.6 percent.[73]

In 1991, Bazen and Martin[74] undertook a new estimation and found youth minimum wage elasticities of -0.1 to -0.2, though the estimates were not considered to be very robust. The adult employment elasticity estimate was zero. However, it should be noted that their study

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72 Jean-Jacques Rosa, "The Effects of Minimum Wage Regulation in France," in Rottenberg (ed), *op. cit.*, pp357-376.

73 J.J. Rosa, "Les Effets du SMIC sur L'emploi des Jeunes: une Analyse Bien Confirmée," mimeo, FNEP, Paris, 1984.

74 Stephen Bazen and John P. Martin, "The Impact of the Minimum Wage on Earnings and Employment in France," *OECD Economic Studies*, No 16, Spring 1991, pp199-221.

focused solely on employment effects – fringe benefit aspects were not expressly considered, which is surprising for a paper written in 1991.

4.5.3 *United Kingdom*

There appears to have been little empirical research on the effects of statutory minimum wages in the United Kingdom. Presumably this is because the minima have been confined to just a few industries.

A recent exception is a study by Kaufman who looked at the employment effects of United Kingdom statutory minima in 1989.[75] His work appears to be the most sophisticated study of United Kingdom minimum wages to date. Kaufman criticised some past efforts as *ad hoc* and cited critical reviews of some others. His own estimate was that, on average, it would take a minimum wage rise of about 17 percent to produce a 1 percent decrease in total employment, with women being slightly more prone to unemployment than men. His estimate was smaller than some previous UK estimates, but in line with most North American findings.

4.5.4 *The Netherlands*

The 1989 OECD Economic Survey of the Netherlands said that the level of the minimum wage in that country was:

> ... thought to have depressed labour market opportunities for those at the lower end of the wage structure (in 1984, 39% of the unemployed were under 25 years old; in 1988, 32%). In the early 1980s, both the level of the gross minimum wage and its ratio to the average gross wage were considerably higher than in other European countries, resulting in high labour costs in low productivity sectors and a narrowing of the wage structure.[76]

4.5.5 *Canada*

In Canada, as elsewhere, there has been a good deal of debate about the degree to which regulations directly affecting the price of labour, as distinct from various macroeconomic factors, have been the causes of unemployment. This has formed a backdrop to the discussion of minimum wage laws as such. Such questions have assumed a new importance with the advent of NAFTA.

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75 R. T. Kaufman, "The Effects of Statutory Minimum Rates of Pay on Unemployment in Great Britain," *Economic Journal*, December 1989, pp1040-53.

76 Quoted in Martin Summers, "Minimum Wage, Maximum Unemployment," *Economic Affairs*, September 1991, pp36-39.

In an article in 1985, Grubel looked at claims that the higher rate of unemployment in Canada than in the United States was due to monetary and fiscal policy failures.[77] He argued that Canada's high fiscal deficit relative to the United States provided evidence that it was not. He also noted that the two countries had similar interest rates and inflation rates, but that the United States had a relatively large trade deficit which ought to have favoured Canada in the employment stakes.

In Grubel's view, the real reason for the difference in employment performance was that Canada's wages were too high. In support he explained that from 1965 to the mid-1980s Canadian real wages *rose 35 percent*. Over the same period United States real wages *fell by 5 percent*, making the difference between the two countries about 40 percent. Adjusting for exchange rates narrowed the gap to about 20 percent, and allowing for Canada's relatively high rates of productivity growth narrowed it further – to about 10 percent. But this remained a substantial difference.

During the 1980s, Riddell confirmed earlier North American work with the finding that a 10 percent increase in the minimum wage rate in Canada would produce a reduction in employment of about one percent. He noted that, in the context of British Columbia, that would imply an eventual elimination of some 15,000 jobs.[78]

A study across five regions over 20 years undertaken in Canada by Swidinsky in 1980 produced the standard finding that a 10 percent minimum wage increase would reduce employment of teenagers by 1 to 3 percent[79].

Block cited some compelling evidence that high minimum wage levels can lead to increased unemployment rates. The unemployment rate of young Canadians as a percentage of the unemployment rate of (more productive) adult employees had been highest in Canadian provinces with the highest minimum wages:

> ... Manitoba, with the highest minimum wage level ($4.30) has the largest unemployment rate for its young workers, relative to the general population (289%). Saskatchewan, with the next greatest level ($4.25), weighs in with the second biggest relative unemployment rate for youth (257%), and at the bottom of the pack in terms of the disenfranchisement of their young people,

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77 H. Grubel, "Canadian Wages Are Too High," *Fraser Forum*, April 1985, pp9-11.

78 This study was one mentioned by Michael Walker in "Spring Rituals," *Fraser Forum*, April 1988. The title of Walker's article is a reference to the annual reviews of minimum wages which are typically undertaken in spring by the provincial governments in Canada.

79 Robert Swidinsky, "Minimum Wages and Teenage Unemployment," *Canadian Journal of Economics*, Vol 13, February 1980, pp158-71 (cited in Neumark and Wascher, 1992, *op. cit.*).

> come BC and Alberta with two of the country's lowest minimum wage levels.[80]

Alberta, which had the lowest minimum, also had the lowest unemployment amongst its young and unskilled workers even though at the time it was suffering one of its worst economic performances in decades.

4.5.6 Australia

Analytical work on the Australian wage setting system has continued to be mostly about macroeconomic issues and the award structure as a whole, rather than the consequences of particular awards or provisions. Concern is typically expressed by Australian economists about total wage costs and the (national) average wage level in relation to other macroeconomic indicators, rather than about the impact of particular regulations affecting the price of labour.

One recent product of Australian research which bears directly on the subject of the present investigation and is likely to prove important to future empirical work is a theoretical study by Hartley.[81] It brought workplace quality effects and effects on the number of people employed together into a formal framework. The framework captured the costs to employers and employees of a minimum wage law which upset the effort/wage trade-offs to which they would voluntarily agree. Empirical applications of the model will be keenly awaited by labour analysts worldwide.

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80 Walter Block, "The Minimum Wage Law Discriminates Against Youth Workers," *Fraser Forum* August 1985, p5.

81 Peter Hartley, "The Effects of Minimum Wage Laws on Labour Markets," Paper presented to the H R Nicholls Society's XIIIth Conference, *The New Province of Law and Order*, The Terrace Hotel, Adelaide, 13-14 November 1992.

5. EMPIRICAL EVIDENCE ON THE MINIMUM WAGE IN NEW ZEALAND

This Chapter reports on an examination of the data on the impact of the legal minimum wage which existed in New Zealand during the 1980s and early 1990s. The analysis focuses on four issues:

- the numbers of people earning less than the minimum wage and their characteristics;
- the impact of changes in the real minimum wage on the frequency distribution of wage rates for people over 20;
- the comparison of employment and unemployment statistics for people aged 15 to 19 years versus those aged 20 to 24 years; and
- the question of whether people on low wage rates have resided in low, medium or high income households.

The available statistics are limited and do not permit every issue concerning the impact of minimum wages in New Zealand to be analysed. However, not all the theoretical issues relating to minimum wage laws are considered worthy of empirical study. A case in point is the notion that if there is monopsony on the employer side, a precisely implemented minimum wage could both boost jobs and raise national income. A finding that increases in minimum wages had occurred at the same time as increases in employment would be consistent with this idea. This should be relatively straightforward to test (and in the tests of the employment impact of the minimum wage reported later in this Chapter we have done so in a broad sense). But unless that condition were satisfied, there is little advantage in investigating the argument further. Over the years, claims of monopsony, particularly in the lower-paid categories of workers, have never been convincing. Furthermore, as argued in Section 3.1.6 of this report, it is difficult to believe that a government would ever be in possession of sufficient information to undertake the adjustments to intervention levels needed to match changing circumstances, which is what the practical application of a policy using a wage floor to combat monopsony would require.

Examples of studies that have looked at the monopsony question in labour markets can be cited. There were two studies in the United States in 1962[82] and another in 1974[83] which showed that areas of the labour market which had been said to be characterised by monopsony in that country were in fact likely to be competitive. The only United States' labour markets where there was some evidence to the contrary were those for nurses and professional athletes. Neither of these groups are usually thought to be at the minimum end of the wage scale.

In the New Zealand situation, some of the pre-conditions for monopsony, or at least transient monopsony, amongst employers probably occur more often than in the United States. For example, a greater proportion of the New Zealand industrial workforce is probably 'tied' to a particular location – certainly most labour mobility indicators would favour the United States. However, there does not seem to be any reason to think that the 'locationally tied specialists' in New Zealand's case are any more likely to be working at the lower end of the wage scale (where minimum wage laws mostly impact) than their counterparts in the United States. The workers in New Zealand's remote regions who work, for example, in the electricity industry are not in the low-pay brackets.

Another line of argument not tested in any empirical way in this study is the so-called 'shock' theory - that a minimum wage shocks employers into increasing productivity. This is akin to the X-inefficiency arguments popularised in the 1970s by writers such as Liebenstein. Liebenstein's view appeared to be that competition could, through channels that were unclear, raise the productivity of resources. The orthodox view is that certain events (such as opening up an industry to competition), may spur increases in efficiency, but they can do so only by prompting the reallocation of resources to uses which better match their true productivity. What fosters this is the removal of distortions in price relativities. Shock theories do not propose a coherent resource reallocation process of this kind. Instead they seem to rest on the idea that, without a government spur of some kind, employers will not be doing their utmost to use the resources available to them to best effect. This view has been discredited – including by Martin who, coincidentally, has undertaken much of the

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82 Yale Brozen, "Minimum Wage Rates and Household Workers", *Journal of Law and Economics*, V, October 1962, pp103-109; and Robert L. Bunting, *Employer Concentration in Local Labour Markets*, Chapel Hill: University of North Carolina, Press, 1962, cited in Brown *et al.*, 1982, *op. cit.*

83 M. Wachter, "Primary and Secondary Labour Markets: A Critique of Dual Approach", *Brookings Papers on Economic Activity*, 3, 1974, pp637-680, cited in Cumming, 1988, *op. cit.*, p95.

recent research on the impact of the statutory minimum wage in France.[84]

The chapter concentrates on the standard questions of the magnitude of the disemployment effects of the minimum wage and whether minimum wages could be a useful tool for redistributing income to the poor.

5.1 Available Data

Table 5.1 summarises the main types of official statistics on the labour market in New Zealand.

Table 5.1: Main Sources of Labour Market Data Collected by the New Zealand Department of Statistics

Source	Frequency	Attributes of Respondents Recorded								Comments
		Sex	Age	Ethnicity	Participant	Employed	Self-employed	Industry/ Occupation	Wage Rate	
• Quarterly Employment Survey	1987 + Quarterly	√	—	—	—	√	—	√	√	Has mostly recorded standard award rates
• Household Labour Force Survey	1985 + Quarterly	√	√	√	√	√	√	√	—	Regular, up-to-date but no wage info.
• Household Expenditure and Income Survey	1981 + Annual	√	√	√	√	√	√	√	√	Best source of information; but households keep changing.
• Census	1981, 1986 & 1991	√	√	√	√	√	√	√	—	Infrequent, no rates of pay information.

The Household Expenditure and Income Survey (HEIS) is usually considered to be New Zealand's most useful source of information on the distribution of salary and wage earnings. Data from this source were examined in the present study. Data from the Household Labour Force Survey (HLFS), which do not include information on wage rates, were also examined to compare the employment experience of groups "covered" with that of groups "not covered" by the minimum wage provisions.

There are several additional *ad hoc* sources of information on the operation of the New Zealand labour market in recent years. For example:

- since the *Employment Contracts Act* came into force, the Department of Labour has been surveying registered contracts, that is those involving 20 or more employees (though the proportion of employees covered by the survey is less

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84 See, for example John P. Martin, "X-Inefficiency, Managerial Effort and Protection", *Economica*, 45, August 1978, pp273-286.

than 20 percent);[85]

- Harbridge and others have been analysing the Department of Labour's and other data on contracts;[86] and
- During 1991 the New Zealand Employers Federation surveyed 1,116 employers covering 190,664 employees.

None of these sources is directly relevant to the minimum wage issue, but all have shown that employment conditions have become more flexible, that about half the contracts involve unions and that there has been a small average wage increase.

In addition, the New Zealand Treasury has been seeking to improve its ability to predict social security outlays under different social security and wage regimes. At the centre of its research has been a model called 'TAXMOD,' an elaborate supply model with no explicit demand modelling.

5.2 The Analytical Task

The usual difficulties of ascertaining the effect of minimum wages on employment and other variables are acute in a country such as New Zealand for several reasons. First, because the minimum wage affects only a minority of workers, not much is likely to be revealed by looking for impacts across the whole workforce. Thus aggregate data of the type that are used in macroeconomic models are also unlikely to be of much assistance; they are not likely to detect the effects which have occurred.

For the same reason, general equilibrium models of the type that now exist in New Zealand are not well-adapted for this purpose. Such models employ elasticities based on prior research but the relevant demand elasticities have not been calculated to a sufficiently disaggregated level for research into the minimum wage *per se*.

Third, census data, which are often very useful for studying the circumstances of small groups, are not very helpful here. Earnings information is not collected in the New Zealand

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85 For example, survey results published by the Department in February 1994 reported on collective employment contracts lodged with the Secretary of Labour as at 31 December 1993 (Department of Labour, *Contract: The Report on Current Industrial Relations in New Zealand*, Volume 8, Wellington, February 1994).

86 See, for example, Raymond Harbridge, "New Zealand's Collective Employment Contracts: Update November 1992", *New Zealand Journal of Industrial Relations*, 19(1), April 1993, pp113-124.

groups, are not very helpful here. Earnings information is not collected in the New Zealand census in sufficient detail to permit useful analysis.

Fourth, there is the problem of untangling the effect of the minimum wage from other possible influences on the distribution of wages. For example, the same interest group pressures which may have led to higher minimum wages are also likely to have led to increases in unemployment benefits and other benefits. Higher benefits may cause some people with low employment incomes to give up work. This in turn may influence the distribution of wages.

Finally, the usefulness of annual and quarterly survey data is limited by the small size of the New Zealand population and the consequent high costs of obtaining a sufficient sample size to permit analysis of the circumstances of relatively small groups.

Despite these very real difficulties, analysis of survey data is still a useful approach to take. Disaggregated employment data have been available from the HLFS since 1985. The HIES has been conducted each year since 1983. The period covered by these data series was one in which there were significant movements in the real minimum wage. For example, as the nominal minimum wage was increased from 30 percent of average earnings in 1984 to 53 percent in 1987, the single rate of unemployment benefit fell from over 90 percent of the minimum wage in 1984 to under 60 percent in 1987.

The opportunity to use the survey data to study minimum wage effects therefore presents itself.

5.3 Examining the HEIS Data

5.3.1 *Impact on the shape of the wage distribution*

The HEIS is based on a survey group only about one tenth that of the HLFS, but in its more detailed questionnaire data are sought on wage rates.

Appreciating the relative thinness of the available HEIS data, it was decided that the first task ought to be to inspect visually whether there were any signs that changes in the minimum wage had caused shifts in the shape of the wage rate distribution. This approach was inspired by the considerations raised in Chapter 3 of the current study and illustrated there in Figure 3.2. As indicated in Chapter 3, the detailed empirical study of effects of compulsory minimum wage rates on the shape of the frequency distribution of wages can be

traced to work published in 1983 by Meyer and Wise.[87] The view taken in the current study was that evidence of such effects, if found, would provide a promising basis for deeper analysis of the HEIS material.

Figure 3.2, in essence, represents the hypothesis to be tested. HEIS data were obtained from the New Zealand Department of Statistics on the hourly rate of wage and salary income for various populations of New Zealanders in the years from 1984 to 1991 inclusive. Persons whose principal source of income was self-employment were excluded. The categories selected reflected attributes which were considered likely to be associated with low wages – age less than 25, unmarried status, absence of qualifications, Maori, and part-time employment.

The following categories were chosen for close analysis:

- all persons with income from wages and salaries aged over 20;
- all wage and salary earners aged 20 to 25 who were not married and had no qualifications;
- all wage and salary earners aged 20 and over who were not married and had no qualifications;
- all wage and salary earners aged 20 to 25;
- all unmarried women with wage and salary income aged over 20 with no qualifications; and
- all wage and salary earners aged 20 and over and who were not married.

The data were provided to ACIL in grouped form and in $1 ranges up to $20. The data have a number of deficiencies.

One is small sample size (and confidentiality restrictions). In groups where the survey sample had three observations or fewer, no information was offered (though groups with zero observations were recorded). The sample size problem is exacerbated because the minimum wage only impacts directly on those persons at the lower end of the wage distribution. With the grouped data in these cases, it was necessary to estimate the number of people below a minimum wage (for example, by using linear interpolation within the range).

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87 Meyer and Wise *op. cit.*

Due to inflation, average wages were almost twice as high at the end of the period as they had been at its beginning. This meant that the dollar range of wage categories was, in real terms, almost twice as wide in 1984 as it was in 1990. There is the question of the appropriate deflator, especially given the introduction of the GST in 1986. Use of the CPI to deflate wages may not be desirable in these circumstances as it may over-estimate the extent to which wages would need to have increased to preserve their purchasing power.

The best way to address these various problems seemed to be as follows. The categories were first converted to cumulative form (by calculating the number with wages below $1.00 an hour, below $2.00 an hour and so on). This had two advantages. Because the numbers in each range are known, there are good estimates of the numbers with wages below the top of each range. Second, the method provided a way in which the 1990 data could usefully be compared with the 1984 data despite the fact that $1 was worth almost twice (in fact 1.8 times) as much in 1984 as it was in 1990. (The numbers with incomes less than the top of each range could be graphed and then linked. This could be done for each category. The two categories could then be compared.)

Having obtained the cumulative categories, the next stage was to adjust for inflation and the impact of GST. The procedure adopted was to calculate the average wage for each category and to deflate it according to changes in the average wage for that group. This was intended to permit an examination of the extent to which a change in the minimum wage resulted in a change in the distribution of wages.

The final stage in the procedure was to graph the results and observe whether the changes in the legal minimum were having the expected effect of shifting the minimum-wage-related discontinuity (i.e. a 'trough' below and a 'bubble' above the value of the minimum) as theory predicts and as overseas researchers such as Meyer and Wise have found.

Relevant graphs are presented in Figures 5.1 to 5.6 below for 1984, 1987 and for 1991 – years corresponding, respectively, to the initial HEIS survey year, the recent peak in the ratio of minimum wages to average wages, and a point in the recent decline in the real minimum wage. (Because of data limitations, 1988 was sometimes used instead of 1987, and 1990 instead of 1991.) The relevant tabular data are contained in Appendix 6.

The graphs provide a means of exploring whether the distribution of wage rates has been affected by changes in the minimum wage along the lines hypothesised in Chapter 3.

There will always be some people who earn less than the minimum wage and, the higher the minimum, the more of them there are likely to be. If the minimum wage were effective, one would, however, expect to find fewer employed people with incomes between the old and the new level at a time when it was increased. This would be offset in some measure by

more people with incomes slightly above the minimum wage. In other words, the distribution of wages would shift.

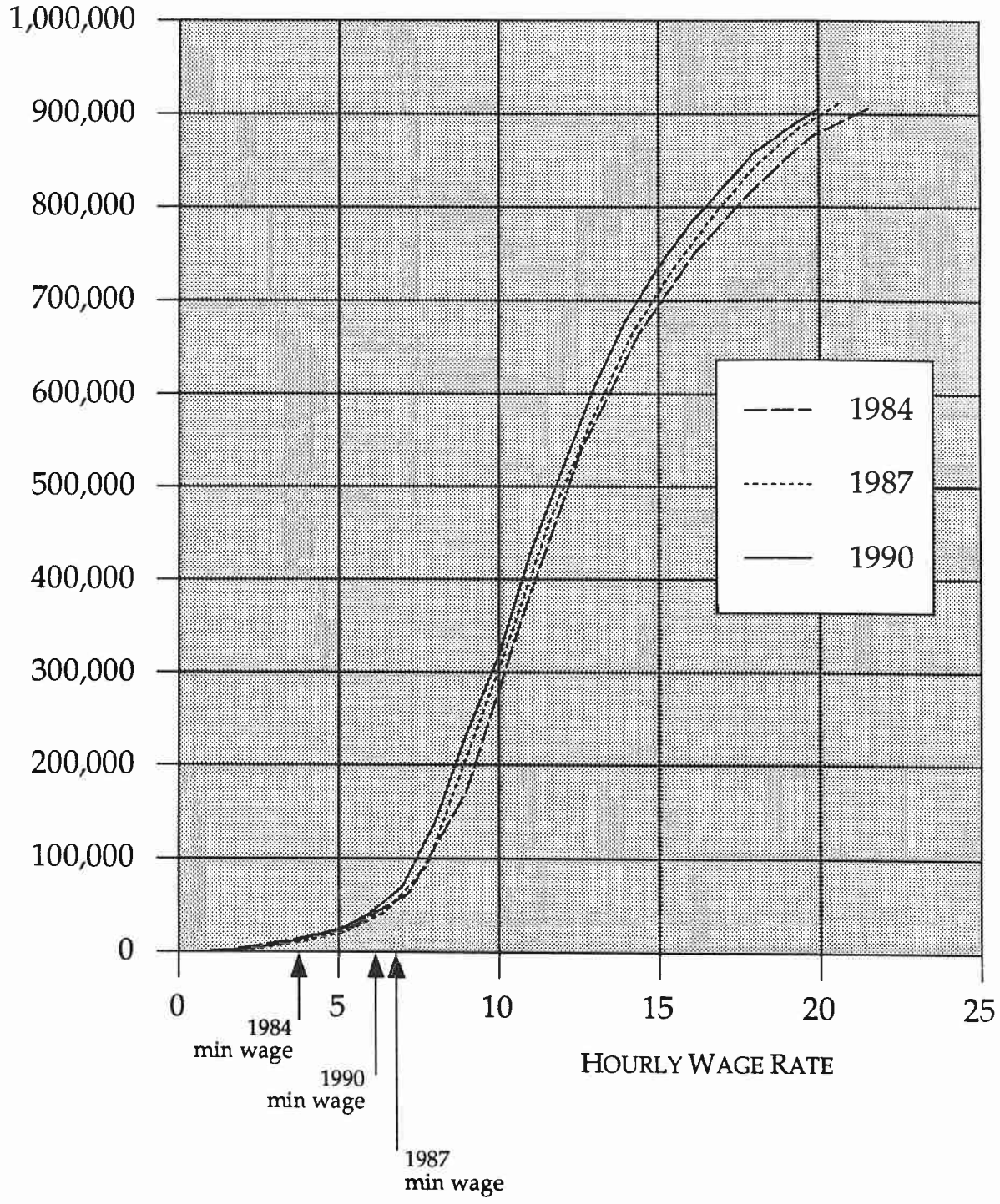
Contrary to these expectations, Figure 5.1 shows that there was little or no shifting of the distribution of wages between 1984 and 1987. The number of people on less than minimum wages in 1987 could be predicted with considerable accuracy from knowledge of the 1984 distribution and the higher minimum wage. The higher minimum wage does not seem to have had much of an effect on the wages actually paid.

Between 1987 and 1990 the wage distribution shifted downwards very slightly. In other words, there were more people below both the old and the new minimum wages than would have been expected on the basis of the previous distribution. The lower minimum wage between 1987 and 1990 does not seem to have affected the distribution of wages.

These observations depend, of course, on the assumptions that were made in arriving at them. Wages increased less rapidly than prices in New Zealand during the 1980s. Adjusting the distributions according to movements in prices rather than average wages would have produced a rightwards shift in the distributions for the earlier years, which yields slightly different results, though the conclusions remain much the same. The most reasonable conclusion would be, once again, that the data do not suggest that the minimum wage had much impact.

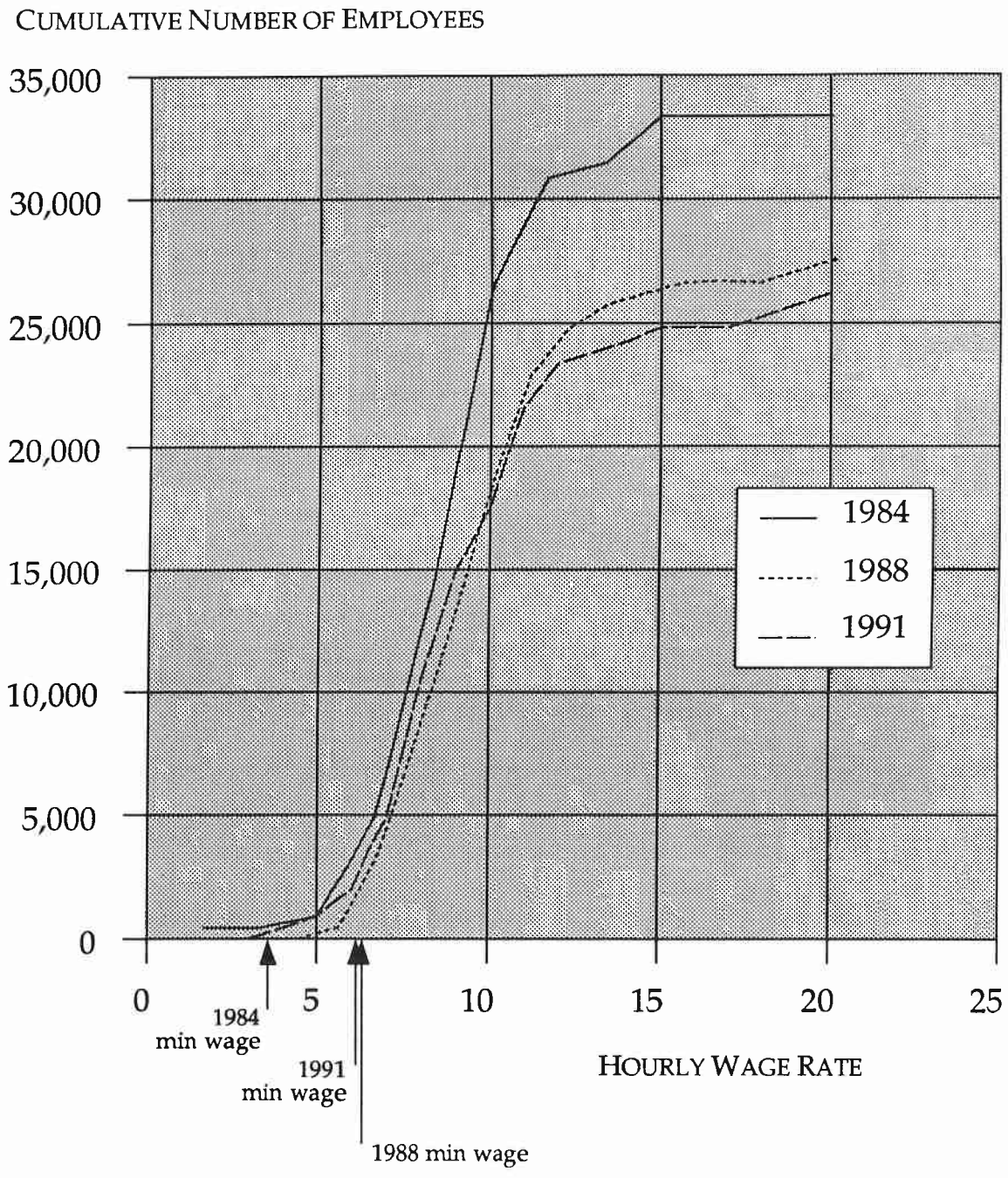
Figures 5.2 to 5.6 repeat the analysis for particular employee categories in similar years. The conclusions are broadly similar.

Figure 5.1: Cumulative Distribution of Wage and Salary Income: All New Zealanders aged 20 and over: 1984, 1987 and 1990 (1990 dollars; deflator = av. wage, relevant group)



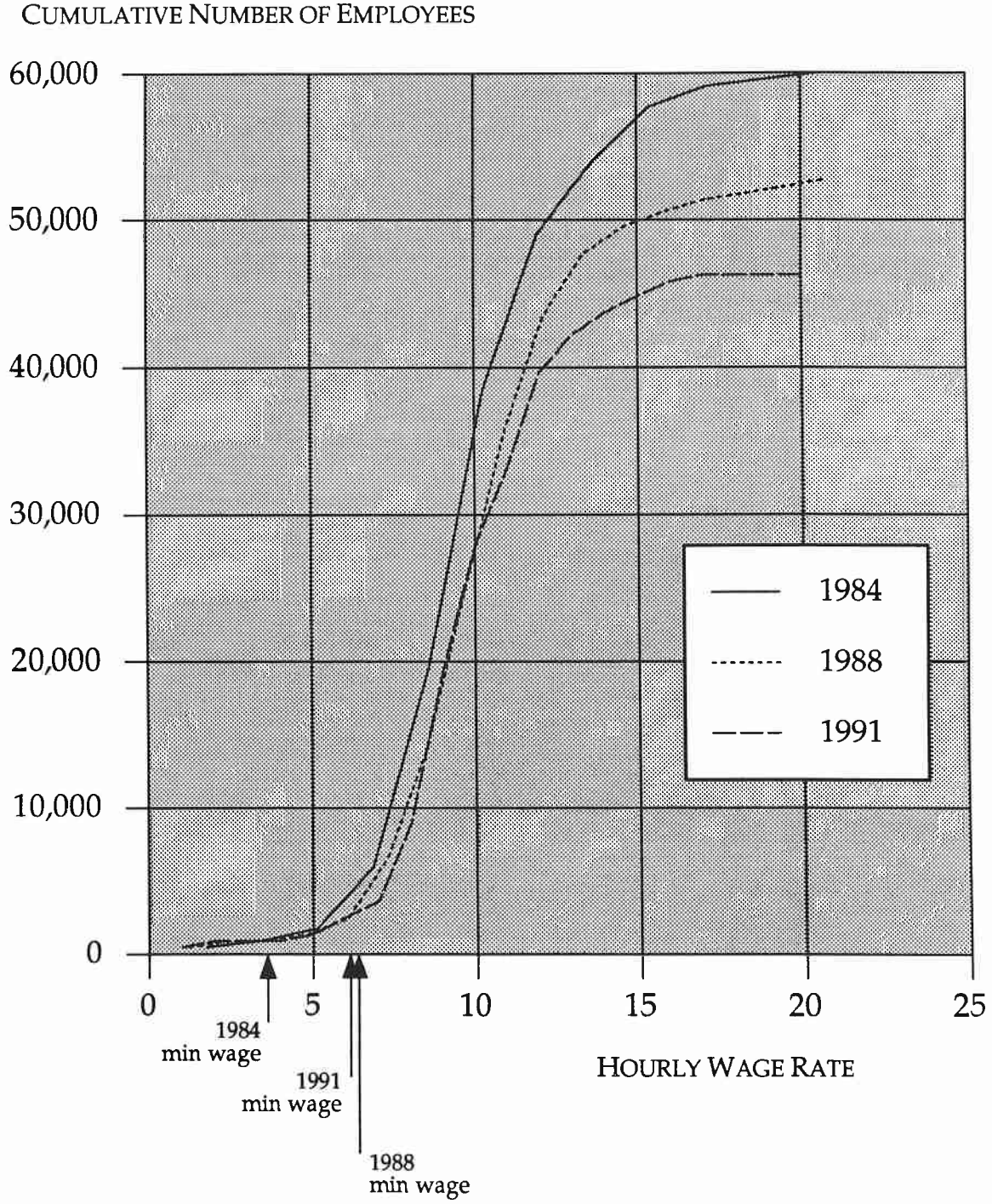
Source: New Zealand Department of Statistics (see Appendix 6)

Figure 5.2: Cumulative Distribution of Wage and Salary Income: All New Zealanders Aged 20 to 25, Not Married, No Qualifications, 1984, 1988 and 1991
(1991 dollars; deflator = av. wage, relevant group)



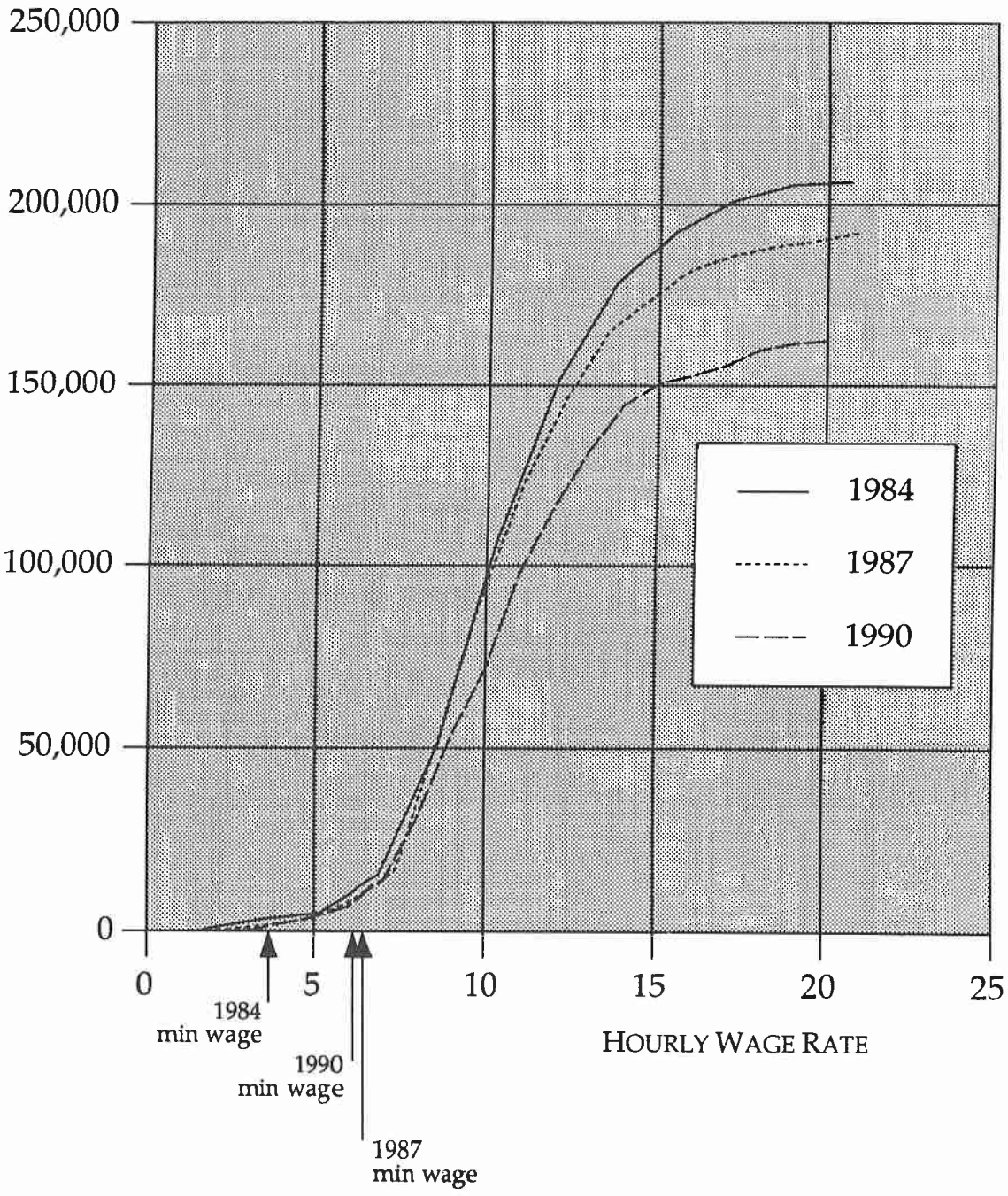
Source: New Zealand Department of Statistics (see Appendix 6)

Figure 5.3: Cumulative Distribution of Wage and Salary Income: All New Zealanders Aged 20 or over, Not Married, No Qualifications, 1984, 1988 and 1991
(1991 dollars; deflator = av. wage, relevant group)



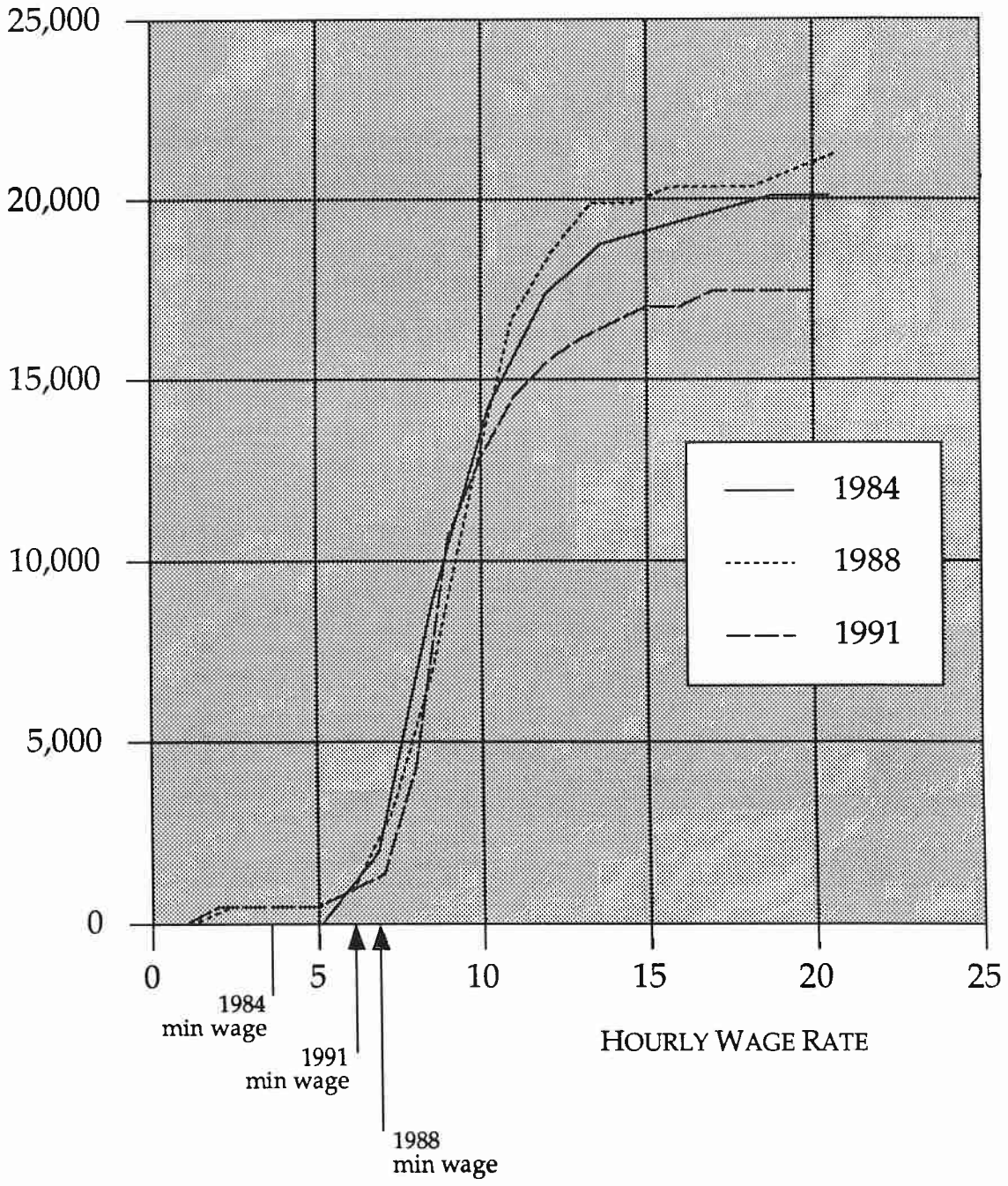
Source: New Zealand Department of Statistics (see Appendix 6)

Figure 5.4: Cumulative Distribution of Wage and Salary Income: All New Zealanders Aged 20 - 25, 1984, 1987 and 1990 (1990 dollars; deflator = av. wage, relevant group)



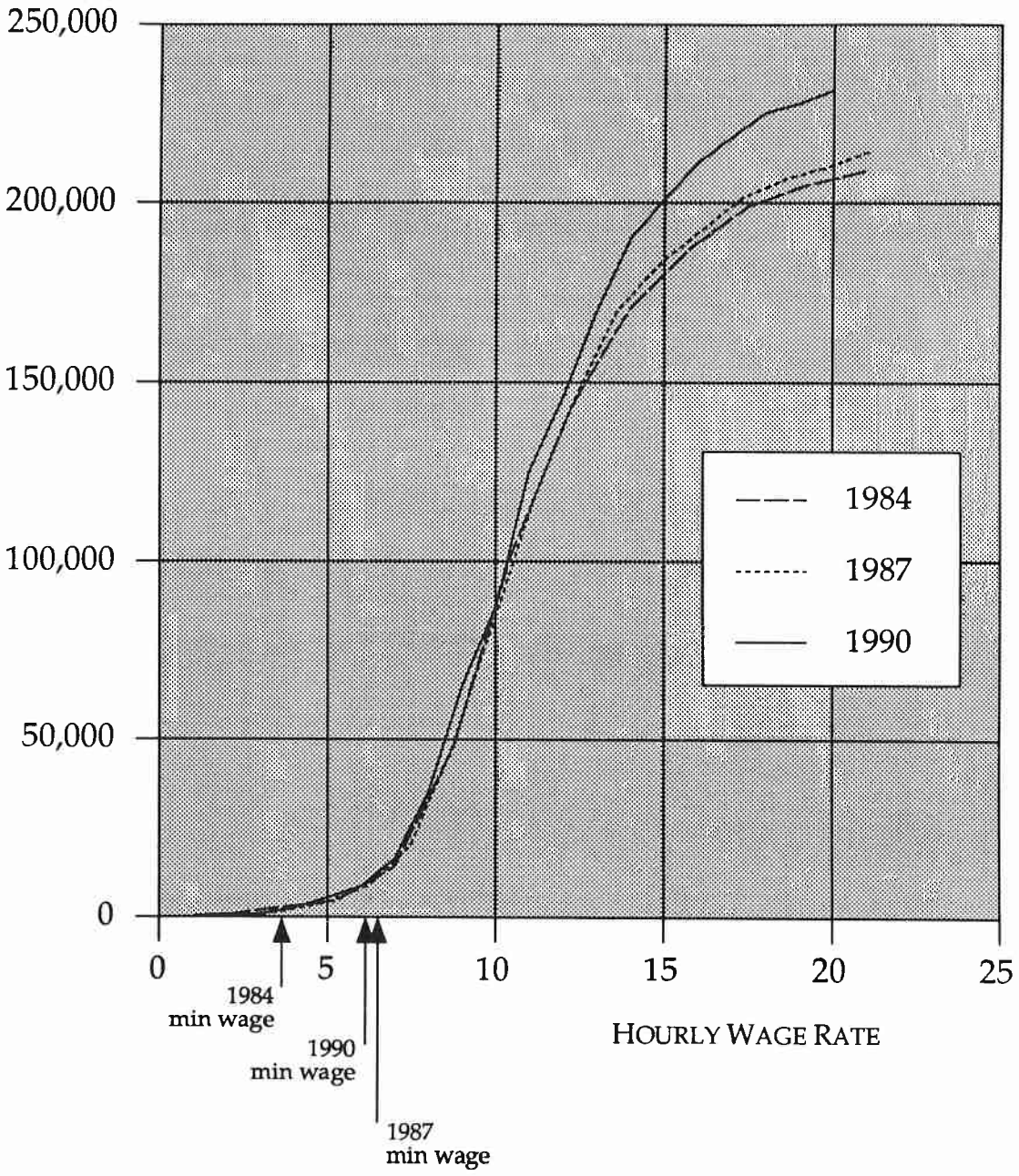
Source: New Zealand Department of Statistics (see Appendix 6)

Figure 5.5: Cumulative Distribution of Wage and Salary Income: All Unmarried Women Aged 20 or Over With No Qualifications, 1984, 1988 and 1991
(1991 dollars; deflator = av. wage, relevant group)



Source: New Zealand Department of Statistics (see Appendix 6)

Figure 5.6: Cumulative Distribution of Wage and Salary Income: All New Zealanders Aged 20 Years and Over and Not Married 1984, 1987 and 1990 (1990 dollars; deflator = av. wage, relevant group)



Source: New Zealand Department of Statistics (see Appendix 6)

The findings are underlined by what the HEIS results reveal about the numbers of New Zealand employees earning less than the minimum wage. They are shown in Table 5.2.

The table shows that some 40,000 to 45,000 employed people aged over 20 years earned less than the minimum wage in the years 1990 to 1993. Around 10,000 were not married and some 5,000 to 9,000 were aged 20 to 25. It appears therefore that the majority of those earning less than the minimum wage were married and the majority were aged over 25. Cumming's thesis (although it included people aged under 20 who were not then covered by the legislation) appeared to show that many of those earning low wages are men working in agriculture, men and women working in trade (including shop assistants), and women in their 30s and 40s who are working part-time.

Table 5.2: Numbers of Employed New Zealanders Below the Minimum Wage

	A	B	C	D	E	F
Year	All Aged over 20	All Aged 20 to 25 not married, no quals	All Aged 20+ not married, no quals	All Aged 20 to 25	All unmarried women 20+ no quals	All Aged 20+ not married
1984	14,500	500	1,000	3,500	0	2,900
1987	54,400			10,500		11,500
1988			5,000		2,300	
1990	45,000			7,700		9,800
1991		2,500	3,700		1,000	
1992	39,000		3,500	8,700	2,300	11,300
1993	44,000	1,500	3,500	4,800	2,300	8,200

Source: New Zealand Department of Statistics and ACIL default values (figures have been rounded)

Table 5.2 also shows that the total number of employed people aged over 20 with income below the minimum wage increased with the higher minimum wage from 14,500 in 1984 to 54,400 in 1987. The number then declined to around 40,000.

In order to be assured that these results about the impact (or lack of it) of changes in minimum wage rates on the wage distribution were not merely a reflection of the paucity of the non-confidential data supplied, ACIL asked Statistics New Zealand to repeat the same analysis incorporating the confidential data. At the same time ACIL requested that data for the latest year then available (1993) be included.

Statistics New Zealand reported as follows:

> We have examined the suppressed cells of all the hourly wage distribution tables supplied for each year and concluded that these suppressed cells would not affect your conclusion in any way.

In addition, including the 1993 data did not alter the findings in any significant way.

Because no coherent minimum wage impact could be detected from a visual inspection, it was decided not to follow up with formal econometric analysis of HEIS data in this study. Perhaps this should be reconsidered in further research in view of the more concrete results we obtained from other survey data, reported below in Section 5.4

Nevertheless our graphical HEIS results may mean what they superficially imply – that the minimum wage has been having little effect. One reason for this could be a high degree of non-compliance. This would be plausible because even though some incentive exists for rival employees to report breaches, there is no reason to expect the employer and employee directly involved to be interested in doing so. Moreover, as indicated in Chapter 2, it seems that few government resources have been devoted to policing.

Another reason could be that the minimum wage of the *Minimum Wage Act 1983* might seldom have been the operative minimum wage, even in the more recent period since the *Employment Contracts Act* was introduced. A listing of awards applying in 1989/90 has been examined[88]. It indicated that most awards in that year specified some rate for youths; about one fifth of all awards had specified youth rates (about half of which were below the statutory minimum wage) while virtually all the rest required teenagers to be paid full adult rates from age 18[89].

Alternatively, the absence of a wage distribution effect could mean that minimum wage impacts are dominated by changes in fringe benefits offered to employees rather than wages. Statistics are not readily to hand to test this.

A final explanation could be data inadequacies. Much has been said about this already, but two particular weaknesses in the HEIS material used to generate the graphs which deserve mention are the 'thinness' of the data for narrowly defined groups and the possible inaccuracy (or irrelevance) of data on wage rates expressed in average hourly terms. It will

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88 The listing was an attachment to the Department of Labour's Background Paper on the Minimum Wage, 1990.

89 Whether these junior rates have been carried over into most of the contracts of employment which now prevail is not clear. The Department of Labour's survey of contracts involving 20 or more people in December 1993 revealed that only 36 percent of those surveyed contained youth rates. Fewer than 20 percent of employees are participants in these contracts which cover 20 persons or more. Presumably the smaller contracts are more personalised and have less need for a youth rate concept. (See Department of Labour, *Contract*, February 1984, *op. cit.* p2.)

not be possible in later work to do much about the relative paucity of data for narrowly defined groups. However, one reviewer of a draft of this study thought it might have been better to look at weekly wage rates reported by HEIS respondents, which is a valid suggestion.

5.3.2 *The minimum wage and poverty*

Another type of analysis of HEIS data was undertaken to investigate how effective the minimum wage might be as an instrument for ameliorating poverty, or at least to examine one side of that issue – whether the people who earn low incomes tend to be relatively poor.

It is easy to see why this would always be only part of the story. The modern theory outlined in Chapter 3 indicates that if a minimum wage raises the wage rates of some workers who are employed at and above the minimum, it will also adversely affect the employment of people who might have been employed at or below that level. These people will be thrust into less preferred activities such as self-employment or reliance on social security. Thus, even if people at or near the minimum wage level were the poor, it would have to be said that the impact of the minimum wage on the well-being of relatively poor people would be ambiguous.

Disemployment effects aside, there has long been a big question mark over whether the people at or near the minimum wage level are the poor. Indeed, it is generally recognised that in OECD countries wage levels and total household income are not closely correlated. It follows that increases in the minimum wage cannot systematically improve the well-being of people in relatively low-income households. As indicated in the research review in Appendix 4, this is one of the reasons researchers have found continued political support for compulsory minimum wage rates so puzzling.

The pioneering empirical work on the incidence of the minimum wage across income groups appears to have been by Kelly (1976), Gramlich (1976), Bell (1981) and Gilroy (1981), all of whom are cited in the major reviews of the minimum wage in the United States in the early 1980s. A more recent empirical analysis of the subject in the United States, by Burkhauser and Finegan,[90] has virtually put the matter to rest in that country with the finding that:

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90 Richard V. Burkhauser and T. Aldrich Finegan, " The Minimum Wage and the Poor: the End of a Relationship," *Journal of Policy Analysis and Management*, 8 (1) 1989, pp53-71.

> ... while it has long been true that secondary workers who hold low-wage jobs usually do not live in poverty households, this is now also true for most low-wage household heads. (p54)

The general OECD picture was shown by Cumming to apply in New Zealand. Her finding was quite striking:

> ... low-wage employees in New Zealand were spread across the distribution of family incomes and taking both social security payments and market earnings into account, the proportion of such employees at the lower end was actually lower than at the higher end.[91]

These results have been reinforced by an analysis undertaken in the present study of the relationship between low wage earnings and household incomes for the years 1989-90 to 1992-93. The results are summarised in Table 5.3.

Table 5.3: Correlation of Household Income with Wage Rates and Wage Income, New Zealand, 1989/90 to 1992/93

Correlation of total household income with:	Pearson correlation coefficients			
	1989-90	1990-91	1991-92	1992-93
1. Household average wage rate	0.49	0.46	0.44	0.42
2. Household head wage rate	0.65	0.60	0.62	0.61
3. Lowest 1/5 household average wage rate	0.20	0.20	0.18	0.10
4. Lowest 1/5 household head wage rate	0.09	0.15	0.20	0.09
5. Lowest 1/5 household wage income	0.09	0.18	0.10	0.12
6. Lowest 1/5 household head wage income	0.06	0.18	0.07	0.11
7. Lowest 1/5 working age wage income	0.07	0.19	0.11	0.11
8. Lowest 1/5 working age household head wage income	0.06	0.18	0.07	0.10

Notes:
- Analysis based on households with non-zero wage income.
- Working age people are defined as less than 60 years of age.
- To be more certain of the relevance of the tests, log transformations were performed on both variables for all relationships shown in this table.

Source: ACIL analysis of HEIS data computed by Statistics New Zealand.

The correlation figures presented in Table 5.3 between wage rates and household income are all positive, but for the portion of wage rates on which the minimum wage is likely to

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91 Cumming, *op. cit.*, p268.

operate (the lowest quintile), the correlations are minuscule.[92]

Interestingly, the correlations between wage rates and household incomes are generally stronger with household heads than with the average wage rate of all householders. This difference holds for correlations involving both all wage rates and the lowest quintile of wage rates, but not for the correlations involving the lowest quintile of wage income. Interestingly too, the weakest correlations in the table generally are for those relating to people defined as being of 'working age'. Nonetheless, all the correlations for groups of lower wage earners are so small that such differences could probably be regarded as insignificant.

As indicators of the minimum wage/poverty relationship the results presented in Table 5.3 above are, of course, subject to many qualifications. First (to repeat a point made earlier in this section), to gain even a rudimentary picture of the impact of the minimum wage on poverty it would be necessary to take account simultaneously of the impact on any people pushed out of employment. Another obvious qualification is that household income is at best an approximate indicator of the well-being of individuals. There is reason to think that much of the difference in size of household incomes is due to differences in household size and so may not reflect accurately the circumstances of individuals within them. They may not even be very accurate indicators of family incomes. Finally, it is widely appreciated that, besides income, factors such as wealth and security of income are important contributors to material well-being.

The many potentially relevant considerations which arise when measuring poverty were canvassed in a recent Department of Social Welfare publication which traces changes in household income over the decade from 1981 to 1991.[93] The report identifies a number of features of households which might be addressed in a more detailed analysis than was possible for this study. Nonetheless, there are good reasons to be confident of the general thrust of this study's findings.

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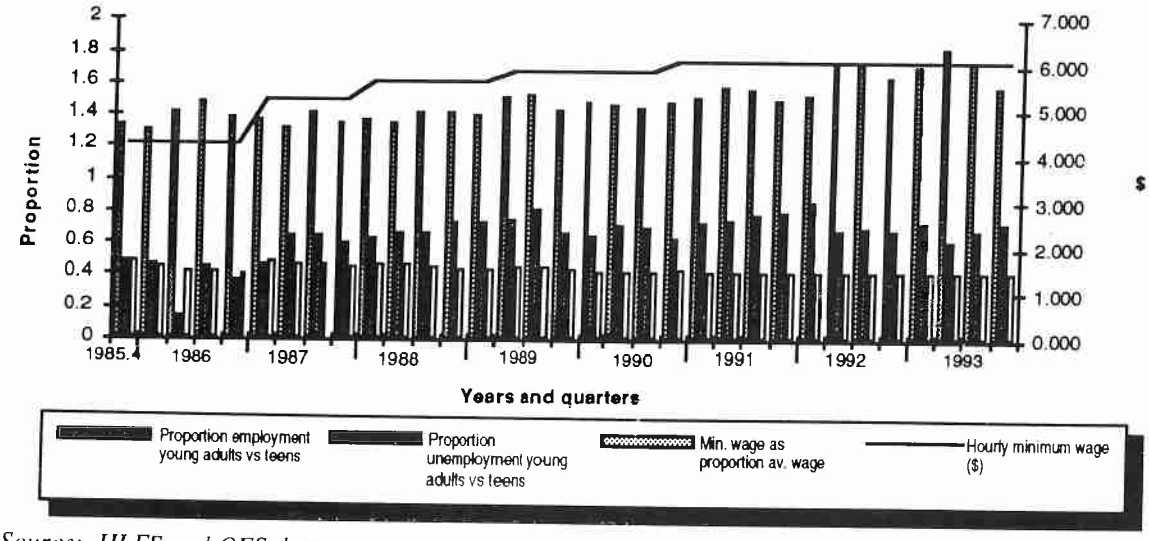
92 There seems little doubt that these correlations would remain minuscule even if a correction factor were applied, as one reviewer proposed, to account for the narrowing of the field tested when looking at the lowest quintile.

93 Mary Mowbray, *Incomes Monitoring Report 1981-1991*, Social Policy Agency of the Department of Social Welfare, Wellington, 1993.

5.4 Analysis of the HLFS Data

A preliminary inspection of quarterly data, which in the present context means principally HLFS data, suggested that they would be more likely than HEIS data to turn up significant results concerning the impact of the minimum wage on employment. The key statistics that were inspected at the outset which led to this view are presented in Appendix 7.

Figure 5.7: Key quarterly data on young adults and teenage employment, December 1985 to December 1993



Source: HLFS and QES data

The New Zealand situation until early 1994, with 20 year olds and above age groups being covered and the below 20 year olds not covered, is ideal for conducting the kind of test which Welch undertook in the United States in the early 1970s.[94] In theory, these circumstances provide an opportunity to compare how each group fared in the face of changes in the minimum wage without necessarily having to go to great lengths to correct for other influences.

The HLFS data are especially suitable for this kind of test because, while containing no wage rate information, they come from a much larger sample than the HEIS and are quarterly, so

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94 Finis Welch , "Minimum Wage Legislation in the United States," *Economic Inquiry* 12 (3), 1974, pp285-318.

that even from the recent commencement of the survey in late 1985 through to late 1993 some 33 quarters of data are available.

The HLFS data series is short by most standards, but it can be seen from the graphical presentation of the data from Appendix 7 in Figure 5.7 that the series is long enough to show significant changes in the minimum wage and that this was a period when the ratios of teenage to adult employment and unemployment rates also varied considerably. That said, it is clear that some kind of formal statistical analysis is required to disentangle the relationship between the minimum wage and other variables.

Six formal econometric tests of HLFS quarterly data were undertaken – three on employment and three on unemployment.

In each case, an equation similar to that used by Welch in 1974 was estimated, that is:

$$\ln\left(\frac{A_t^i}{A_t^{25+}}\right) = \beta_0 + \beta_1 \ln\left(\frac{MW_t}{\overline{W}_t}\right) + \beta_2 Z_t + \beta_3 t + \beta_4 Q_{1t} + \beta_5 Q_{2t} + \beta_6 Q_{3t} + \varepsilon_t$$

where:

A_t^i is the employment/unemployment status of a particular target group;

A_t^{25+} is the employment/unemployment status of the adult population 25 years of age plus;

MW_t is the minimum wage;

$\overline{W}_t$ is the average wage;

t is a time trend;

Z is a business cycle variable; and

Q_1, Q_2 and Q_3 are seasonal dummy variables.

Expressing the dependent variable and the first independent variable in natural logarithms enables the key parameter of interest to be estimated directly as an elasticity.

In the United States, teenagers have long been covered by minimum wage legislation and in his analyses Welch was concerned to test the hypothesis that teenagers, as the least skilled and least experienced members of the working population, would bear the brunt of any disemployment effects.

Welch, therefore, set up the dependent variable of the equation (i.e. the left hand side of the

equation) as the ratio of teenage to non-teenage employment. As he had expected, his results showed that teenage employment was being significantly harmed by the minimum wage in the United States.

In New Zealand, the situation with coverage of the minimum wage has been different in that teenagers have been (until recently) exempt. The New Zealand situation is thus best suited to tests which examine whether the employment of young adults is being harmed by the minimum wage relative to the rest of the working population and, more particularly, whether their employment experience differs significantly from that of people in the 15- to 19-year old group who are not subject to the minimum wage law, and are probably their closest rivals for work.

The quarterly dummy variables and the trend variable were included in the model to correct for seasonal and cyclical factors.

The results obtained during the present New Zealand study are summarised in Table 5.4 below. (More detailed results are presented in Appendix 7.)

Table 5.4: Estimated Elasticities With Respect to Changes in the Minimum Wage, New Zealand, 1985 to 1993

	Group	Employment (relative to adults 25 years of age or more)	Unemployment (relative to adults 25 years of age or more)
1.	Teenagers (15–19 year olds)	+0.204 (NS)	–0.321 (NS)
2.	Young adults (20-24 year olds)	–0.155 (*)	+ 1.611 (**)
3.	Young adults (20-24 year olds, no qualifications)	–0.418 (*)	+1.640 (*)

Notes:

NS not statistically significant
* statistically significant at 5 per cent level
** statistically significant at 1 per cent level

Source: Regression analysis of HLFS data using econometric package LIMDEP

In the tests on unemployment, the dependent variable (on the left side of the equation) was written as the ratio with respect to people over 25 years of age of the employment of two

groups – that is, teenagers on the one hand and young adults 20 to 24 years old on the other hand.[95]

As hypothesised, the results were very different for each group.

For teenagers, who until 31 March 1994 were not covered by the minimum wage provisions, there was a tendency (albeit not statistically significant) for increases in the minimum wage to be associated with increases in employment.

In striking contrast, but again as hypothesised, the employment of 20-24 year olds, teenagers' most likely rivals in the workplace, was negatively correlated with increases in the minimum wage. Here the result was statistically significant at the 5 percent level. The estimated size of the correlation, –0.155, implied that for a 10 percent increase in the minimum wage there would be a reduction about 1.5 percent in young adult employment. This is a finding within the usual 1 to 3 percent range of disemployment impacts that has typically been found in other countries.

The third employment test was again with respect to 20-24 year olds, but with that sub-group of employees who have no training. Again, the hypothesis of a negative impact on employment was confirmed – the results (significant at the 5 percent level) indicating that the impact was about three times as severe on this sub-group as on 20-24 year olds as a whole.

In policy terms, this concurrence of New Zealand evidence with findings elsewhere is significant. The results are as would be predicted from modern theory. They suggest that the increases in the real minimum wage of about 8 percent during the 1980s (i.e. from 1980 to 1990 inclusive) cost 2,500 to 5,000 jobs amongst the quarter of a million 20 to 24 year olds then in the New Zealand population, and that probably about three quarters of this burden fell on the unskilled portion of that age group.

As regards our analysis using HLFS data of effects of the minimum wage on rates of unemployment, the results were again in line with the hypothesised effects. The three tests on unemployment with HLFS quarterly data involved estimating the Welch-type equation

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95 To correct for differences in group sizes, the employment of each group was expressed in what may be termed employment propensities – i.e. as the number employed divided by the working age population.

using, in turn, the unemployment rates of 'teenagers', 'young adults' and 'young adults with no qualifications' (relative to unemployment among people over 25 years of age) as the dependent variable.

As indicated in Table 5.4, no significant impact of the minimum wage was again found for teenagers. However, for young adults it was found, with high statistical significance, that a 10 percent increase in the minimum wage would raise their unemployment rate by about 1.8 percentage points. (Their unemployment rate was 11 percent over the 1985 to 1993 period and 16.1 percent of 11 percent equals 1.77.) In the case of young adults with no qualifications, the impact was, again, even more pronounced, the results suggesting that a 10 percent increase in the minimum wage would cause an increase of more than 3 percentage points in this group's unemployment rate. (Over the period their unemployment rate averaged about 20 percent and 16.4 percent of 20 percent equals 3.28.) As the number of unemployed 20-24 year olds has ranged from 30,000 to 40,000 over the last decade, these findings suggest that increases in the minimum wage can be held responsible for at least 5,000 of them.

The magnitude of these unemployment rate results is greater than has been obtained in most studies in other countries. In most cases, increases and decreases in the minimum wage appear to have caused offsetting changes in participation rates which have cushioned the unemployment rate impacts, and higher minimum wage rates have tended to discourage people from looking for work, thereby reducing the size of the workforce at the same time as some additional people were being refused a job. (By convention, the unemployment rate is expressed statistically as the proportion of the workforce, not the population.)

The results reported in this study seem likely to stimulate interest in further empirical work on the New Zealand data, especially in relation to the possible impacts of minimum wages on vulnerable minorities, beyond those which evidently fall on young adults without qualifications.

6. CONCLUSIONS AND IMPLICATIONS

6.1 What the Theory Says

The modern theory of minimum wage laws predicts that they will have a wide range of effects, not all of which have to do with the number of people employed.

The overriding insight provided by modern theory is that, except in the limited theoretical case of labour market monopsony, a statutory minimum wage is likely to push employers and employees into situations where their agreed work/wage/training/ work conditions mix is neither the same, nor as mutually beneficial, as it would be if pay rates had been purely a matter of voluntary negotiation. It is predicted that the outcome is a mismatch which, while often difficult to observe in all its dimensions, is manifested in one or more of the following symptoms:

- an inappropriate type of investment in vocational education due to the disincentive for employers to offer on-the-job training;
- a distorted mix of workplace benefits in the form of the safety, comfort and ambience of the premises, courtesy of supervisors, and proximity to home, transport, parking and so on;
- a tendency for ethnic, racial and other unsavoury forms of discrimination in employment to arise;
- fewer fringe benefits in the form of health insurance, subsidised food or accommodation, time off for study, year end bonuses, commission payments, holiday pay and sick leave;
- with fewer fringe benefits, a proportionately higher cash income for lower paid people who retain employment and thus (depending on tax rules and the shape of the tax scale), a higher rate of personal taxation than otherwise;
- higher participation in outside training courses, higher school enrolments (except in societies where students use low-wage part-time employment to meet living expenses during their courses) and a higher average school leaving age;
- a level of self-employment which is higher than would otherwise be the case, and lower incomes in self-employed activities as larger numbers seek to enter them; and
- disemployment, which may show up as a higher official rate of unemployment, even if the minimum wage reduces the participation rate

somewhat by discouraging people from staying in the workforce.

From a government viewpoint, the modern theory predicts:

- a higher level of social welfare expenditure to support people priced out of the labour market, whether on unemployment benefits or benefits in some other form;
- more public expenditure on education and training; and
- constant pressure to introduce and police new so-called 'minimum employment conditions' relating to safety, pay methods, holidays and so on, where employers will seek to economise if a minimum wage is enforced.

The theory also predicts that in a compulsory minimum wage environment, the issue of exemptions to the minimum wage will become a pressure point for the government. For example, at the same time as traditionally exempt groups (such as registered charities and sheltered workshops) will be pressing to ensure that no more exemptions are issued, others are likely to be pressing for comparable treatment.

6.2 Principal Overseas Empirical Findings

As noted in Chapter 4 and the accompanying Appendix 5, quantitative studies of the minimum wage have mainly been undertaken in the United States and have mainly focused on the effect of minimum wage laws on *numbers* of employed people.

Consistently the US work has found that with *adults* there has been a small disemployment effect (around 1 percent for a 10 percent increase in the minimum wage), though the effect has been concentrated in the youngest and oldest age categories, and has been more severe for men than women.

With *teenagers*, the employment effects of the minimum wage have been much more pronounced. On average, the results obtained in the United States and elsewhere have been a 1 to 3 percent reduction in teenage employment for a 10 percent increase in the minimum wage. The largest results obtained have been for unskilled youths. Results for blacks versus whites and males versus females have been mixed.

Given these outcomes, it is not surprising that a 1978 study found that the representatives of the most poorly paid workers were most likely to vote against minimum wage laws. Other studies have suggested that articulate, relatively well-paid people have supported increases in the minimum wage, as an adjunct to claims for increases in their own wages or to lessen competition from the lower wage end of the market.

Several studies have shown empirically that increases in statutory minimum wages have had the most severe disemployment effects in *low wage areas*. While nationally the impact might have seemed small, in South Carolina, for example, a 20 percent increase in the minimum wage was shown to have created 22, 36 and 34 percent decreases in the cotton industry's white male, white female and black male employment levels respectively.

On effects *other than those on employment numbers*, quantitative work has been less extensive, partly reflecting difficulties of measurement. A number of studies have shown that increases in minimum wages have reduced *on-the-job training* – one demonstrating that the worth of this payment-in-kind lost to workers outweighed the value of the minimum wage rise by nearly one third.

A study of big-city retailing showed that in response to a minimum wage increase, fewer workers were given *fewer hours* to do the same work as before. Another, on the restaurant industry, demonstrated that for every 1 percent rise in the minimum wage, restaurants reduced *penalty rates* for late shifts by some 4 percent, *severance pay* by 7 percent and *sick pay* by 3 percent.

Perhaps the most important empirical finding as far as minimum wages are concerned is that low wages are *not correlated with low household incomes*. The main reason is that across OECD countries at least, poverty is most often associated with the absence of paying work, not low wages. The implication is that, even ignoring the ill-effects of this kind of legislation on employment numbers and on fringe benefits and work conditions, trying to attack poverty through higher minimum wages would be ineffective, and could even have a perverse income distribution effect.

No empirical studies are known to have been undertaken yet on the *deadweight costs* to society of compulsory minimum wage legislation. The key costs, as noted in the previous section, are the mismatches which occur because one component of the employment bargain (the wage) which employers and employees reach is artificially increased. The net waste caused will be the sum of a great many induced inconveniences and less satisfactory arrangements across the lower paid section of the workforce, *plus* the economic cost of taxation and administration which will accompany any effort by the government to remedy the unwanted effects of such legislation – such as government support for training, official monitoring of work conditions and the payment of social security benefits.

Finally, on the subject of deadweight costs, it should be mentioned that the available evidence on the competitiveness of labour markets suggests that the theoretical monopsony case for fixing a wage above market levels offers no practical support for such a policy. Economists have never given much credence to the monopsony view of any labour markets,

but analyses have suggested that it is especially unlikely to be observed in the low-wage and low-skill occupations where the minimum wage has its main impact. Thus, from an efficiency point of view, the price distortions caused by minimum wages cannot be excused realistically as 'corrections' for undue market power on employers' part.

Any efficiency problem with the workings of labour markets at the lower end of the wage/skill scale is more likely to arise from the reduced incentives to seek and accept paid work created by the tax and social welfare systems. This problem is exacerbated by the existence of a wage floor.

6.3 What has been Learned from the Analysis of the New Zealand Data?

The New Zealand legislation on minimum wages has not until very recently covered teenagers. Trainees in certain vocations have been and remain exempt and there is a routine exemption for people working in sheltered workshops run by registered charities. Outside the sheltered workshop environment, disabled workers deemed eligible by inspectors of the Department of Labour can qualify for exemption by being individually granted an under-rate certificate.

The New Zealand minimum wage applies nationwide. This is likely to have varying disemployment and workplace effects across regions, and could be costly for lower-wage regions, but such effects will be hidden in the national statistics.

Quantitative analysis of the effects of minimum wages is notoriously difficult for several reasons. One is that the effects are not only (and are probably not even mainly) to do with readily-measured changes such as the 'number of people employed'. Another reason is that the people whose employment status is likely to be most sharply affected – people to whom we may refer as 'victims' – are narrow sub-categories of the workforce (such as young, unskilled, female members of ethnic minority groups) who are not heavily represented in employment surveys.

In New Zealand, with its relatively small total population, the labour survey information on sub-categories of workers is particularly thin.

Graphical inspection of annual data from the Household Expenditure and Income Survey (HEIS) revealed no sign that changes in the minimum wage have affected the wage rate frequency distribution or the employment of lower-paid New Zealand employees over 20 years of age. Indeed, the HEIS data revealed no minimum wage effects even on the employment of sub-categories of lower-paid people usually hypothesised to be victims, such as those in the 20-25 age group, the unskilled, or young women with no training. The reasons for this are not clear and the question may warrant further work. However, we

know that the HEIS is a relatively small survey and that the data are annual which means that from 1984 to 1993 there are only 10 observations. Furthermore, there is a suspicion that, since pay intervals differ, respondents' survey answers about their average wage rates have been inconsistent (or even irrelevant).

More substantial results than these have been obtained from analysis of data from the Household Labour Force Survey (HLFS) which is understood to be ten times larger than the HEIS and, though offering no wage-rate information, has the advantage relative to the HEIS of being a quarterly series. This means that since 1985 there have been 33 observations.

Using quarterly data from the Household Labour Force Survey collected from December 1985 until December 1993, it was found that:

- with 20-24 year olds, the youngest group of people (then) covered by the minimum wage, the level of employment was negatively related to the level of the minimum wage. The statistically significant result that, for a 10 percent increase in the minimum wage, employment in this group would fall by 1.5 percent is within the range of 1 to 3 percent typically found over the last 20 years in other countries;
- in support of the usual fear expressed about minimum wages, the negative impact on 20-24 year old employment was three times more pronounced on the fraction of those workers who were unskilled;
- with 15-19 year olds (who were not covered by the minimum wage in the period), there is an indication, albeit not statistically significant, that employment has been positively correlated with the minimum wage applying to their adult rivals in the labour market; and
- with 20-24 year olds, unemployment has been positively related to the level of the minimum wage. The result is highly significant in a statistical sense, in contrast to most overseas studies where increases in minimum wages appear to have been associated with falling participation rates. Interestingly, no negative relationship of any significance was found to exist between the adult minimum wage and teenage unemployment.

A disemployment effect of 1.5 percent for a 10 percent increase in the real minimum wage is not unimportant. With an average of around a quarter of a million 20-24 year olds in the New Zealand population in the 1980s, the cumulative increases in the real minimum wage of about 8 percent in that decade are estimated to have cost some 2,500 to 5,000 jobs, and probably about three quarters of that burden fell on the unskilled portion of that age group. Harmful effects other than those on employment numbers are also likely to have occurred.

One statistical finding obtained which is important for the consideration of minimum wage policy was the absence of any significant correlation between low wages and household income in New Zealand.

This result is pertinent to the claim usually made by proponents of minimum wage legislation that it is a useful instrument for combating poverty. The 'no correlation' finding is consistent with the wage/household income relationship found in all OECD countries. The relationship may be even weaker for teenage wage earners than for wage earners in general and indeed, if findings in some countries are any guide, the teenage wage/household income correlation may actually be negative.

6.4 Lessons for New Zealand

The results obtained during this study will be of interest to those concerned with labour market policy in New Zealand and, in particular, can be expected to prompt further research on the effects of the minimum wage on employment of sub-categories of the New Zealand workforce, such as ethnic minorities.

Official data on the non-wage aspects of the labour market in New Zealand are not available. Incidental evidence such as the degree to which increases in real minimum wages might have been accompanied by complaints about, for example, workplace safety or other non-wage aspects cannot be readily tested, given the way figures on complaints are collected.

In New Zealand there seems to be a particular interest in a (supposed) link between the minimum wage and education. For example, in a recent report to their minister supporting the introduction of a minimum wage for teenagers, staff in the Ministry of Youth Affairs argued, among other things, that:

> ... a minimum wage for youth could reinforce the policy of encouraging young people to engage in education and training by potentially reducing the number of low paid jobs that attract young people away from education and training.[96]

People with these views should pay more attention to research results of the type reported in Chapter 4 (Section 4.2) about the ambiguity of the minimum wage impact on formal education. It is also important to understand the absence of any convincing argument that more education is always efficient or that formal schooling is any more efficient than other

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96 Heather Roberts, "Report to the Minister of Youth Affairs", 15 December 1993, *op. cit.*, p.4.

forms of education.

It is difficult to see how New Zealand could have avoided the kind of costs associated with minimum wages which have been cited throughout this report. Even if each distortion the minimum wage has caused – either to the employment prospects of the least-skilled individuals or to the wage/on-the-job training/work-conditions mix agreed by employers and employees – has been small, there will have been a great many such distortions, on a great many occasions. The total social cost is likely to have been substantial.

By most people's standards, the impact will also have been unfair since a large proportion of the costs will have fallen on the least-skilled. It cannot even be safely claimed that any tendency of the minimum wage to raise the wage rates of a section of the least-skilled group was fair. Besides being selective as between one low-skilled person and another, there is about as much chance that any person whose wage rate was raised lived in a high-income household as in a low-income household (this is an implication of the absence of any significant statistical correlation between wages and total household income).

6.5 Policy Implications

There have been repeated suggestions in New Zealand, particularly by the Council of Trade Unions, that the minimum wage level should be increased. The CTU strongly criticised the government's decision following the December 1994 annual review not to increase the adult minimum wage. On the basis of the evidence presented in this report, that decision was sound. It contrasts with the government's subsequent and unwise decision in regard to teenagers.

In the lead-up to the decision in February 1994 to broaden the coverage of the minimum wage to include teenagers, three arguments were prominent. These were that new American evidence had removed the traditional disemployment effect fears; that a teenage minimum was needed to make the circumstances of teenagers consistent with those applying to people 20 years of age and over; and that a teenage wage floor would reduce the scope for unscrupulous employers to exploit more vulnerable teenage workers.[97] All three ideas are mistaken.

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97 Examples of columnists who put forward all or some of these views in the weeks before the decision were Alastair Morrison ("Economic recovery relies on lowering the wage base," *The Dominion*, 14 January 1994) and Rosslyn Noonan ("Teens held hostage to outdated policies," *Sunday Star*, 30 January 1994).

First, as explained in Chapter 4 of this study (Section 4.4) and the accompanying Appendix 5, the so-called new American evidence has been discredited. Katz and Kreuger, for example, have admitted that their finding of a positive teenage employment response in Texan restaurants to a minimum wage increase might have had something to do with their failure to survey the businesses which ceased trading altogether. Kreuger has also said subsequently that: "[his] comments should *not* be interpreted as support for the position that increasing the minimum wage is sound public policy".[98] Likewise, Card, the author who reported a positive teenage employment response to the minimum wage increase in California, among other things failed to allow for background changes in product demand. So unconvincing have the new findings been that the Clinton administration has still not fulfilled its promise to substantially raise the minimum wage.

Second, in view of the findings of this study, the consistency argument should be turned on its head. While the minimum wage does not account for a high proportion of New Zealand's rate of unemployment, it is destroying an unknown number of potential jobs and distorting other working conditions. At any level where it has a positive effect, a minimum wage does harm and little, if any, good. In the increasingly flexible era ushered in by the *Employment Contracts Act*, the minimum wage legislation remains a rigid anachronism.

Besides repealing the minimum wage for teenagers, a half-way step towards the goal of abolishing the *Minimum Wage Act* would be to reduce the minimum wage to that of the unemployment benefit for single people. That would be broadly consistent with the work test currently applied for unemployment benefits, an issue addressed in the next section.

The third argument arose from suggestions that some teenagers have been exploited by their employers in respect of pay rates offered. The allegations mainly involve small firms, not medium or large firms. Until and unless the specific circumstances of each case are known, it should not be assumed that exploitation has occurred.

In the case of many teenagers, especially those trying to enter the workforce for the first time, or working briefly during holidays, low rates of pay will be appropriate given their experience, capacity and productivity. Indeed, it is common for teenagers to be quite comfortable, even keen, to work for a brief initial period without remuneration at all, simply to gain valuable work experience. Teenagers themselves recognise, as do their parents, that the key initial benefit is gaining the experience of working, with some on-the-job training,

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98 Alan B. Krueger, "Have Increases in the Minimum Wage Reduced Employment?" *Jobs and Capital* 2(2), Summer 1992, p11.

rather than the amount they are paid. It follows that cases where the pay rate seems low by adult standards may not, when the full circumstances are known, represent exploitation.

In the very infrequent cases where exploitation is thought to occur, there are preferable and more effective ways of dealing with them than applying the heavy hand of legislation and intrusion by government inspectors. Obvious possibilities include:

- representations on behalf of the employee by parents or guardians – surely the most logical first approach to follow;
- media investigations; and
- representations by local figures of authority including local members of parliament (as has apparently occurred successfully in some recent cases).

Another possibility, suggested by the select committee which reviewed the *Employment Contracts Act* in 1993, is the establishment of a 'hot line' to investigate claims of exploitation.

Legislating a teenage minimum wage is surely a case of using a sledgehammer to crack a nut. Even a graduated scale of minimum wages – the 19 year old rate lower than the 20 year old rate and so on – would not address the alleged problem in a well-targeted way and would damage the interests of many more teenagers than it would protect.

The decision in February 1994 to extend the coverage of the minimum wage to teenagers drew strident criticism from some quarters, but attempts to justify the decision appeared in the media for weeks afterwards too. One type of defence heard was that "you can see wage floors do not cause youth unemployment because youth unemployment did not disappear, and indeed it got worse for a while, after wage awards were scrapped in May 1991". Another was that "youth unemployment is being soaked up by teenagers increasingly staying in the education system, not by their acceptance of slave wages.[99]

The trouble with statements of this kind is that they make impressionistic rather than analytical use of the available statistics. As shown in Chapter 5 of this study, isolating wage effects from other influences is difficult, but proper analysis reveals that minimum wages *do* cause job losses. Moreover, in the New Zealand case at least, even in the face of a decline in participation rates minimum wage rates appear to have caused an increase in the

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99 Both of these ideas were put forward, for example, by David McLoughlin in "Out of the Woodwork", *North and South*, April 1994.

unemployment rate.

The lamentable fact is that minimum wages cost jobs, and the numbers show it.

6.6 Wider Employment and Unemployment Issues

New Zealand shares the concern of most countries to achieve high sustainable rates of economic and employment growth and a rising standard of living. It is commonly agreed that the employment objective has not been met in recent years, although there have been some encouraging signs recently.

Conversely, growth in unemployment since the early 1970s and its persistence through to the 1990s have been unmistakeable. The unemployment figures themselves do not tell the full extent of the problem. Many workers have withdrawn from the labour market because they regard further job search as futile. Generous income support, including early retirement and disability schemes, have encouraged such decisions.

Technological change and the removal of industry supports and extensive, if overdue, public sector reform – which have forced many employees from traditional activities – have exacerbated the short- to medium-term unemployment problem. In addition, however, as the OECD has delicately explained in a broader context:

> Wage structures in some countries have moved out of line with the structure of employment opportunities[100].

The unemployment problem is serious in its own right because it brings with it individual hardship, economic loss and a threat to the social and political fabric. It also risks provoking precipitate and counter-productive policy action. Both aspects are of concern in the New Zealand context.

New Zealand has taken two major steps to combat the unemployment problem. One was the introduction of the *Employment Contracts Act* in May 1991. This has permitted increased flexibility in the conditions under which people work. Most employers and employees have opted to move to enterprise-based employment arrangements which have better reflected their mutual interests and local supply and demand conditions. The dynamics unleashed by this greater flexibility have almost certainly been underestimated by most policy analysts so far.

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100 OECD, "Employment /Unemployment Study," *Interim Report to the Secretary-General*, Paris 1993, p22.

The other main initiative, directed simultaneously at both unemployment and budgetary problems, has been reforms of social welfare policies. The result has been that the so-called 'replacement rates' (that is, the income available from social security relative to the amount available from paid work) for most households have been significantly reduced.[101] Nevertheless, replacement rates remain wide-ranging across different categories of people – quite moderate, for example, for singles considering full-time employment, and quite high for most part-time workers and sole parents.

However, the changes have reduced the disincentive to work which is inherent in the social welfare payments structure. A single 20 year old during 1990 was entitled to an unemployment benefit of $143.57 per week. In 1991 this was cut to $108.17 per week, with small upward adjustments to $109.25 and $110.69 in 1992 and 1993 respectively. Over this period, average wages rose slightly. Thus there was a larger gap between these two parameters which will have increased the job search incentive for 20 year olds, hopefully raising their participation above what it would otherwise have been.

Nonetheless, the incentive for some people to search for work has continued to be undermined by a provision which has forbidden the payment of a wage which many may have found attractive – namely some rate below the minimum wage of $245 per week. The *Employment Contracts Act* removed the obligation to adhere to awards which required employees in particular occupations and industries to be paid no less (and sometimes no more) than a specified wage rate. But it left the minimum wage in place.

What the current rules mean, to use the obvious example, is that an unskilled 20 year old receiving unemployment benefits whose productivity might justify a wage rate of any figure up to $244 per week cannot work legally as an employee – unless he/she fitted one of the disabled or trainee exemption categories. Anomalously, from this perspective, the same barrier is not put in the way of the self-employed.

This situation is neither justifiable, nor consistent with the approach taken by the Department of Social Welfare to people on unemployment benefits who are offered a job. The current administrative rule is that such people must forfeit the benefit if they do not accept a job offer at a wage rate $15 or more above the unemployment benefit rate. For single 18-24 year olds, that is currently a figure of $125.69 per week – equivalent to about half the present minimum wage.

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101 For an account of these initiatives, see Mark Prebble and Paula Rebstock, *Incentives and Labour Supply: Modelling Taxes and Benefits*, Institute of Policy Studies, Wellington, 1992.

It is in this context that the recent extension of the minimum wage to cover teenagers should be assessed. It should be clear that the move has merely circumscribed the employment options of another section of the community. There is nothing in this for the teenagers who have been priced out of work, or for the wider community.

6.7 Complementary Elements of a Pro-employment Strategy

Thinking about measures to combat the inefficiency and distress associated with unemployment now generally focuses on ways in which the desired combination of social welfare, taxation and employment protection can be more effectively pursued. This is a complex subject, no less so in New Zealand than elsewhere, but in these concluding remarks it is appropriate to reflect on what elements might usefully be introduced to that end.

There may be a role for some rearrangement of existing labour market programmes, but the main requirement appears to be the development of safety net measures which involve direct payments to top-up incomes, without corrupting the paramount workplace principle that people's wages ought to be dictated by their productivity.

The OECD's recent comments on the importance of achieving equity and social protection with policies which do not, at the same time, have counter-productive effects on the functioning of labour markets are a helpful starting point:

> Some policies, particularly some forms of employment protection legislation, seek to ensure that conditions of employment are of a satisfactory standard. Some, such as health and safety provisions and training requirements, can involve an investment in longer term productivity and welfare which has to be balanced against the higher immediate costs involved. Others, such as minimum wages and other provisions which prescribe minimum employment standards, do increase labour costs and will in most circumstances result in a lower employment level than would otherwise be the case. These need to be examined to ascertain whether their distributional goals can be achieved in other ways which minimise negative effects on employment. For example, wage subsidies directed at families with low overall income will be more cost effective than minimum wages in alleviating poverty amongst households with employed members.[102]

The material presented in this report indicates there is little reason to think that New Zealand's minimum wage achieves any worthwhile distributional goals. The question to consider now is whether new measures could be introduced to raise the incomes of those who would otherwise experience hardship while providing less of a disincentive to work. This would require an acceptance of the proposition that, as the OECD puts it, "an effective

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102 OECD, *op. cit.*, p28

general approach to the unemployment problem starts from the recognition that low productivity jobs warrant the payment of only a low wage."

A detailed consideration of remedies for unemployment was published in the United Kingdom in 1991.[103] As well as stressing the need for labour market flexibility, it set out the lessons of experience with a variety of social welfare and labour market programmes. The main findings were:

- the unconditional payment of benefits for an indefinite period has clearly been a major cause of high unemployment in Europe. The obvious solution is that benefits must be of limited duration;
- active manpower policy can help lower unemployment rates. Benefits for the unemployed in Sweden, for example, run out after 14 months, but before that time unemployed people are helped to find work, can have retraining, and can (if persistently unemployed) benefit from wage subsidies;
- concentrating help on the long-term unemployed seems wise, unless the costs are disproportionately greater; and
- focusing the aid directly on the unemployed, rather than on, say, regions appears to be more cost effective.

These are not remarkable insights, and the book's main policy conclusions, such as the need for strict benefit testing, are in line with most contemporary thinking on unemployment. The support for subsidised employment programmes is less widely endorsed.[104]

The main alternative to offering support through unemployment benefits is to top-up incomes to some desired level via the social welfare system without reference to the employment status of the recipient.

As with unemployment benefits, there would be a degree of moral hazard with direct top-up payments. One risk sometimes mentioned is that recipients could conspire with employers so that employees were paid less at work than their productivity would dictate, knowing that the government would make up that and more in the top-up.

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103 Richard Layard, Stephen Nickell and Richard Jackman, *Unemployment: Macroeconomic Performance and the Labour Market*, Oxford University Press, 1991.

104 A Patrick Minford, "Review Article: Has Labour Market Economics Achieved a Synthesis?" *Economic Journal*, July 1993.

New Zealand has found practical solutions to such problems in the past through careful policy design. The best known case is probably the Guaranteed Minimum Family Income (GMFI) scheme which:

- is confined to parents of dependent children;
- requires the recipient to engage in work for at least 20 hours per week in the case of a single parent, and for at least 30 hours in the case of a couple; and
- is paid alongside an allowance known as Family Support, as part of the same administrative system.

Departmental officers have said that, while the possibility has been recognised, they are unaware of any fraud with the GMFI through the collusion of employees and employers. While it would always be difficult to be one hundred percent sure that there is no abuse of this or any other scheme, experience with the GMFI suggests that income top-up schemes can work without significant cheating.

The proposition that unemployment could be reduced by time-limiting the payment of unemployment benefits also deserves consideration in the New Zealand context. The prime aim of such a measure would be to strengthen incentives to seek and accept paid work. A system of time-limited unemployment benefits would need to be supplemented by discretionary special benefits for those who did not find jobs within a specified period of perhaps 6 or 9 months. These special benefits would be paid subject to stringent tests of need. The expiry of entitlement to the standard unemployment benefits after a fixed period would provide a natural opportunity to consider the person's suitability for training and the like. Strict administration would be needed to ensure that special benefits did not degenerate into an unlimited extension of unemployment benefits.

Further encouragement to unemployed workers to re-enter the workforce would flow from reducing the effective marginal tax rates which they face when moving off benefits. While there may still be some scope to refine present benefit abatement rules, it is limited given present government expenditure levels and associated tax rates. A helpful step would be to reduce the tax rates facing low income earners. This will become a real possibility if recent progress towards lower levels of government spending, deficits and debt is maintained.

New Zealand's moves to increase labour market flexibility through the *Employment Contracts Act*, and to reform its welfare arrangements with a view to encouraging those who are able to work to do so, are in line with current international thinking on strategies to combat unemployment. It would not have been reasonable to contemplate measures such as time limits on benefits or stricter work tests under previous labour market arrangements which did not permit workers to freely contract for jobs. Now that such flexibility is available, and

would be enhanced by moves to abandon or relax the constraints imposed by the statutory minimum wage, such a policy package becomes a feasible option. Certainly there is a need to progress beyond the stage where a statutory minimum wage is regarded as having some useful role as either income support or a labour market tool.

APPENDICES

REPRINTED ACT

[WITH AMENDMENTS INCORPORATED]

MINIMUM WAGE

REPRINTED AS ON 1 OCTOBER 1991

INDEX

In this index "(n)" after a page number indicates that the enactment is referred to in a note on that page.

ANALYSIS

THE MINIMUM WAGE ACT 1983
1983, No. 115

An Act to consolidate and amend the law relating to minimum wages [*16 December 1983*

1. Short Title and commencement—(1) This Act may be cited as the Minimum Wage Act 1983.

(2) This Act shall come into force on a date to be appointed by the Governor-General by Order in Council.

As to subs. (2), this Act came into force on 2 September 1985; see S.R. 1985/212.

[2. Interpretation—In this Act, unless the context otherwise requires,—

"Employer" means a person employing any worker or workers; and includes a person employing a homeworker:

[["Employment Tribunal" means the Employment Tribunal established under the Employment Contracts Act 1991:]]

[["Labour Inspector" means a Labour Inspector designated under section 143 of the Employment Contracts Act 1991:]]

"Worker"—

(a) Means any person of any age employed by an employer to do any work for hire or reward; and

(b) Includes a homeworker.]

This section was substituted for the original s. 2 by s. 2 of the Minimum Wage Amendment Act 1987. See s. 1 (2) of that Act.

"Employment Tribunal": The definition of this term was inserted by s. 2 (1) of the Minimum Wage Amendment Act 1991.

"Labour Inspector": The definition of this term was substituted for a definition of the term "Inspector" by s. 2 (2) of the Minimum Wage Amendment Act 1991.

3. Act to bind Crown—This Act shall bind the Crown.
Cf. 1945, No. 44, s. 6

4. Prescription of minimum wages—(1) The Governor-General may from time to time, by Order in Council, prescribe the minimum rates of wages payable to any class or classes of workers, which class or classes shall be defined in the Order by reference to the age of the workers.

(2) Any minimum rate of wages prescribed pursuant to subsection (1) of this section may be prescribed as a monetary amount or as a percentage of any other minimum rate of wages prescribed pursuant to subsection (1) of this section.

Cf. 1945, No. 44, s. 2 (2); 1952, No. 18, s. 2 (1)

See S.R. 1990/191.

[**5. Annual review of minimum wages**—(1) The Minister of Labour shall, in each year ending on the 31st day of December, review any minimum rate prescribed pursuant to section 4 of this Act.

(2) Following a review under subsection (1) of this section, the Minister may, whether in that year or subsequently, make recommendations to the Governor-General regarding the adjustments that should be made to that minimum rate.]

This section was substituted for the original s. 5 by s. 3 of the Minimum Wage Amendment Act 1987. See s. 1 (2) of that Act.

6. Payment of minimum wages—Notwithstanding anything to the contrary in any enactment, award, collective agreement, determination, or contract of service, but subject to sections 7 to 9 of this Act, every worker who belongs to a class

of workers in respect of whom a minimum rate of wages has been prescribed under this Act, shall be entitled to receive from his employer payment for his work at not less than that minimum rate.

Cf. 1945, No. 44, s. 2 (1); 1970, No. 137, s. 6; 1974, No. 137, s. 2

7. Deductions for board or lodging or time lost—(1) In any case where a worker is provided with board or lodging by his employer, the deduction in respect thereof by the employer shall not exceed such amount as will reduce the worker's wage calculated at the appropriate minimum rate by more than the cash value thereof as fixed by or under any Act, ... determination, or agreement relating to the worker's employment, or, if it is not so fixed, the deduction in respect thereof by the employer shall not exceed such amount as will reduce the worker's wages (as so calculated) by more than 15 percent for board or by more than 5 percent for lodging.

(2) No deduction in respect of time lost by any worker shall be made from the wages payable to the worker under this Act except for time lost—

(a) By reason of the default of the worker; or

(b) By reason of the worker's illness or of any accident suffered by the worker.

Cf. 1945, No. 44, s. 2 (4), (5); 1974, No. 106, s. 3

In subs. (1) the words "award, collective agreement," were omitted by s. 3 of the Minimum Wage Amendment Act 1991.

8. Under-rate workers' permits—(1) If any worker satisfies [a Labour Inspector] ... that he is incapable of earning wages at the appropriate minimum rate prescribed under this Act, [the Labour Inspector] may from time to time grant the worker a permit to accept wages at such lower rates as may be specified in the permit.

(2) A permit granted to any worker under subsection (1) of this section shall continue in force for the period specified in that behalf in the permit; and while it continues in force the rate of wages specified in the permit shall be deemed to be the minimum rate of wages prescribed under this Act in respect of that worker.

(3) *Repealed by s. 4 (2) of the Minimum Wage Amendment Act 1991.*

Cf. 1945, No. 44, s. 2 (6), (7)

In subs. (1) the words "a Labour Inspector" were substituted for the words "an Inspector" by s. 4 (1) (a) of the Minimum Wage Amendment Act 1991; the words "of

Awards" were omitted by s. 4 of the Minimum Wage Amendment Act 1987; and the words "the Labour Inspector" were substituted for the words "the Inspector" by s. 4 (1) (b) of the Minimum Wage Amendment Act 1991.

[8A. Wages and time records—(1) Every employer who employs any worker whose wages or rates of wages are prescribed or paid pursuant to this Act shall keep a record (called the wages and time record) showing, in the case of each such worker,—

(a) The name of the worker:

(b) The worker's age, if under 20 years of age:

(c) The worker's postal address:

(d) The kind of work on which the worker is usually employed:

[[(e) The contract of service under which the worker is employed:

(f) The classification or designation of the worker according to which the worker is paid:]]

(g) The hours between which the worker is employed on each day, and the days of the worker's employment during each week:

(h) The wages paid to the worker each week and the method of calculation:

(i) Such other particulars as are prescribed.

(2) Every employer shall, upon request made at any reasonable time by [[a Labour Inspector]], produce forthwith for inspection by [[that Labour Inspector]] every wages and time record that is, or at any time during the preceding 6 years was, in use under this Act in respect of any worker employed by that employer at any time in those 6 years.

(3) Where an employer keeps a wages and time record in accordance with the [[Employment Contracts Act 1991]] or the Factories and Commercial Premises Act 1981 or the Agricultural Workers Act 1977 or the Bush Workers Act 1945, that employer shall not be required to keep a wages and time record under this Act in respect of the same matters.

In subs. (1), paras. (e) and (f) were substituted for the former paras. (e) and (f) by s. 5 (1) of the Minimum Wage Amendment Act 1991.

In subs. (2) the words in the first and second sets of square brackets were substituted for the words "an Inspector" and "that inspector" respectively by s. 5 (2) (a) and (b) of the Minimum Wage Amendment Act 1991.

In subs. (3) the Employment Contracts Act 1991, being the corresponding enactment in force at the date of this reprint, has been substituted for the repealed Labour Relations Act 1987.

8B. *Repealed by s. 6 of the Minimum Wage Amendment Act 1991.*

8C. *Repealed by s. 3 of the Minimum Wage Amendment Act 1990.*

(c) In all other cases, $245 for each week plus $6.125 for each hour in excess of 40 worked by the worker in each week.

3. Revocation—The Minimum Wage Order 1989* is hereby revoked.

MARIE SHROFF,
Clerk of the Executive Council.

*S.R. 1989/101

EXPLANATORY NOTE

This note is not part of the order, but is intended to indicate its general effect.

This order, which comes into force on 17 September 1990, increases the minimum rates of wages prescribed for workers 20 years of age and upward.

The rates apply to both male workers and female workers.

The order makes it clear that—

(a) Where a worker is paid by the day, the worker is to be paid, in addition to the prescribed rate for each day, the prescribed hourly rate for each hour in excess of 8 worked by the worker on each day; and

(b) Where a worker is paid by the week, the worker is to be paid, in addition to the prescribed rate for each week, the prescribed hourly rate for each hour in excess of 40 worked by the worker in each week.

Issued under the authority of the Acts and Regulations Publication Act 1989.
Date of notification in *Gazette*: 16 August 1990.
This order is administered in the Department of Labour.

WELLINGTON, NEW ZEALAND: Published under the authority of the New Zealand Government—1990

18309A—90/N

A COPY OF THE MINIMUM WAGE ORDERS OF 1990 AND 1994

1990/191

THE MINIMUM WAGE ORDER 1990

PAUL REEVES, Governor-General

ORDER IN COUNCIL

At Wellington this 18th day of August 1990

Present:

HIS EXCELLENCY THE GOVERNOR-GENERAL IN COUNCIL

PURSUANT to section 4 of the Minimum Wage Act 1983, His Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, hereby makes the following order.

ORDER

1. **Title and commencement**—(1) This order may be cited as the Minimum Wage Order 1990.

(2) This order shall come into force on the 17th day of September 1990.

2. **Minimum rates**—The minimum rates of wages payable to all workers (whether male or female) who are workers to whom the Minimum Wage Act 1988 applies and who are of the age of 20 years and upwards shall be the following:

(a) If the worker is paid by the hour or by piecework, $6.125 an hour or an amount equivalent thereto having regard to the rate of production of the worker:

(b) If the worker is paid by the day, $49 for each day plus $6.125 for each hour in excess of 8 worked by the worker on each day:

Price Code: 2—A

(2) Section 8 (3) of the principal Act is hereby repealed.

5. (1) *This subsection substituted new paragraphs for paras. (e) and (f) of s. 8A (1) of the principal Act.*

(2) (a), (b) *These paragraphs amended s. 8A (2) of the principal Act.*

6. Repeals—Sections 8B and 8D of the principal Act (as inserted by section 5 of the Minimum Wage Amendment Act 1987) are hereby repealed.

7. (1) *This subsection substituted a new section for the former s. 10 of the principal Act (as substituted by s. 6 of the Minimum Wage Amendment Act 1987).*

(2) Section 6 of the Minimum Wage Amendment Act 1987 is hereby consequentially repealed.

8. (1) *This subsection substituted a new section for the former s. 11 of the principal Act (as substituted by s. 7 of the Minimum Wage Amendment Act 1987).*

(2) Section 7 of the Minimum Wage Amendment Act 1987 is hereby consequentially repealed.

9. *This section substituted a new section for the former s. 11A of the principal Act (as inserted by s. 8 of the Minimum Wage Amendment Act 1987).*

10. *This section inserted s. 11B in the principal Act.*

11. Repeal—The Minimum Wage Amendment Act 1990 is hereby repealed.

The Minimum Wage Act 1983 is administered in the Department of Labour.

WELLINGTON, NEW ZEALAND: Published under the authority of the New Zealand Government—1991

25924F —91/NS

(2) This Act shall come into force on the 1st day of August 1987.

2. *This section substituted a new section for s. 2 of the principal Act.*

3. *This section substituted a new section for s. 5 of the principal Act.*

4. *This section amended s. 8 (1) of the principal Act.*

5. *This section inserted ss. 8A to 8D in the principal Act.*

6. *Repealed by s. 7 (2) of the Minimum Wage Amendment Act 1991.*

7. *Repealed by s. 8 (2) of the Minimum Wage Amendment Act 1991.*

8. *Impliedly repealed by s. 9 of the Minimum Wage Amendment Act 1991.*

THE MINIMUM WAGE AMENDMENT ACT 1991
1991, No. 27

An Act to amend the Minimum Wage Act 1983

[*7 May 1991*

1. Short Title and commencement—(1) This Act may be cited as the Minimum Wage Amendment Act 1991, and shall be read together with and deemed part of the Minimum Wage Act 1983 (hereinafter referred to as the principal Act).

(2) This Act shall come into force on the 15th day of May 1991.

2. (1) *This subsection inserted the definition of the term "Employment Tribunal" in s. 2 of the principal Act.*

(2) *This subsection substituted the definition of the term "Labour Inspector" for a definition of the term "Inspector" (as substituted by s. 2 of the Minimum Wage Amendment Act 1990) in s. 2 of the principal Act.*

3. *This section amended s. 7 of the principal Act.*

4. (1) (a), (b) *These paragraphs amended s. 8 (1) of the principal Act.*

Employment Contracts Act 1991 which is in force immediately before the commencement of this section.]

This section was inserted by s. 10 of the Minimum Wage Amendment Act 1991.

12. Regulations—The Governor-General may from time to time, by Order in Council, make all such regulations as may, in his opinion, be necessary or expedient for giving full effect to the provisions of this Act and for the due administration thereof.

Cf. 1945, No. 44, s. 5

13. Saving—Nothing in this Act reduces or authorises any employer to reduce the wages being paid to any worker at the date of the commencement of this Act.

14. Repeals—The enactments specified in the Schedule to this Act are hereby repealed.

SCHEDULE Section 14

ENACTMENTS REPEALED

1945, No. 44—The Minimum Wage Act 1945. (R.S. Vol. 3, p. 633.)
1946, No. 40—The Statutes Amendment Act 1946: Section 55. (R.S. Vol. 3, p. 636.)
1952, No. 18—The Minimum Wage Amendment Act 1952. (R.S. Vol. 3, p. 636.)
1968, No. 94—The Minimum Wage Amendment Act 1968. (R.S. Vol. 3, p. 637.)
1970, No. 137—The Age of Majority Act 1970: So much of the First Schedule as relates to the Minimum Wage Act 1945.
1974, No. 106—The Minimum Wage Amendment Act 1974. (R.S. Vol. 3, p. 637.)

THE MINIMUM WAGE AMENDMENT ACT 1987
1987, No. 83

An Act to amend the Minimum Wage Act 1983

[*28 May 1987*

1. Short Title and commencement—(1) This Act may be cited as the Minimum Wage Amendment Act 1987, and shall be read together with and deemed part of the Minimum Wage Act 1983 (hereinafter referred to as the principal Act).

this Act, where there has been any default in payment of any such wages or other money or where any payment of any such wages or other money has been made at a rate lower than that prescribed under this Act or otherwise legally payable to the worker, the whole or any part, as the case may require, of any such wages or other money may be recovered by the worker or by a Labour Inspector to the use of the worker by action commenced in the Employment Tribunal in the same manner as an action under section 48 of the Employment Contracts Act 1991, notwithstanding the acceptance by the worker of any payment at a lower rate or any express or implied agreement to the contrary, and subsection (2) of that section shall apply accordingly.]

This section was substituted for the former s. 11 (as subsituted by s. 7 of the Minimum Wage Amendment Act 1987) by s. 8 (1) of the Minimum Wage Amendment Act 1991.

[**11A. Compliance order**—Section 55 of the Employment Contracts Act 1991 shall apply to non-observance or non-compliance with any provision of, or requirement given under, this Act as if it was a provision of, or requirement given under, Parts II to IV of the Employment Contracts Act 1991, and proceedings under that Act may be commenced by any worker or employer prejudicially affected by the non-observance or non-compliance.]

This section was substituted for the former s. 11A (as inserted by s. 8 of the Minimum Wage Amendment Act 1987) by s. 9 of the Minimum Wage Amendment Act 1991.

[**11B. Forty-hour five-day week**—(1) Subject to subsections (2) and (3) of this section, every employment contract under the Employment Contracts Act 1991 shall fix at not more than 40 the maximum number of hours (exclusive of overtime) to be worked in any week by any worker bound by that employment contract.

(2) The maximum number of hours (exclusive of overtime) fixed by an employment contract to be worked by any worker in any week may be fixed at a number greater than 40 if the parties to the contract agree.

(3) Where the maximum number of hours (exclusive of overtime) fixed by an employment contract to be worked by any worker in any week is not more than 40, the parties to the contract shall endeavour to fix the daily working hours so that those hours are worked on not more than 5 days of the week.

(4) Nothing in this section shall apply in respect of any individual employment contract within the meaning of the

8D. *Repealed by s. 6 of the Minimum Wage Amendment Act 1991.*]

Ss. 8A to 8D were inserted by s. 5 of the Minimum Wage Amendment Act 1987. See s. 1 (2) of that Act.

9. Workers to whom Act does not apply—This Act shall not apply to—

(a) Apprentices to whom the Apprenticeship Act 1983 applies:

(b) Apprentices bound by an indenture of apprenticeship entered into under the Maori Housing Amendment Act 1938, the New Zealand Railways Corporation Act 1981, the Defence Act 1971, the Post Office Act 1959, or the State Services Act 1962, or under any other Act:

(c) Persons of any class prescribed by regulations under this Act who are employed under contracts of service under which they are required to undergo any training, instruction, or examination for the purpose of becoming qualified for the occupation to which the contract of service relates:

(d) Inmates of any charitable institution (not being persons residing on the premises by reason only of their being employed therein) who, as such inmates, do any work in or in connection with the institution.

Cf. 1945, No. 44, s. 3; 1946, No. 40, s. 55; 1968, No. 94, s. 2; 1970, No. 137, s. 6

In para. (b) the Defence Act 1971 has been repealed and replaced by the Defence Act 1990, the Post Office Act 1959 was repealed by s. 2 (1) of the Post Office Act Repeal Act 1987, and the State Services Act 1962 was repealed and replaced by the State Sector Act 1988.

[**10. Penalties and jurisdiction**—(1) Every person who makes default in the full payment of any wages payable by that person under this Act and every person who fails to otherwise comply with the requirements of this Act shall be liable to a penalty recoverable by a Labour Inspector in accordance with the provisions of the Employment Contracts Act 1991.

(2) All proceedings under this Act shall be commenced in the Employment Tribunal.]

This section was substituted for the former s. 10 (as substituted by s. 6 of the Minimum Wage Amendment Act 1987) by s. 7 (1) of the Minimum Wage Amendment Act 1991.

[**11. Recovery of wages**—Without affecting any other remedies for the recovery of wages or other money payable by an employer to any worker whose wages are prescribed under

THE MINIMUM WAGE ORDER 1994

CATHERINE A. TIZARD, Governor-General

ORDER IN COUNCIL

At Wellington this 21st day of February 1994

Present:

THE RIGHT HON. J. B. BOLGER PRESIDING IN COUNCIL

PURSUANT to section 4 of the Minimum Wage Act 1983, Her Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, hereby makes the following order.

ORDER

1. Title and commencement—(1) This order may be cited as the Minimum Wage Order 1994.

(2) This order shall come into force on the 31st day of March 1994.

2. Minimum rates for workers aged 16 to 19 years—The minimum rates of wages payable to all workers (whether male or female) who are workers to whom the Minimum Wage Act 1983 applies and who are of or over the age of 16 years and under the age of 20 years shall be the following:

(a) If the worker is paid by the hour or by piecework, $3.68 an hour or an amount equivalent thereto having regard to the rate of production of the worker:

(b) If the worker is paid by the day, $29.44 for each day plus $3.68 for each hour in excess of 8 worked by the worker on each day:

Price Code: 2—A

(c) In all other cases, $147.20 for each week plus $3.68 for each hour in excess of 40 worked by the worker in each week.

3. Minimum rates for workers aged 20 years and upwards—The minimum rates of wages payable to all workers (whether male or female) who are workers to whom the Minimum Wage Act 1983 applies and who are of the age of 20 years and upwards shall be the following:

(a) If the worker is paid by the hour or by piecework, $6.125 an hour or an amount equivalent thereto having regard to the rate of production of the worker:

(b) If the worker is paid by the day, $49 for each day plus $6.125 for each hour in excess of 8 worked by the worker on each day:

(c) In all other cases, $245 for each week plus $6.125 for each hour in excess of 40 worked by the worker in each week.

4. Revocation—The Minimum Wage Order 1990* is hereby revoked.

MARIE SHROFF,
Clerk of the Executive Council.

*S.R. 1990/191

EXPLANATORY NOTE

This note is not part of the order, but is intended to indicate its general effect.

This order, which comes into force on 31 March 1994, prescribes the minimum rates of wages payable to workers who are of or over the age of 16 years and under the age of 20 years.

The order also prescribes the minimum rates of wages payable to workers 20 years of age and upwards. These rates are the same as the rates prescribed in the Minimum Wage Order 1990 which is revoked.

The minimum rates for workers who are of or over the age of 16 years and under the age of 20 years are approximately 60 percent of the rates prescribed for workers 20 years of age and upwards.

Issued under the authority of the Acts and Regulations Publication Act 1989.
Date of notification in *Gazette*: 24 February 1994.
This order is administered in the Department of Labour.

WELLINGTON, NEW ZEALAND: Published under the authority of the New Zealand Government—1994

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APPENDIX 3

AN OUTLINE AND CRITIQUE OF THE 1988 NEW ZEALAND STUDY OF MINIMUM WAGES BY JACQUELINE CUMMING

As noted in Chapter 2, there have been few formal studies of the impact of New Zealand's *Minimum Wage Act*, or at least few that are publicly available. An important and relatively recent exception is a lengthy study by Jacqueline Cumming in February 1988.[1] Ms Cumming had been employed at the Department of Labour's Low Pay Unit. The thesis set up the minimum wage issue as a question of whether, for the analysis of low pay, the 'neoclassical' theoretical framework, or an alternative termed 'segmentation theory,' offered a better explanation.

The thesis presented some background data but in the main it relied on *a priori* argumentation. It began with a competent review of the perverse effects of minimum wage legislation predicted in the standard economics literature. Most of the important insights of modern economic analysis were reported. The alternative arguments (and some 'evidence') for taking a kinder view of minimum wages were also presented. The author concluded that young people, women and ethnic minorities (and New Zealand society) would be adversely affected by removal of the minimum wage legislation.

A more detailed account of the arguments in the thesis is presented here to demonstrate its strengths and failings. It is considered that Ms Cumming's strong conclusion is not warranted.

3.1 Review of the Neoclassical Framework

The so-called 'neoclassical' framework presented by Cumming is, in fact, an outline of the orthodox economic literature on the effects of minimum wage legislation which is reviewed in the main body of this study. Her description traced analytical contributions that have appeared in reputable journals over the years, and referred to increasingly realistic and

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1 Jacqueline Margaret Cumming, "A Theoretical and Empirical Analysis of Minimum Wage Legislation and its Impact on Low Pay: a New Zealand Perspective," *Thesis presented to the University of Auckland in partial fulfilment of the requirements for the degree of Master of Arts in Economics*, unpublished, Auckland, February 1988.

complex formal models now available to explain the impact of compulsory minimum wages. The predictions of the models were faithfully reported as follows:

- in a perfectly competitive situation, minimum wage laws will impose "efficiency costs on the economy in terms of reduced output and employment" (p55) by interfering with market valuations of people's labour;
- in a situation where firms are monopsonistic buyers of labour (and thus are price makers in the labour market), a carefully set minimum wage could increase employment without creating any increase in unemployment (that is, the difference between those seeking and finding work). Cumming correctly reported that the orthodox opinion is that the conditions which would allow a minimum wage (especially just one, economy-wide minimum wage) to do this would not ordinarily prevail (pp56-60);
- non-price aspects, such as the physical, race, sex, age, productivity, skill and other differences amongst workers, figure larger in employers' hiring decisions in the presence of a minimum wage than otherwise (pp60-61);
- the wage distribution and level of employment observed in the presence of a minimum wage depends on the elasticity of substitution between different labour qualities, but generally for more highly skilled workers minimum wages will be a bonus. Groups with less training and work experience are more likely to be losers (p64);
- when the minimum wage coverage is not universal (that is, when some industries or categories of workers are exempt), workers not covered may enjoy higher or lower 'wages' depending on such factors as the degree to which there is an influx of workers into the group formerly in the covered sector (including those who end up on the black market or self-employed), and any increased exits and search for covered sector jobs by people formerly in the uncovered group. Complicating factors include the 'turnover' rate in the covered sector and the possibility that new wage levels in either sector will induce people outside the workforce to join it (that is, to display increased participation if their 'reservation' wage is surpassed – the 'added worker' effect) or induce those in it to leave it (that is, to display the 'discouraged worker' effect). Allowing for an uncovered sector may change the predictions of simpler neoclassical models somewhat, but does not alter the conclusion that a minimum wage will impose efficiency losses on the economy (pp65-72);

- employment conditions typically include a range of fringe benefits besides money wages. Elements such as life and health insurance, subsidised food and accommodation, training or time off for study, job safety, cordiality of employers, and modest expectations concerning work performance are examples. Some workers are likely to receive fewer such fringe benefits in the presence of minimum wage legislation and may be worse off even if their wages rise. Similarly, the decline in demand for labour and increase in participation rates may not be as great as predicted in simpler models. A reduction in on-the-job training by employers is particularly likely and a tendency for people, especially minority groups, to stay at school longer or quit school and seek work in a minimum wage job is predicted (pp72-82); and

- if productivity were a function of wages, one effect of minimum wage legislation would be that affected workers raise their unit output (or that employers do so by introducing advanced production techniques more quickly than otherwise to contain unit labour costs). A shock effect, along the lines of Liebenstein's X-inefficiency theory, could be posited to occur. Modern neoclassical writers doubt the relevance of such phenomena, especially in western economies (pp82-86).

Summarising all the above in a section on 'macroeconomic' implications, Cumming cited Pettengill's 1981 work[2] and observed that:

> ... neoclassical theory predicts that [minimum wage legislation] MWL will not only raise the wages of those who remain employed and must now be paid the minimum wage (the 'direct' effect) but also the wages of those workers most easily substituted for the now more expensive minimum wage labour. The resulting wage distribution depends upon the elasticity of substitution between labour of different qualities on each task, the elasticity of supply of each task, the elasticity of substitution between labour and quality on each task and the elasticity of demand for the output of each task.
>
> "If MWL [coverage] is incomplete, the wage distribution in the covered sector will alter as indicated above. But wages in the uncovered sector may rise or fall, depending on the supply responses of those displaced from the covered sector and those not previously in the labour force. (pp86-87)

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2 J. Pettengill, "The Long Run Impact of a Minimum Wage on Employment and the Wage Structure," in *Minimum Wage Study Commission*, Report of the Minimum Wage Study Commission Vol. VI, US Government Printing Office, Washington DC, 1981, pp63-103.

3.2 The Macroeconomic Picture

The next section of the thesis, where Cumming outlined some of the macroeconomic pressures which can be released by minimum wages, also started reasonably well. On the one hand, she noted that additional labour costs associated with a minimum wage law may be passed into the prices of labour-intensive goods and services, especially in a closed economy, thereby potentially boosting inflation. The point was made that the higher money incomes of the now higher paid employees, including those in higher wage categories who can bargain successfully to sustain their relative positions, could also lead to increased spending which aggravated this tendency. On the other hand, she observed, shareholders of companies (and displaced workers) would have less income and would spend less. She noted that any inflationary effect would depend on monetary policy. Thus if the first round effect were a general rise in prices and the money supply were expanded (say by a government seeking to maintain employment in the face of the disemployment effects of the minimum wage), a wage-price spiral could result.

From this point, the quality of the analysis deteriorated somewhat. Moving on from inflation to employment, the thesis provided a rather confused account of the different effects which minimum wage legislation can have on the demand for, and supply of, labour. As regards the aggregate supply of labour, Cumming asserted that the 'standard' model introduced earlier predicts that unemployment arises because minimum wages reduce the demand for labour *ceteris paribus*, and increase the supply of labour *ceteris paribus*. She noted that:

- on the demand side there were situations where the marginal value product may not fall as additional members join the workforce; and
- on the supply side, "where the income effect of the increased wage offered outweighs the substitution effect of the increased relative price of leisure the labour supply curve may well slope backwards. Hence the unemployment resulting from MWL will be less than the disemployment resulting from MWL" (pp94-95).

This, the associated reference to Wachtel's 1984 [sic] observation,[3] and the accompanying remark that the simple supply and demand analysis above ignores the interdependence

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3 As Cumming's bibliography makes clear, the reference is meant to be to M. Wachter, "Primary and Secondary Labour Markets: A Critique of the Dual Approach," *Brookings Papers on Economic Activity*, 3, 1974, pp637-680. Wachter observed that the tendency of the labour

/cont.

between labour supply and demand that is labelled the 'added worker' effect and the 'discouraged worker' effect (p95), are difficult statements to interpret. Presumably they are meant to explain, without endorsement, the standard view that, since minimum wage legislation will usually reduce participation rates, its measured impact on the official level of unemployment is likely to understate its true negative impact on the number of jobs. This explicit judgment was avoided by the author who suggested that econometric testing would be needed to determine the effects on employment, while determining 'macroeconomic' effects would require general equilibrium simulations (p98). These conclusions are formally correct but, in view of the weight of circumstantial evidence available, seem a bit coy.

After this account of standard theory, Cumming's thesis included a 63-page outline of three of the major North American reviews of the early 1980s and a 74-page description of what statistics were available in New Zealand in 1988 on employees with low pay. The former covers some of the same territory as Chapter 4 of this report.

3.3 Official Data on Low-Paid People

The data search chapter presented material on the incidence of low paid full-time workers, defined as those earning less than 60 percent of the adult median wage of $6.32 per hour. In summary, it explained that:

- low paid full-time workers were most concentrated among females, people working in agriculture, and people working as agriculturalists. However, the highest number were males, those working in a sector called 'trade,' and those whose occupation was 'sales';
- the largest sex/industry concentration of low paid people outside agriculture was females in the trade sector (26.5 percent), representing 28.3 percent of all low paid people. This category covers shop assistants;
- by age group, the highest numbers of low paid people were 18 to 20 year olds (33 percent), though the highest concentration was in the 15 to 17 year old category[4]; and
- by ethnic origin, the highest number of low paid people were European Caucasian males and females (83.6 percent and 83.0 percent of all low paid

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supply curve to be backward bending was a phenomenon likely to be confined to people with high wages, and not the average.

4 Seven age groups were defined: 15-17, 18-20, 21-30, 31-40, 41-50, 51-60 and 60+.

people respectively), while the highest concentration was in the 'non specified' category of males and females (16.7 percent and 57.1 percent respectively).

According to family circumstances, the highest number of low paid people were single people without children who were not head of a household (comprising 64 percent of low wage males, and 56 percent of low wage females).

Amongst part-time employees, it was found that:

- the low paid included 47.1 percent of males and 30.7 percent of females;
- since females constituted most of the part-timers, they made up 75 percent of all the low wage part-timers; and
- moreover, whereas part-time males were mostly young, part-time females were mostly in their 30s and 40s.

As Cumming pointed out, these patterns are broadly consistent with those found in other western countries.

3.4 'Explanations' of Low Pay

The statistical presentation was followed by 38 pages which looked at 'explanations' of low pay. Around 17 of those pages were given over to the so-called 'segmentation theory' (which, as noted, postulated that alongside a primary sector of the labour market with good working conditions there is a secondary sector characterised by exploitation of women, young people and immigrants by firms which can be shocked into higher performance by minimum wage laws).

To the author's credit, Stigler's and West and McKee's contrary observations that low paid workers tended to be in highly competitive industries (which points to low productivity as the prime cause of low pay) were also mentioned.

3.5 Arguing Towards Conclusions

Chapter 6 of the thesis presented conclusions about the impact of minimum wage laws in New Zealand. Significantly, in doing so it seemed not to draw much on the orthodox material presented in earlier chapters.

3.5.1 *Elasticity of Demand for Labour*

The chapter began with a review of evidence on the elasticity of demand for labour, in particular:

- Reserve Bank research, reported between 1981 and 1983, which estimated long-run aggregate real wage labour demand elasticities from single equations of -0.4 to -0.61 (and an output elasticity of labour demand of 0.4 to 0.8);
- further Reserve Bank work which placed a labour demand equation into the Reserve Bank's core model for the whole economy. This yielded a wage elasticity of demand of -0.19; and
- a 1986 study using OECD data which estimated the long-run aggregate New Zealand wage elasticity as -0.23 (with an output elasticity of labour demand of 0.19).

The estimate referred to in the second dot point above was given greatest credence in the thesis, in view of its allowance (however crude) for economy-wide feedback effects (the associated labour supply elasticity with reference to the workforce was 0.12 and the associated unemployment elasticity was 0.07).

Correctly, the author noted that, having an absolute value of less than 1.00, all the aggregate wage demand elasticity estimates implied that if all wages were raised, workers as a whole would earn more money. Also correctly, the author noted that:

- in the more competitive circumstances prevailing in recent times in New Zealand, labour demand was likely to be more wage-elastic than formerly (p249); and
- the wage elasticity of demand for segments of the labour market such as the lowest paid would be different from the aggregate (p249).

These factors point to increases in statutory minimum wages causing significantly greater disemployment than the aggregate estimates suggest. Yet Cumming avoided this conclusion, citing some New Zealand authors who have argued that demand for the lowest paid is likely to be the least elastic, for example, because:

- in Britain, which is known to have a similar profile of low paid workers to New Zealand, workers who might be considered to be the only close substitutes for each other are often all low paid (p250);

- Australian evidence is that elasticities of substitution between skilled and unskilled labour are low (p251);
- arguably, technical relationships are so fixed that the elasticity of substitution of low paid labour for capital is low, with available estimates for all labour at 0.50 and for the lower paid half at 0.18 (among those with the highest substitution elasticities are skilled white collar workers, skilled blue collar builders and rural workers) (p251); and
- in New Zealand there would seem to be less clear-cut evidence than was found in the United States that raising minimum wages would shift demand to more capital intensive goods (p252).

Overall, the author found that the elasticity evidence for New Zealand did not point conclusively one way or the other on the employment effects of the statutory minimum wage. As if to emphasise the sense of fine balance of evidence conveyed in points raised earlier, she observed in closing that:

- on the one hand, the American, Canadian and French studies were inconclusive as regards the impact on *adult* employment, a finding which is (allegedly) more relevant to New Zealand than the conclusive teenage finding, given that in New Zealand the minimum wage law did not then apply to people under 20 years old; whereas
- on the other hand, the New Zealand economy is more open than those of the United States, Canada and France, suggesting a higher elasticity than has been estimated overseas.

In ACIL's judgment, the conclusive overseas evidence on teenage disemployment is mistakenly downplayed by Cumming. The important implication to draw from the overseas evidence is that disemployment effects are concentrated on the least productive sub-set of the eligible worker group. In New Zealand that sub-set is likely to include a relatively high proportion of the youngest eligible people, in this case those aged 16 to 24 years. Aged workers, disabled people and some ethnic minorities are also likely to be relatively strongly represented. This issue is returned to briefly later on.

3.5.2 Do Minimum Wages Cause a Compression of Wage Rates?

Faulty reasoning also seemed to plague the author's discussion of evidence that minimum wage legislation was compressing the wage distribution and so impeding efficiency. The line of argument is hard to follow but the contention was that, whatever its effects on relative wage rates, efficiency was not being significantly impaired.

The confusion began on page 256 where a New Zealand Planning Council diagram was reproduced which showed the coefficient of variation of New Zealand wage levels plotted from 1971 to 1985. The diagram showed that, generally speaking, wage differentials have been widening since 1976. But oddly, the diagram was cited by the author as showing that at certain times (presumably pre-1976) government policies were able to narrow the dispersion of wages – evidence which ordinarily would be regarded as support for the so-called orthodox view she was seeking to refute.

Of course, part of the problem with the analysis at this point was that whatever the United States author cited may have said in 1981, it is not altogether clear that it was the view of orthodox economists at large that minimum wages decreased wage dispersion. In general, orthodox economists would probably predict that raising low wages by law will put upward pressure on both low and high wages in the covered sector. What happens to wage relativities economy-wide would be said to depend on market circumstances. Indeed, as noted earlier in this paper, at least one orthodox economist has suggested that minimum wages may be *intended* to widen real income, if not wage, differentials, the argument being that in political circles statutory minimum wages are supported by moderate and high level wage earners because they see minimum wages as a device for improving their wage levels while sticking to the bargaining requirement that the relative pay rates of themselves and the lowest paid employees are not widened.

The point is that 'wage compression' is an overly simplistic characterisation of the standard economic prediction of minimum wage effects.

3.5.3 *Do Relative Wages Affect Labour Allocation?*

The thesis quickly moved on from the issue of whether minimum wages actually narrowed or widened the dispersion of wage rates to introduce a broader argument. This argument was that, irrespective of the dispersion outcome, there was little evidence that more flexible wages (by which was implied 'allowing low wages to fall') would allow a better allocation of labour. Cumming argued that:

- support for this view with respect to occupations was found in the 1986 study by Philpott and Stroombergen which inferred from Australian data that New Zealand has very low elasticities of substitution between occupations (an average of 0.35) – indicating "that wage differentials would have to be quite wide to eliminate unemployment of unskilled labour";
- as regards industries, a 1985 American study by Bell and Freeman which allegedly found that wage flexibility actually reduced employment was cited; and

- on the regional front, a 1986 New Zealand study of quarterly employment data by Hoare was cited which found that manufacturing firms tended not to move to low wage regions, but rather to locate in high wage regions for non-wage reasons (though it was admitted that Hoare also found manufacturers in low wage regions did tend to employ relatively more labour).

The support offered for the conclusions that relative wages did not affect hiring decisions was inadequate, given that it represented the refutation of a major tenet of orthodox economic analysis. In the face of global evidence of migration of labour-intensive industry to take advantage of locations with lower labour costs, it seems completely untenable. Yet the conclusion became the pillar of the whole thesis. It was the main basis for the author's ultimate 'finding' that raising low wages would, on balance, help wage earners without making efficiency of resource use palpably worse.

3.5.4 *Minimum Wages as an Income Redistribution Instrument*

The final leg of the analysis in Chapter 6 of the thesis concerned the impact of minimum wages on the distribution of income.

Cumming started this segment with a denial of two of the main effects which orthodox economists would predict – that is, positive ripple effects on the wages of higher wage earners and disemployment of lower wage earners – saying that:

- union and employer opinion in New Zealand had been that low wage earners have gained at the expense of higher wage earners "[so] gains made by low-paid workers are not necessarily passed on to higher paid earners"; and
- "we have no [direct] evidence of the impact of MWL on employment in New Zealand" (p263) ... "but evidence is that aggregate wage elasticities of demand are small" (p264).

Both points may have been true, but are not crucial – for example, it is what would have happened otherwise which is at issue, not whether wage differentials were falling. Thus the implication that these arguments refute the orthodox analysis was drawn by the author with undue confidence.

She then observed, with respect to the relationship between wages and incomes, that:

- in New Zealand in December 1986, 67 percent of low paid full-time employees were single with no children, 25 percent were married with no children and most were below the age of 21; in particular,

- 46 percent of the low paid were over 21 years;
- 25 percent were over 31 years;
- 10 percent had children; and
- 'many' part time employees were probably married women (pp264-266); and

- consistent with the United States experience, in March 1986, low-wage employees in New Zealand were spread across the distribution of family incomes and, taking both social security payments and market earnings into account, the proportion of such employees at the lower end was actually lower than at the higher end (pp266-268).

The author pointed out that defining households in 'poverty' was difficult in the absence of information about numbers of family members. She also noted that the data did not cover part-time workers who tended to have lower pay rates and might have been more closely associated with poverty than full-time workers.

Despite these caveats and the indications to the contrary (listed above) which can be drawn from available data, Cumming asserted that:

> analysis of this information suggests that an increase in the minimum wage would lead to some improvement in the household income of low-income households; (p268)

and that:

> ... given that a good [sic] proportion of low paid workers are found in low income households, it would appear that raising the minimum wage will have some impact on reducing poverty in New Zealand (p270);

while admitting that:

> many higher income households would also benefit, however (p268);

and that:

> ... as in other countries, the distribution of low wage workers means that MWL will never be a completely satisfactory means of income redistribution (p267).

In the subsequent and final chapter of the thesis (Chapter 7), the author made the point about the potential contribution of the minimum wage to income distribution objectives in rather stronger language. For example:

> With regard to the income redistributing effects of MWL, while workers other than the lowest paid also obtain wage increases from MWL, the

> benefits are concentrated on the lowest paid and the minimum wage seems to have played an important role in reducing poverty. As an income redistributing device, the minimum wage does however have limitations. But the reduction in social welfare payments that would come about as a result of the minimum wage would allow an increase in benefit payments to those who are not employed and hence are not beneficiaries from MWL (p274).

Three times Cumming repeated the point, saying that:

> a considerable proportion of New Zealand's low-paid workers are found in low income households (p276);

and:

> the evidence suggests that MWL may go some way towards eliminating low pay and perhaps poverty in New Zealand (p276);

and finally:

> MWL also plays a role in the redistribution of income towards low income families (p279).

Some caveats were included but they did not seem as strong as the available facts required.

The tendency of the conclusions to exaggerate the earlier chapters' findings about the contribution of minimum wage laws to income distribution objectives was accompanied by some other, rather too flattering, assessments of the role of minimum wages. For example, the thesis again trailed its coat past the idea that labour markets are oligopolistic (and by implication that the minimum wage may not involve an employment and output sacrifice) without bringing any supporting evidence to bear on the issue. Indeed, the deficiency of evidence was conceded, in part, with the disarming admission that:

> In discussing low pay under segmentation theory, we are in fact discussing the secondary labour market. This thesis has not set out to exhaustively test for segmentation of the New Zealand labour market (p276).

Yet it went on to claim, on the basis of the observation that pay rates and working conditions differed between groups of women, young people and part-timers, that:

> ... the evidence leads to a tentative conclusion that the New Zealand market is segmented (p277);

and that:

> ... the removal of wages from competition will place the onus on employers to improve efficiency through the introduction of new technology, through an incentive to increase output via new markets, and through the development of new products (pp277-278).

The conclusions chapter of the thesis also floated the idea that if, as the available estimates suggested, the elasticity of demand for labour was less than -1.0, a statutory minimum wage above the market wage would make 'labour' better off (see pp273 and 275). Unlike the more cautious statement which appeared earlier in the thesis, this is a faulty proposition because, even if it were agreed that the size of the wage bill was a valid measure of how well-off 'labour' is, and that one could safely ignore effects of wage movements on labour supply, the key variable would not be the *aggregate* labour demand elasticity (which evidently the author had in mind), but rather the price elasticity of demand for that class of labour with wages at or below the statutory minimum – a parameter likely to have a value very much larger than -1.0.

Finally, there was a misconception which appeared earlier but which was repeated more confidently in the conclusions, namely in the idea that the overseas evidence indicated that the impact of minimum wages on adults in New Zealand, as elsewhere, was negligible.

A balanced reading of the overseas evidence is that *in countries where teenagers are covered by the minimum wage,* the impact on adult employment is generally significant and positive but not large. The impact on employment of teenagers in those cases is generally more significant, but negative.

Translating these results to the New Zealand situation where *only people over 20 years of age have, until recently, been covered by the minimum wage,* the most reasonable prediction is that the disemployment effects of the minimum wage will be found among the youngest (and least experienced, least able and least educated) of those covered – that is those 20 to 25 years old. Meanwhile, positive employment effects are likely to be concentrated amongst other categories of workers competing for the kind of work undertaken by unskilled 20-25 year olds – that is, teenagers (to the extent that they are not covered otherwise by awards) and middle aged adults, including part-time workers.

A balanced translation of overseas literature to the New Zealand situation would also have noted the likely impact of New Zealand's minimum wages on the non-wage working conditions of the hypothesised 'young adult' and other victim groups. On-the-job training, for example, is likely to be less common for some groups than otherwise. Having noted the literature on this subject earlier in her thesis, Cumming ignored it in the conclusions.

APPENDIX 4

RECENT WORLD TRENDS WITH MINIMUM WAGE REGULATION

A complete survey of countries has not been undertaken in the course of this study, but there are indications that, worldwide, minimum wage regulation is falling out of favour or at least coming under increasing challenge. While there seem to be few cases where statutory minimum wages have actually been abolished in recent years, in several countries the real value of the statutory minimum wage has been allowed to fall by leaving its nominal value static. This has been the case in New Zealand where, since 17 September 1990, the minimum value has remained at $6.125 per hour.

This Appendix contains background descriptive material on recent developments in a number of overseas countries. It is summarised in Chapter 3.

4.1 The European Union (EU)

In 1990 the European Community (now the European Union) adopted a Community Charter of the Fundamental Social Rights of Workers which, among other things, calls for "an equitable wage." The Charter does not nominate a minimum wage rate.

A recent official publication on the Charter states that the onus for taking initiatives on matters relating to employment and pay lie principally with the member states. It also says that "in a Community of 12 industrialised countries, everyone should be guaranteed an equitable wage."[1]

However, the document also endorses the need for diversity by stating:

> The Commission also believes that the growing, widespread use and very diverse forms of employment contract other than the open-ended type *necessitate a Community framework providing a minimum level of consistency between these different forms* in order to avoid distortions of competition and to increase the transparency of the labour market at Community level (emphasis added).

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1 The Commission of the European Community, *Community Charter of the Fundamental Social Rights of Workers*, Office for Official Publications of the European Communities, Luxembourg, 1990, p50.

Under Title 1 (Fundamental social rights of workers), the Charter makes the simple statement on the question of pay rates that:

> All employment shall be fairly remunerated;

and that:

> To this end, in accordance with arrangements applying in each country:
>
> (i) workers shall be assured of an equitable wage, i.e. a wage sufficient to enable them to have a decent standard of living;
>
> (ii) workers subject to terms of employment other than an open-ended full-time contract shall benefit from an equitable reference wage;
>
> (iii) wages may be withheld, seized or transferred only in accordance with national law; such provision should entail measures enabling the worker concerned to continue to enjoy the necessary means of subsistence for him or herself and his or her family.

(Title 1 clause 5)

This is a modern charter. The evident care which it takes not to prescribe what pay rates should apply in different member states is of interest. It seems unlikely, for example, that the European Union could have become directly involved in the French government's (failed) attempt to lower the minimum wage (the "SMIC") early in 1994.

4.2 Papua New Guinea's Recent Decision

In August 1992, the Papua New Guinea Minimum Wages Board[2] ruled that the country's urban minimum wage be cut by about two-thirds to 23 kina (or about NZ$40 per week), bringing it back to the rural sector level. Major unions, both private sector and public sector, issued statements opposing the move and urged the Industrial Registrar not to register the new rate. However, on schedule in September the Registrar approved the new rate which subsequently was ratified by Cabinet. The differential which had applied to rural and urban workers in the 17 to 21 age bracket was simultaneously removed. As before, these younger workers are entitled to 75 percent of the adult wage, but the same rate applies across the country.

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2 Papua New Guinea Minimum Wages Board (Margaret Elias, Chairman), *Minimum Wages Board Determination*, 1992, Port Moresby, 21 August 1992.

As a transitional measure, employers were required to continue paying at the old rate any existing workers already on the minimum rate on 15 September 1992. Indeed, subject to their employers' capacity to pay, these workers were entitled to a two percent pay rise in line with the indexed increase granted to employees in other pay scales. Thus in effect the new minimum is to be applied to new entrants to the workforce.

The automaticity of CPI wage indexation for the minimum and other rates was removed also – the two percent wage increase was thus a one-off increase.

An edited version of the Board's determination which appeared in the local press explained the basis of the decision.[3] A major consideration was the Board's desire to remove a relative cost burden on PNG's industries. Alternative employment opportunities are needed more than ever with the closure of the Bougainville copper mine. The Board pointed out that the majority of the 50,000 school leavers each year could not find employment – and that this group needed special attention. Rural-urban migration and the law and order situation were mentioned as concerns justifying the lower youth minimum wage. Meanwhile productivity in PNG, the Board observed, is low by international standards and does not justify the existing high wage level. It found that the problems are exacerbated by an inflexible wages system and that the criteria for grading centres as 'rural' or 'urban' were no longer appropriate.

Other reports made it clear that the determination was in line with PNG government submissions to the Board. The Employers Federation expressed its support for the decision and said it expected the new entry wage to encourage overseas investors.[4] It considered employers would be encouraged to employ young and inexperienced job-seekers. Unions said they would comment "after carefully studying it in detail."[5]

Whereas PNG has retained a minimum wage, its decision to reduce its level in the face of chronic urban disorder and unemployment is a significant step.

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3 "A closer look at the Minimum Wages Board recommendations," *Post Courier*, 28 August 1992.

4 "Employers pleased with determination to protect workers," *Post Courier*, 27 August 1992.

5 *ibid.*

4.3 The Origins and Recent History of United States Minimum Wages

The first minimum wage laws in the United States were introduced by individual states. Massachusetts led the way in 1912 with a law which provided for a board to set wages for women equal to the cost of living. Similar laws (also covering women and children) were passed in 15 states and Washington DC and Puerto Rico from 1912 to 1923.[6]

Massachusetts' law permitted lower minimum wages for learners and slow workers and was practically voluntary, since the only penalty for non-compliance was publicity. Laws with more concrete minima also appeared, such as those introduced in Oregon and Utah in 1913. However, by the end of the 1920s five of the 17 original minimum wage laws were either never enforced or were repealed. Another seven had been found unconstitutional by the United States Supreme Court on the grounds that, for adults at least, they violated the right of contract under the 'due process' clause of the Fifth Amendment to the United States Constitution. The remaining five original minimum wage laws were only lightly enforced – with the liberal granting of exemptions to slow workers. Prosecutions tended to be targeted at small firms which could not easily afford appeals to the courts.

Recent work by Thies has shown that the published findings of official reviews of the operation of these laws conducted at the time were not always consistent with the facts. The disemployment effects, in particular, were played down. (Thies's reassessment of the figures is reported in Chapter 4.)

To demonstrate the range of opinion at the time, Thies cited a number of colourful objections to the policy of exempting slow workers from minimum wage provisions. Sidney Webb, one of the founders of the Fabian Society, was one commentator who was very critical of exemptions because of the way they allowed people who cannot earn their keep to compete for jobs.[7] In modern times, people who share Webb's politics would rarely be so blunt about the economics of wage minima.

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6 Clifford Thies, "The First Minimum Wage Laws," *Cato Journal*, 10 (3), Winter, 1991, pp715-46.

7 "The unemployable, to put it bluntly, do not and cannot under any circumstances earn their keep. ... Of all ways of dealing with these unfortunate parasites, the most ruinous to the community is to allow them unrestrainedly to compete as wage earners for situations" (Sidney Webb, "Theory of Minimum Wages," *Journal of Political Economy*, 20 December 1912, pp 973-98 cited in Thies, *ibid).*

The *Encyclopedia Britannica* explains that Sidney Webb (1859-1947) was a prominent social reformer, 1st Baron Passfield, husband of Beatrice Potter, English social reformer, contributor to *Fabian Essays (1889)*, leading promoter of the London School of Economics, founder of the

/cont.

Faced with flattering reviews and the continued advocacy of such laws by social reformers, some states reworded their legislation to avoid appeals. Thus Wisconsin's so-called 'new design' law provided for a minimum wage that was 'not oppressive'. Some of these too were struck down – for example, in 1936 a 1933 New York state law that called for a minimum that was "fairly and reasonably commensurate with the value of service or class of service rendered," was voted unconstitutional by the Supreme Court. But in 1937, another in Washington DC was upheld (with the Chief Justice querying the idea that the Constitution guaranteed freedom of contract).

In 1938, with President Roosevelt's support, Congress passed the *Fair Labor Standards Act* which, in 1941, was endorsed in a 9-0 ruling by the Supreme Court. Since then the constitutionality of minimum wage laws in the United States has not been questioned.[8]

The *Fair Labor Standards Act* of 1938 set a minimum wage of 25 cents per hour. In purchasing power terms, the federal legal minimum wage rose steadily until 1968, fluctuated at 10 to 20 percent less between 1969 and 1981 and declined steadily during the rest of the 1980s (while its nominal value remained frozen). At the end of the decade it had reached its lowest level relative to average wages since 1950.

It is understood that the vast majority of United States workers are now covered by the same wage floor. The coverage of the federal minimum wage was extended to retail trades and services in the 1960s, and between 1966 and 1978 its level in agriculture was increased

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New Statesman and author of the manifesto *Labour and the New Social Order* on which the British Labour Party fought the 1918,1922 and 1924 elections.

8 Thies *(ibid)* traced the rise in American support for minimum wage laws up to 1941 back to the late 19th Century when socialists and Christians alike were querying the idea that free contracts determined the just wage. In Pope Leo XIII's 1891 encyclical *Rerum Novarum,* for example, the Catholic Church said that the older and higher principle was that:

> "... remuneration must be enough to support the wage earner in reasonable and frugal comfort. If through necessity or the fear of a worse evil the workman accepts harder conditions because an employer or contractor will give him no better, he is the victim of force and injustice" (from *The Just Wage 1750-1890: A Study of Moralists from St Alphonsus to Leo XIII* by James Healey, 1966, cited by Thies, *ibid,* p721).

Thies explained that American Catholic commentators elaborated on this notion during the early 1900s and, along with a number of other reformers and government reports, helped popularise the view that a decent living wage could only be established by some authority beyond the parties immediately involved. This, Thies says, meant that justice, as originally understood, was replaced with social justice, undermining liberty and the right of contract.

in several steps to eventual parity with other sectors.[9] Besides the 85 percent or so of workers who are covered directly by federal law, many states have historically maintained state minimums equal to the federal rate for workers outside the federal law. In the late 1980s, however, several states responded to the decade-long decline in the real value of the federal minimum wage by establishing wage floors above the federal rate. By 1990 about a quarter of the states had minimum wage levels above the federal level.

In 1989 the federal *Fair Labor Standards Act* was amended. There followed two increases in the minimum wage, from $3.35 to $3.88 on 1 April 1990 and then to $4.25 on 1 April 1991. A provision allowing a minimum wage for teenagers of 85 percent of the minimum for two 90-day periods was included in the 1989 amendments and, as scheduled, this was 'sunsetted' on 31 March 1993. A Department of Labor report at that time said the federal teenage-wage experiment had failed in the sense that few employers could find candidates, or were frustrated by the paperwork required by the law. A union representative told the press she was "glad to see it go" in view of fears that the scheme would encourage substitution of teenagers for adults. Meanwhile, though retailers were critical of the needless red tape, another business spokesman pointed out that such schemes could work if the sub-minimum was low enough.[10]

With President Clinton's election in late 1992, interest in the minimum wage issue in the United States became more intense. Before the election, Clinton pledged to raise the federal minimum wage to $4.75 per hour. The Labor Secretary, Robert Reich, is said to want to take the additional step of indexing the minimum wage.

As might be expected, newspapers in the United States soon began to highlight the issue, reporting different views and the contrasting results of recent empirical research. An East Coast newspaper, *The Union Leader*, ran two stories about the minimum wage on 5 April 1993.[11] The first reported some managers in the New Hampshire hospitality industry who feared that higher minimum wages would cause wage inflation at all levels and others who considered the wages of workers at rates above the minimum would be unaffected. The industry association view, however, was that costs generally would rise and that menu and

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9 Coverage of the law in 1977 was estimated at 84 percent of all private non-farm non-supervisory wage and salary workers compared with 53 percent in 1950 (Finis Welch, *Minimum Wages: Issues and Evidence*, American Enterprise Institute, Washington DC, 1978).

10 Anne Veigle, "Training wage dies after 3-year run", *Washington Post*, 30 April 1993, pp C1,C3.

11 Tom Fahey, "Minimum at $4.25 for Now: Employers Fear a Hike", and Scripps Howard News Service, "If the Minimum Goes Up", *The Union Leader* (Manchester, New Hampshire), 5 April 1993.

room prices would go up. A union spokesman quoted in the article said he doubted that the minimum wage could keep a working household out of poverty – which, he said, was the issue because 90 percent of those on minimum ages were adults over the age of 18. He said the wage rate needed for a full time worker to earn the $11,250 required to keep a family out of poverty in 1992 was $5.40 per hour, well above Clinton's target of $4.75.

The second story reported an emerging controversy amongst economists. It reported new research on restaurants in two cities by William Spriggs (of the 'liberal' Economic Policy Institute) which found that employment had remained unaffected by increases in the minimum wage. Spriggs' explanation was that higher wages increased motivation, making supervision easier and inducing a productivity rise. The article contrasted Spriggs' finding with the traditional finding of David Neumark (of the University of Pennsylvania) in a recent study released in March 1993 by the business-financed Employment Policies Institute.

A report in a March 1993 issue of the business journal *Business Weekly* also made a reference to Card's study of Californian teenagers and a study by Katz of restaurants in Texas.[12] (It is perhaps significant that Katz, from Harvard University, is currently the Labor Department's chief economist.) The article said Card and Katz speculated that the reason for their results was that minimum had not been raised for so long that the increases did not place it above where the free labour market would have set it.

The article also cited 'Clintonites' who said that while raising the minimum wage could hurt employment growth temporarily, that effect would be outweighed by the spur which higher wages would provide for adopting better production methods which in turn would eventually create jobs requiring higher skills. They linked the Administration's plans to raise the minimum wage to its pursuit of a so-called 'high-skills job strategy'. This is an argument which comes close to saying that higher skills are desirable, however they are obtained, and begs the question of why increases in the minimum wage should stop at any point. Yet according to the report, even Richard Berman, executive director of the Employment Policies Institute (which has traditionally opposed the minimum wage), is sympathetic to this kind of 'force-fed-productivity-increase' rationale.

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12 Aaron Bernstein *et al.*, "A Higher Minimum Wage; Minimal Damage?", *Business Weekly*, 22 March 1993, pp 92-93.

In fact this kind of argument is not new – it was being made in some circles in the United States in the mid-1980s, for example.[13]

For balance, *Business Weekly* mentioned David Neumark's work at the University of Pennsylvania, though it reported that Neumark apparently did not think the minimum wage was a massive intrusion. It also mentioned that its resident columnist, Rudiger W. Dornbusch of the Massachusetts Institute of Technology, believed the question of whether the minimum wage raises unemployment was now uncertain.

As noted at the end of Chapter 3, until mid-1994 at least, the Clinton administration had not raised the Federal minimum wage, evidently because it had not been persuaded by this "new" thinking.

4.4 Australia's Basic Wage and Minimum Wage Concepts

The history of Australia's labour laws from the 1890s to recent times has largely paralleled New Zealand's. The major difference now is that Australia continues to have a complex 'award' system along the lines of that which New Zealand abandoned with the *Employment Contracts Act 1991*, with the added complication that the states and the Commonwealth control awards for different occupational groups.

Awards in the Australian system were based from the early 1900s until 1967 on a so-called 'basic wage', available as a minimum to all, with 'margins' (or a 'secondary wage structure') built on. The concepts of basic and secondary wages seem to have gained currency in Australia a few years before they did in New Zealand, but the origins are the same. In Australia's case, their history as a pair of linked concepts is usually traced to an article by the then head of the Arbitration Commission, Justice Higgins, entitled "A New Province for Law and Order" (published originally in the *Harvard Law Review* in November 1915 and subsequently by the Victorian government printer in 1922). The article itself followed Higgins's articulation of the basic wage concept in the famous 'Harvester Case'[14] in 1907, which involved the question of whether an employer should be granted certain excise exemptions on the grounds that wages paid to his employees were 'fair and reasonable'. Higgins focused on the "... normal needs of the average employee, regarded as a human

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13 McKenzie, 1988, *op. cit.* pp 202-203. McKenzie attributed the argument then to Professor Barry Bluestone of the University of Massachusetts.

14 "Ex parte H. V. McKay (1907) 2 CAR 1" (cited in CCH Australia Limited *Australian Law Reporter*, 1989, pp 21 and 271).

being living in a civilised community" and sought to ensure that wages would "... be sufficient to provide those things and clothing and a condition of frugal comfort estimated by current human standards".

From time to time the foundation of the basic wage changed. It was originally based on the needs of a man who supported a wife and three children, but later the ability of industry to pay a particular wage was included.

In 1966, the Conciliation and Arbitration Commission introduced a concept it called the 'Minimum Wage' and declared it to be the minimum which could be paid to adult male employees in the lowest classifications who were in receipt of award rates and no more.[15] From June 1975, this minimum has applied, as with awards, equally to males and females. It has deliberately not been based on any index. Apparently, the idea has been that the minimum should meet the circumstances of individuals whether they have a family to support or not. Interestingly, the Commission said in a major wage case in 1974 that it had not been told how many people received the minimum wage, but that it believed the number was not large and that its new level would have no serious impact on the economy.

In 1967, the two-tiered 'basic wage plus margin' approach was replaced, in the face of union complaints, with one amount entitled the 'total wage'. Introducing the concept, Justice Kirby (then Commission President) said "We should now express wages as total wages and retain the minimum wages concept introduced by the Commission in July 1966"[16]. Thus, in essence, the new approach was structured in much the same way as the old. One difference to emerge is that there now tends to be different minimum rates attached to different awards. The total rates are commonly termed 'paid' rates. Wage rounds have focused on the total (or paid) rates, of course, so the practical significance of the minimum wage as a separate concept may not be great.

There is widespread acceptance in Australia (and within the two main political parties) that the wage setting system should be decentralised and that 'enterprise bargaining' should be more widely adopted. By comparison with the changes which action based on this agreement could bring, the Conciliation and Arbitration Commission's disavowal of the basic wage concept in 1967 rates as merely cosmetic.

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15 *ibid*, p21, 273.

16 *ibid*, p21, 274.

An agreement (or series of agreements) between the Commonwealth government and the unions' peak body (the Australian Council of Trade Unions) has been in place since 1983. Known as the 'Accord', its stated purpose has been to moderate wage claims so that average increases in wage rates could be kept in line with GDP growth. The Accord has probably achieved this part of its aim – average real wages have fallen and employment has grown. But unemployment, especially youth unemployment, has continued to rise. Non-wage hiring costs, such as the insurance, training and (most recently) superannuation obligations of employers, have increased substantially. In addition, the relativity of award rates between occupations has been preserved and there has been pressure to raise, or even eliminate, youth rates in awards. Thus there is reason to suspect that the Accord has supported artificially high youth and other lower-level pay rates – something likely to be an important cause of unemployment and an inhibitor of training and apprenticeship.[17]

In its manifesto for the 1993 election, the Opposition (comprising the Liberal and National parties) put forward a labour policy package (entitled 'Jobsback!', which included both the winding down of the centralised award system and the immediate introduction of a youth minimum wage of A$3 per hour[18]). In the event the government retained office but commentators have not generally identified the idea of a lower minimum for young employees as a reason for the Oppositon's lack of success at the polls.

A White Paper was produced by the Australian government on the subject of unemployment in April 1994.[19] While appearing to endorse greater flexibility in wage setting, it did not propose abandonment of of the centrally-determined award rate structure. There is to be a "Youth Training Initiative", but awards will continue to establish wage

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17 George Fane, "The Australian Labour Market in the 1980s; A Comment" (a paper commenting on another presented by Bruce Chapman to *A Conference on the Australian Economic Experience in the 1980s*, Reserve Bank of Australia, Sydney, 20-21 May 1990). Fane pointed out, inter alia, that labour market deregulation in Australia "might well do more to raise the variance of wages and earnings than to reduce their average levels".

18 The Jobsback! package proposed A$ 3 an hour as the minimum hourly rate for 15-17 year olds and A$ 3.50 an hour for 18-20 year olds, No blanket 'adult' minimum rate was proposed – rather it was proposed that the hourly rate be not less than the base ordinary-time rate for full-time workers "under the relevant award, former industrial agreement or other instrument at the time the workplace agreement was signed".

19 Commonwealth of Australia, *Working Nation*, Australian Government Publishing Service, Canberra, 4 May 1994.

floors. Nevertheless, in order to address youth unemployment in particular, a training wage at a rate considerably below the minima set in awards has been planned for introduction.[20]

4.5 Canada

In Canada, civil rights, and thus labour legislation, are largely a provincial matter and the provinces have minimum wage laws.

Conditions of employment in federal undertakings and any other operations which Parliament declares to be for the general advantage of Canada or for two or more of the provinces are, however, covered by the Canada Labor Code. This includes minimum wage legislation, which is reviewed 'regularly'.[21] A feature of interest is that employers providing on-the-job training may not have to pay minimum wages during all or part of the training period.

In 1991, the federal minimum, at $4.00, was below all of Canada's provincial minima, whereas in 1981, at $3.50, it had been about the same as most of them. Some provinces have industry-specific minima – Alberta, for example, has special weekly minima for commercial agents and salespeople.

The main contemporary issue with minimum wages in Canada is whether they will aggravate the economy's adjustment to the new free trade agreement with Mexico and the United States (NAFTA).

4.6 United Kingdom

The United Kingdom had a system for setting lower rung wages which resembled the current Australian and former New Zealand award structures. Instead of a universal minimum wage, minima called 'statutory minimum rates' (or SMRs) were established by individual wage councils and wage boards in specific low-paid industries. Typically they covered some 15 percent of workers directly. This was not a majority of the low paid by most definitions. However, the wage boards' rates formed the basis for the wages bargained by the half of the workforce which was unionised. The role of the wage councils in setting minimum wages was progressively abandoned by the Thatcher government in the 1950s so

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20 Hon. Simon Crean MP (Minister for Employment, Education and Training), "ACTU Endorses National Training Wage", Media Release 21C/94, Parliament House, Canberra, 9 May 1994.

21 Canada Year Book, 1990.

that for all practical purposes there is now little regulation of minimum wages in the United Kingdom.

Historically, United Kingdom union officials did not support the industry-wide application of minimum wages – perhaps on the grounds that it caused disemployment amongst workers on the lowest pay rung and reduced union membership. However, in the late 1980s the political party associated with the unions, the British Labour party, became converted to the idea of a statutory minimum wage. Before the 1992 election it pledged to introduce a minimum rate of one half male median earnings and then to raise it progressively to two-thirds. Fears that this would have a devastating effect on industry and jobs were expressed.[22]

Another related United Kingdom concern is the recent introduction of the EU-wide social charter of workers' rights. While no minimum wage is specified, if it were, jobs would be lost in member states which currently have the lowest wage rates. The possibility of this kind of outcome was recognised, for example, in the United States in the 1950s when trade unions in the northern states campaigned for equal wages for southern workers. If they had succeeded, the resurgence of industrial activity in the south might have been nipped in the bud. The concern of the United Kingdom is that, in an EU context, it is part of 'the south'.

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22 Richard Layard, "Minimum Wages: A Cautionary Tale of North and South," *Financial Times*, 22 November 1989, p19.

APPENDIX 5

A REVIEW OF OVERSEAS EMPIRICAL RESEARCH ON MINIMUM WAGE LEGISLATION

5.1 Introduction

As noted in Chapter 3, economists' thinking about minimum wage regulations has concentrated on their impact on employment, on their subtler effects on the work environment and such things as workers' educational and other decisions, and on the distribution of their effects on particular demographic and income groups.

This Appendix presents a detailed review of the statistical analyses which have been reported in the professional journals. What emerges is evidence of certain new trends in analysis, but equally of the fact that empirical work on the subject of minimum wages nearly always raises complex issues.

The results are summarised in Chapter 4 of the report.

5.2 The Empirical Formulation

Most studies of the employment effects of minimum wage laws have attempted to estimate the demand curve for labour:

$$(1) \qquad N_i = f(W_{im}, T, Z)$$

where: N_i gives the number employed in group i; W_{im} is a variable showing the importance of the minimum wage for i; T represents trends in the demand for labour; and Z other relevant variables. The importance of the minimum wage (or its 'real' value) is most commonly represented by the 'Kaitz index' – the ratio of minimum wages to average wages multiplied by coverage. Equations of this type can be run for groups of interest (youth, ethnic minorities etc.).

Formulations which value the minimum wage relative to the average wage have been criticised on the grounds that the ratio of average to minimum wages may not accurately represent what is really of interest – the ratio of the minimum wage to the wage individuals would have accepted in the absence of the minimum wage. The average wage for all employed people, and in particular the average wage of those who compete with youths and other 'marginal' workers, is likely to be raised by the introduction of a statutory minimum wage.

A variation of the model in equation (1) popularised by Mincer[1] has the dependent variable, N_i, specified as the ratio of youth employment to the youth population; the wage variable as the ratio of the minimum wage to the average adult wage; and includes factors such as the unemployment rate of prime age males to track labour demand.

Mincer's choice of the minimum wage variable as the ratio of the minimum wage to the average adult wage is subject to the standard criticism. This dependent variable is also said to be open to question because it confounds supply and demand factors. The review by Hamermesh lists the restrictive assumptions required for it to fit the theory of factor demand.[2]

Moreover, the numbers employed in a particular category could depend on the minimum wage in other categories as well as in its own.

An alternative procedure (used, for example, by Kaufman in 1989 and by Bazen and Martin in 1991[3]) notes that the elasticity of youth unemployment with respect to the minimum wage is given by:

$$(2) \qquad E_{ym} = \varnothing_{im} \cdot E_{yj} + \varnothing_{am} \cdot E_{ya}$$

where E_{yj} is the elasticity of youth employment with respect to wage j; $\varnothing_{im}$ represents the elasticity of employment of group i with respect to the minimum wage, m; and subscripts a and y stand for adults and youths respectively. (A similar expression can be written for adult unemployment etc.) The estimated equation shows the extent to which an increase in the minimum wage compresses the wage distribution. The elasticities E_{yj} and E_{ya} are derived by first presuming a CES (constant elasticity of substitution) production function for aggregate output and then by working back from estimated labour demand equations to estimates of the underlying parameters.

Studies along the foregoing lines make up the bulk of empirical studies of the effects of minimum wages.

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1 J. Mincer, "Unemployment Effects of Minimum Wages," *Journal of Political Economy*, August 1976, pp87-104.

2 D.S. Hamermesh, "Minimum Wages and the Demand for Labour," *Economic Inquiry*, July 1982, pp365-80.

3 See: R.T. Kaufman, "The Effects of Statutory Minimum Rates of Pay on Employment in Great Britain," *Economic Journal*, December 1989, pp1040-53; and Stephen Bazen and John P. Martin, "The Impact of the Minimum Wage on Earnings and Employment in France," *OECD Economic Studies*, 16, Spring 1991, pp199-221.

Quantification can bring a measure of discipline to policy discussions, provided proper procedures are followed. It is surprising how often the supporters of minimum wages seem not to appreciate that in judging their effects it is necessary to compare the current situation not with the past but with the situation which would have prevailed if the minimum wage had not existed. Brown, a well-known American expert on minimum wages, has pointed out some striking cases of confusion on this score in the United States. For instance he noted that:

- during the 1977 Congressional hearings on the minimum wage, much was made of the fact that in the year following previous increases in the minimum wage employment had risen and unemployment had fallen or remained constant; and
- ten years later, in another round of hearings in 1987, it was said that "the arguments that were put forth [in 1977] were 'There will be a loss of jobs. People will go out of business. It is an unfair imposition.' Again, history and experience point out clearly that there is no basis for that argument. More than 11 million new jobs have been created since 1981 and productivity is up 6 percent – all of this with a 27 percent increase in private wages."[4]

As Brown has pointed out, what is unfortunate for the latter argument is that the real minimum wage in the United States fell during the 1980s. The fundamental flaw, though, is that the statement makes no systematic attempt to allow for other influences. Such naivety must be avoided.

The vast majority of the empirical studies of the effects of minimum wage laws have been undertaken in the United States. The 'highlights' of American work in the 1970s, 1980s and early 1990s are outlined here.

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4 Charles Brown, "Minimum Wage Laws : Are They Overrated?" *Journal of Economic Perspectives*, 2(3), Summer 1988, p134.

5.3 Studies Reported Before the Early 1980s

5.3.1 The Brown, Gilroy and Kohen Review of Employment Effects

The discussion begins with an examination of the material that was brought together around the time of the United States Minimum Wage Study Commission which reported in 1981.[5] The study itself is renowned for its finding that the 46 percent rise in the minimum wage between 1977 and 1981 destroyed 644,000 jobs among teenagers alone. It concluded:

> The evidence is now in, and the findings of dozens of major economic studies show that the damage done by the minimum wage has been far more severe than even the critics ... predicted.

Brown *et al.* published in 1982 a revision of a major review of the United States literature which they had prepared for the Minimum Wage Study Commission. The review looked specifically at theoretical developments, noting, for example, that in studies of the employment effects of minimum wages, time lags were not as plausible as in most economic contexts. They also observed that theory predicts deadweight costs (losses of economic output) to accompany minimum wage regulations (perhaps even where there are no employment losses), but that empirical estimates had not received much attention.[6]

However, the bulk of the review concerned empirical findings which are discussed under a number of headings.

– *Time-series studies on teenagers and youths*

The review of empirical results began with studies of teenagers and youths. Time series analyses of the single equation type have been relied upon, with employment of teenagers rather than unemployment being the dependent variable in more recent research. This is a sensible development given that disemployment is the main harmful effect predicted by theory. Unemployment as officially measured does not include those discouraged from seeking work altogether. Moreover, because the job search process is nebulous, so is the concept of unemployment. Statistical measures of it have changed significantly over time. Finally, part-time employment can be of interest – Gramlich found in 1976 that the

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5 Minimum Wage Study Commission, *op. cit.*

6 Charles Brown, Curtis Gilroy and Andrew Kohen, "The Effect of the Minimum Wage on Employment and Unemployment," *Journal of Economic Literature*, Vol XX, June 1982, pp487-528.

minimum wage caused a rise in part-time employment (though other researchers have found the opposite result).[7]

In simple equations of teenage employment, the minimum wage has mostly been measured by the so-called 'Kaitz index' which is the minimum rate expressed as a proportion of average hourly earnings weighted in each industry by the proportion of workers covered.[8] The reviewers acknowledged criticisms,[9] but favoured it ahead of the use of dummy variables for changes in the level of coverage of the minimum wage, the 'real' minimum wage or the ratio of the minimum wage to average hourly earnings ignoring coverage. Gramlich used a variation with teenage earnings instead of economy-wide earnings and inserted the teenage/adult ratio as a separate variable. He also corrected both the minimum wage and the averages for deductions such as pension contributions.

The reviewers discussed other standard variables: a general demand for labour variable (e.g. prime age male unemployment); a time trend; a variable for participation in the armed forces; a potential labour supply variable (e.g. teenage/total worker population); and a variable for participation in employment or training programs (e.g. school enrolment). Opposition to the inclusion of a supply side variable (such as teenage/total worker population) had been expressed on the grounds that it was irrelevant and invited confusion with minimum wage effects. But the reviewers favoured its inclusion since (i) the supply side was likely to be important for those teenagers (50 percent) "who earn more than the minimum"; (ii) a truly exogenous supply side variable may reduce the precision of the estimate but will not bias it; and (iii) excluding supply variables seemed incorrect in cases where teenage unemployment was to be explained.[10]

The authors endorsed the use of quarterly data to offset sampling variation and to better capture cyclical influences. They noted (without comment) that half the studies had used lags and that about half had used log/log specifications.[11]

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7 *ibid*, p498 footnote 13 (citing Gramlich, Zucker and Mixon).

8 *ibid*, p499. (Hyman Kaitz, "Experience of the Past : The National Minimum Youth Wage," *Unemployment and Minimum Wages Bulletin*, 1657, US Department of Labor, 1970, pp30-54.)

9 The two criticisms noted were (i) it implied that a 10 percent increase in the level of the minimum wage had the same value as a 10 percent increase in coverage, and (ii) it made coverage and the level indistinguishable (*ibid*, p500).

10 *ibid*, p501.

11 *ibid*, p502.

Twenty-five time series studies of teenage employment effects undertaken between 1970 and 1981 were examined. The reviewers found that the following results were obtained:

- on balance, a 10 percent increase in the minimum wage resulted in about a 1 to 3 percent reduction in total teenage employment. The reviewers concluded that the better specifications produced estimates in the lower half of the range;
- all studies found a negative employment effect for all teenagers as a group;
- the signs were almost exclusively negative for the various age-sex-race sub-groups known to attract lower wage rates.[12]
- as regards unemployment, findings were more varied. Two large positive relationships and one large negative relationship were found in response to increases in the minimum wage.[13] Most, however, were in a narrow band – the response to a 10 percent increase in the minimum wage was generally 0-0.75 percent, implying that for a great many teenagers the response was to leave the workforce altogether;
- so-called 'wrong signed' results for unemployment (a term which would probably not be applied to reduced unemployment estimates today) were said to be more common amongst the low-wage demographic sub-groups (non-white males in particular);[14]
- though sensitivity analysis was not conducted in any study reviewed, in general neither the sample period nor model specifications showed marked differences in results. One result which surprised the reviewers was that in instances where it was separately identified, the 'coverage' variable was less significant than the variable for the level of the minimum.[15] This cast a shadow over the Kaitz index which, as noted, incorporated coverage, though the authors stuck to their view that a coverage variable should be included;
- allowing potentially endogenous supply side variables to vary (e.g. welfare benefits, school enrolments and armed forces recruitment) reduced the size of

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12 *ibid*, p505.

13 *ibid*, p505 (citing Adie and Moore, and Lovell).

14 *ibid*, p506.

15 *ibid*, p506 (citing Wachter and Kuni).

the minimum wage response estimates substantially.[16] Controlling for school enrolments was evidently the least important of these factors;[17]

- few differences were observed in the results of models allowing lagged and instantaneous responses;
- there was a tendency for estimated unemployment effects to be larger for females than for males and for the opposite to be the case with disemployment effects; and[18]
- estimated impacts on blacks were, surprisingly, not much more severe than on whites and some studies have found whites to be more severely affected.[19]

– *Cross-sectional studies on teenagers and youths*

Eight cross-sectional studies involving teenagers were also reviewed. They used pre-1971 data, were reported between 1970 and 1981, and usually involved comparisons between states or cities. Significant differences in laws between such regions continued until the Federal law was extended to retailing and services in the 1960s, and even after that extension differences in average wages have meant that the relative importance of the Federal minimum has continued to vary from region to region.

Although the results were more variable, the cross-sectional study estimates generally found minimum wage effects of a similar order to the time series studies. However, doubts that most cross-sectional studies were measuring anything more than the implications of differences in average wages between regions have been expressed.[20]

Two cross-sectional studies which did not encounter that problem (or criticism) were cited. One involved a consideration of the employment status of young men who in 1966 had lower and higher wages than the minimum set in 1967. (The authors found no pattern in their subsequent employment status.[21]) The other, by Meyer and Wise, involved estimating the effects of minimum wages on the divergence of the observed distribution of wages at a

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16 *ibid*, p506 (citing Al Salam, Quester and Welch).

17 *ibid*, p507 (citing Abowd and Killingsworth; Brown, Gilroy and Kohen; Ragan (1); Ragan (2); Mattila (1) and Mattila (2)).

18 *ibid*, p508.

19 *ibid*, p508 (citing Ragan; Betsey and Dunson; Brown, Gilroy and Kohen).

20 *ibid*, p511 (citing Cunningham).

21 *ibid*.

point in time from a normal distribution. The main criticism of this procedure was that there were influences (e.g. social security) which were likely to cause the left hand side of the distribution of wages to be thinner than normal. This issue is considered further below.

– *Studies on adults*

The third set of empirical results reviewed in Brown, Gilroy and Kohen's 1982 article concerned the effects of minimum wages on adults.

Few US studies seemed to have focused on adults, but from seven reported between 1971 and 1981 the reviewers found:

- consistent estimates of disemployment and unemployment effects for 20 to 24 year olds;
- smaller estimated effects than on teenagers (generally less than 1 percent for a 10 percent increase in the minimum wage);
- disemployment effects among white males over 65 years but not females;[22] and
- evidence that adult women's employment was significantly increased.[23]

One cross-sectional study reported the standard finding that the negative employment effects were greatest for workers with wage rates below the minimum. However, it also found that workers with wages well above the minimum experienced lower employment too – quite contrary to expectations.[24] No plausible explanation was suggested.

– *Studies on low-wage industries and areas*

The fourth set of studies reviewed by Brown *et al.* related to low wage industries and areas. In most cases the studies compared employment growth in industries with different proportions of workers initially paid below the statutory minimum wage.

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22 *ibid,* p512 (citing Mincer).

23 *ibid.*

24 *ibid,* p514 (citing Linneman).

The findings of studies of *agriculture* reported by the reviewers were that:

- the minimum wage rate was increased to parity with that in non-agricultural sectors from 1967 to 1978. Over a longer period, from 1946 to 1978, the minimum wage disemployment effect on hired workers in agriculture was estimated by one researcher to have been at least 60,000 (about 5 percent of the 1979 level). The same researcher's work relating to a shorter period, 1967 to 1970, showed a more striking effect of about 18 percent;[25]
- another author found total farm employment fell in twelve southern states from 1967 to 1969 by 24 to 51 percent due to increases in the minimum wage; and[26]
- a third, using pooled cross-sectional data on 14 cotton producing states, found that the extension of the minimum wage to agriculture accounted for 65 percent of the decline in peak month cotton farming jobs from 1967 to 1969 and 50 percent of cotton farming jobs overall. The effect was concentrated in low wage states.[27]

The reviewers cautioned that since (i) 'immediate family members' of farm operators were legally exempt; (ii) minimum wage variables in all the studies cited were crudely specified; and (iii) the number of observations was small, all the agricultural results quoted were suspect, though the direction of bias would not always be clear.

Several studies of the effects of extending the Federal minimum wage to *retail trade* from 1961 were also reviewed. As expected, US Department of Labor studies found that in covered sectors employment fell whereas it rose in uncovered sectors, both in the south and nationally. However, a later Department of Labor study found no correlation between the employment decline and the change in the minimum wage law. Other researchers have found conflicting results with one reporting very significant responses.[28] The reviewers themselves reworked some of the data and found statistically non-significant but consistently negative outcomes. A 1981 study was cited which used more extensive data and obtained similar results but another which found no consistent evidence of the

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25 *ibid*, p515 (citing Gardner).

26 *ibid*, p515 (citing Lianos).

27 *ibid*, p516 (citing Trapani and Moroni).

28 *ibid*, p517 (citing Shkurti and Fleisher; Karlin).

hypothesised relationship was also quoted.[29] The most thorough study of all found that the 1961 extension of minimum wages to retailing had produced a significant curtailment of employment (5 percent) especially if expressed in terms of hours of work,[30] though there were notable variations in the industry. Effects on department store employment were negligible, for example, while those on variety and food stores were particularly strong.

The extension of the minimum wage to *service* industries in 1966 was the subject of Department of Labor reports on hospitals, hotels and motels, laundries and cleaning establishments which found no correlation in these three sectors between the minimum wage increase and disemployment. The reviewers challenged the formulation of the studies and reworked the data to yield an elasticity estimate of about a 1 percent drop in employment for a 10 percent wage increase.[31] A separate study of private household workers before and after 1974 found a contrary response, though it was noted that hours of work were reduced and that compliance in the household help sector was modest.[32]

Disagreement was also expressed by the reviewers with Department of Labor studies of the employment impact of minimum wages in *low wage manufacturing*. Again reworking the data, they obtained stronger results than the Department, with an elasticity of at least 0.24, implying that a 10 percent wage increase would cause at least a 2.4 percent decline in employment.[33] In support, some 1973 research on seven low wage non-durable goods manufacturing industries for the years 1947 to 1966 was cited which found that both the number of workers employed and the number of hours worked declined with increases in the minimum wage.[34] The elasticity for hours of work was -0.91 and for the number of workers -0.79. A second 1981 study of eight low wage manufacturing industries for the years 1948 to 1979 found even stronger effects, with elasticities implying that a 10 percent minimum wage increase would create an employment loss of just below 1 percent.[35]

A third challenge to the Department of Labor's work was mounted by Brown *et al.* in relation to studies of the impact of minimum wages in *low wage areas*. Three studies that

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29 *ibid*, p518 (citing Boscher and Grossman; Madden and Cooper)

30 *ibid*, p518 (citing Fleisher). The study involved a mixture of time series regressions, forecasts of wages and estimates of consumer demand.

31 *ibid*, p520.

32 *ibid*, pp520-21 (citing Gordon).

33 *ibid*, p521.

34 *ibid*, pp521-2 (citing Zucker).

35 *ibid*, p522 (citing Boscher and Grossman).

produced significant estimates of adverse minimum wage effects on employment or unemployment were cited in support – one on Florida, another on eight south-eastern states and a third on South Carolina.[36] The last, the most sophisticated, found that the direct effect of a 20 percent minimum wage increase was a 22, 36 and 34 percent decrease in white male, white female and black male employment respectively. (No results were reported for black females, apparently because of data problems.) Indirect effects were found to reduce these estimates a little, but by no more than 3 percentage points in each case. Some reservations with the model were expressed but the direction of the findings seemed to be considered robust.

The review by Brown *et al.* concluded with a reminder that employment and unemployment effects, which were the exclusive focus of their article, are not the sole determinants of the welfare (i.e. efficiency) effects of the minimum wage. The remark is prescient because since the review article was published in 1982, research has concentrated more on explaining, if not quantifying, effects other than on employment and unemployment.

A second reminder offered by the reviewers in closing was that if poverty alleviation is the objective, any measure aimed at achieving this through raising the lowest wages may be misdirected (even if employment/disemployment effects are not taken into account). Two studies showing the weak correlation between low wages and membership of low income households were cited.[37] If households are the relevant unit of concern, the authors noted that minimum wages could not be an efficient poverty alleviation device even in the best of circumstances.[38]

Although it is now a decade old, the Brown *et al.* review remains as good an outline of the empirical issues associated with minimum wage laws as can be found, justifying this extended summary.

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36 *ibid,* p523 (citing Colberg; Carter; Heckman and Sedlacek).

37 *ibid,* p524 (citing Gramlich; Kelly).

38 Some authors have gone as far as to deny any link between the money wages of an individual and the real income or welfare enjoyed by that individual. (See for example, Carolyn Shaw Bell, "Minimum Wages and Personal Income," in Rottenberg (ed), *The Economics of Legal Minimum Wages,* American Enterprise Institute for Public Policy Research, Washington 1981, p458.)

5.3.2 *The 1979 AEI Conference on the Economics of Legal Minimum Wages*

The late 1970s and early 1980s was an active period for investigation of the effects of legal minimum wages in the United States. Apart from the Brown *et al.* review, the West and McKee review and the Minimum Wage Study Commission already mentioned, a Conference on the Economics of Legal Minimum Wages was held by the American Enterprise Institute in late 1979. Thirty-four economists, principally academics specialising in labour economics, contributed to it. The papers presented were frequently referred to in the Brown *et al.* review, but the commentary which appeared in the 1981 edited collection was not and some of it brought out other useful information.[39] In addition, the papers included some research on topics other than the effects of minimum wages on employment/unemployment, which was the focus of the Brown *et al.* review. There were also some reports on research studies conducted outside the United States which reinforced the American findings (or were of interest as examples of work with less complete data). Overall, there were 21 papers and seven comments. Four papers were on countries other than the United States.

– *Call for work on the impact on aggregate welfare*

Professor Sherwin Rosen's commentary on the Conference papers lamented the lack of attention to measuring the overall effects on aggregate welfare[40] and highlighted the contributions on the impact of minimum wages on on-the-job training and schooling. Rosen noted the dearth of empirical work (at that time) on the impact of minimum wages on fringe benefits in general, and recommended the extension of Leighton and Mincer's work showing the negative impact on on-the-job training to other areas. He also noted the continuing confusion concerning the effect of minimum wages on schooling, with Mattila's finding that schooling is encouraged being reversed by Cunningham's research.

– *Schooling*

The ambiguity of the impact of a minimum wage on schooling is mainly due to the opposing incentives it creates. One is a preference to remain at school which arises from the new demand by employers for better trained employees whose productivity is more likely to match the minimum wage. The other is the disincentive to remain at school which arises

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39 Simon Rottenberg (ed), *op. cit.*

40 *ibid*, pp485-490.

from the newly reduced availability of part-time work (for which wage rates are generally lower) making the work-plus-school option less feasible.[41]

Intuitively, the idea that the minimum wage *encourages* schooling is most persuasive. However, even if one accepts that governments have sought to offset the bias against training with education subsidies, it seems safe to say that minimum wage laws encourage an inferior pattern of human capital formation, which is the more important point.

– *Impact on poverty*

A commentary by Goldfarb reviewed a paper given at the conference (by Carolyn Shaw Bell) and two others published earlier (by Kelly in 1976 and Gramlich in 1976, both canvassed in the review by Brown *et al.*) on the question of the impact of minimum wages on poverty.[42] He noted that none of the studies went beyond simulating a first round increase in low wage earners' pay. Practical aspects not covered included:

- disemployment effects;
- ripple effects which raise wages in higher brackets;
- the predicted decline in non-covered sector wages;
- the interaction with social security payments; and
- the longer term effects of the distortions on the productivity of low paid workers.

Goldfarb did not predict the direction in which these factors might bias the results. However, it seemed unlikely that the consistent finding that wages and family poverty were not closely related would be overturned.

- *Workplace effects*

Several other commentaries in the Rottenberg volume of conference papers echoed Rosen's call for greater consideration of the effects of the minimum wage laws other than on employment and unemployment. Indeed Goldfarb's was the only commentary which set down a 'shopping list' for further research that included the impact of minimum wages on

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41 This is a paraphrase of a very obscure description by Cunningham (see Rottenberg (ed), *ibid*, pp89-91).

42 *ibid*, (Robert S. Goldfarb, "The Context of Recent Research," pp523-9).

employment and unemployment *per se*, whether in general or for particular demographic groups.[43]

The implication was that as early as 1981, most experts considered the employment/unemployment consequences of minimum wages to be not worth a great deal of further research effort – because the matter was settled, or not readily capable of refinement, or was secondary to a wider set of issues about the substitution of money wages for the fringe benefits of employment. It may be significant that when the Minimum Wage Study Commission reported in 1981 it accepted the proposition that a 10 percent increase in the minimum wage decreased teenage employment by around 1 to 3 percent. This may have signalled to economists that disemployment effects had been officially acknowledged, so that analysis could move on to other more subtle issues.

– *The political economy of minimum wages*

Among the interesting parts of the Rottenberg volume's commentary on the conference papers were those relating to the political economy of minimum wage laws. Several authors offered suggestions for the persistence of minimum wage laws in the face of overwhelming evidence that they involved:

> ... regulating markets in order to give some of the have-nots somewhat more by depriving other have-nots of their jobs ... .[44]

The answer to the political economy question in Fellner's view, and apparently in the view of Cox and Oaxaca and Colberg, was that articulate, relatively well paid and well organised groups outside the low wage worker group were the main lobbyists for minimum wages. Cox and Oaxaca placed the emphasis on unions (though relevant employer groups were also recognised), while Colberg stressed regional interests.[45]

Fellner's view was that the outside group gained from the imposition of minimum wages through two mechanisms:

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43 *ibid*, pp 523-30.

44 This is William Fellner's paraphrase of an expression in Finis Welch's 1978 study *Minimum Wages, Issues and Evidence*, American Enterprise Institute, Washington DC, 1978, pp16-19.

45 Rottenberg (ed), *op. cit.* (William Fellner, "Comments on the Substitution Effects of Minimum Wage Legislation," pp205-514; James C. Cox and Ronald L. Oaxaca, "The Determinants of Minimum Wage Levels and Coverage in State Minimum Wage Laws," pp403-428; and Marshall R. Colberg, "Minimum Wages and the Distribution of Economic Activity," pp247-263).

- the substitution of full-time and other relatively well paid workers for the poorly paid workers who became unemployed or left the workforce; and/or
- the ability the minimum wage granted them to earn higher wages without the presentational disadvantage of widening the differential between their own wages and those of the lowest paid.

He suggested that the second mechanism depended for its success on demand management not accommodating the money wage increases – that would lead to inflation. Thus, he said:

> ... minimum wages have helped the relatively well paid to raise their wages without having to face the difficulties of creating an even greater increase of the differentials in their own favour than those which they have already succeeded in securing for themselves in the bargaining process.

Fellner's observations are persuasive. But the question which fellow commentator Leffler asked in his title: "The Unanswered Question: Why Are Minimum Wages Popular with the Poor?" sits oddly with them.[46] Leffler offered no empirical or logical backing for his sweeping assertion that "the poor" supported minimum wage laws. In an earlier paper, he postulated that the poor had a demand for minimum wages because of the positive effect that minimum wages have on welfare benefits.[47] Even if it were accepted that higher minimum wages raised welfare rates, it is barely plausible that the poor would support minimum wage laws. If the poor are defined to include the people displaced from work by minimum wages, raising minimum wages will leave many on lower incomes than before. This is true whether they are pushed on to unemployment benefits or into the so-called uncovered sector. Furthermore, the attitude of those on welfare would probably depend on what changes they considered were possible. Many of them might support abolition of the minimum wage, but support minimum wage *increases* on the grounds that if they are to be condemned to unemployment by a minimum wage, it might as well be by a high one. This hardly qualifies as support for *minimum wages* in a general sense.

Empirical evidence refuting Leffler's proposition was presented in 1978 by Kau and Rubin. They found that representatives of the most poorly paid workers voted against minimum wage laws.[48] The general point that poor people have played little part in the political

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46 *ibid*, pp531-4.

47 Keith B. Leffler, "Minimum Wages and Wealth Transfers," *Journal of Law and Economics*, October 1978, pp345-58.

48 J.B. Kau and P.H. Rubin, "Voting on Minimum Wages: A Time-Series Analysis," *Journal of Political Economy*, 86, 1978, pp337-42.

support for regulation has been made, for example, by Stigler,[49] and seems likely to apply equally to minimum wages legislation.

5.4 Minimum Wage Studies in the 1980s

– *Fringe benefit issues*

Since the early 1980s there has been a significant change in the focus of empirical work in the United States on the minimum wage. It has shifted perceptibly towards its impact on non-money work conditions and fringe benefits. By the late 1970s the theory of this subject had been traversed to some extent and, at least in respect of the negative impact of minimum wages on on-the-job training, there had already been some empirical estimation. However, it is a sign of the relatively slow uptake of these ideas that as late as 1987 McKenzie identified the failure to consider working conditions and fringe benefits as critical defects in the conventional economic theory of minimum wages. Indeed, he argued:

> Perhaps the most powerful explanation for the political acceptance of wage minimums is that people who support them are simply ignorant of their effects. Economists do not seem to have fully understood the market consequences of the laws. In fact, conventional supply and demand analysis of wage minimums may have misled many politicians into believing that such laws are an effective way of helping one segment of their constituency at the expense of another, smaller segment.[50]

To demonstrate the quantitative significance of the impact of minimum wages on non-money variables, McKenzie cited examples of the growing body of research as follows:

- Hashimoto found that under the 1967 minimum wage hike, workers gained 32 cents per hour in money income but lost 41 cents per hour in training – a net loss of 9 cents an hour in full-income compensation;[51]
- Leighton and Mincer came to a similar conclusion: increases in the minimum wage reduced on-the-job training and, as a result, dampened growth in the real long-run income of covered workers;[52]

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49 George Stigler, *The Economist as Preacher and Other Essays*, Basil Blackwell, Oxford, 1982, Ch.3.

50 Richard B. McKenzie, *The Minimum Wage: A New Perspective on an Old Policy*, 1987, Ch.11.

51 Masanori Hashimoto, "Minimum Wage Effect on Training to the Job," *American Economic Review, 70*, (December 1982), pp1070-87.

52 Linda Leighton and Jacob Mincer, "Effects of Minimum Wages on Human Capital Formation," in Rottenberg (ed), *op. cit.*

- Wessels found that minimum wages caused retail establishments in New York to increase work demands; in response to a minimum wage increase, only 714 of the surveyed stores cut back store hours, but 4827 stores reduced the number of workers and/or their hours worked. Thus, in most stores, fewer workers were given fewer hours to do the same work as before;[53]

- Wessels' research and studies by Fleisher, Alpert and Dunn showed that minimum wage increases led to large reductions in fringe benefits and to worsening working conditions;[54] for example, in the aforementioned New York study, many stores reduced commission payments, eliminated year-end bonuses, and decreased paid vacation and sick leave. In his study, Alpert found that for every 1 percent increase in the minimum wage, restaurants reduced shift premiums by 3.6 percent, severance pay by 6.9 percent, and sick pay by 3.4 percent; and

- if the minimum wage did *not* cause employers to make substantial reductions in non-money benefits, then increases in the minimum wage should cause (i) an increase in the labour force participation rates of covered workers (because workers would be moving up their supply-of-labour curves); (ii) a reduction in the rate at which covered workers quit their jobs (because their jobs would then be more attractive); and (iii) a significant increase in the costs of production of firms which are heavily dependent on covered minimum-wage workers. However, Wessels found little empirical support for such conclusions drawn from conventional theory. Indeed, in general, he found that minimum wage increases had the exact opposite effect: (i) participation rates went down; (ii) quit rates went up; and (iii) prices did not rise appreciably – findings consistent with the view that minimum wage increases made workers worse off.[55]

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53 Walter J. Wessels, "Minimum Wages: Are Workers Really Better Off?" (Paper prepared for presentation at a conference on minimum wages, Washington DC, National Chamber Foundation), July 29, 1987).

54 Belton M. Fleisher, *Minimum Wage Regulation in Retail Trade,* (Washington DC., American Enterprise Institute, 1981); William T. Alpert, "The Effects of the Minimum Wage on the Fringe Benefits of Restaurant Workers" (Paper, Leigh University, Bethlehem, Pa., 1983); and L.F. Dunn, "Non-Pecuniary Job Preferences and Welfare Losses among Migrant Agriculture Workers," *American Journal of Agricultural Economics, 67,* (May 1985), pp257-65.

55 Wessels, *op. cit.*

Given the findings of his own and other studies, Wessels maintained that it was reasonable to deduce that every 10 percent increase in the hourly minimum wage will make workers 2 percent worse off.[56] This means that an increase of $1.30 in the legal minimum (equal to the 1987 Congressional proposal) could, on balance, make the covered workers worse off to the tune of 26 cents per hour.

An interesting comment by McKenzie was that in view of their adverse effect on conditions of work, minimum wage laws may be one of several factors that induced federal and state governments in the United States to attempt to regulate health, noise and safety conditions.[57] This point is also relevant to recent calls to upgrade the so-called minimum conditions of employment in New Zealand.[58] For low wage workers at least, enforcement of the minimum wage component of those conditions will create pressures for employers to downgrade the rest, thus worsening the trade-off for employees and creating a dilemma for enforcement authorities.

– *Brown's 1988 challenge*

By implication at least, McKenzie's approach to the impact of minimum wages is challenged by Brown who revisited the issues in a 1988 study.[59] Brown's main points were that statutory minimum wages were less important than commonly claimed because:

- they affected a small proportion of the population (in the United States 6 percent of those employed earn the minimum wage and another 6 percent said they earn less);
- they accounted for a small proportion of wage and salary income (5 percent in the United States);
- high job turnover rates meant that it was unlikely that the layoffs and exits from the workforce caused by the minimum wage would involve prolonged burdens for particular individuals (turnover rates in minimum wage jobs in the United States were 12.5 percent per month);
- a large proportion of the workforce was not covered by the minimum wage law;

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56 *ibid*, p15.

57 Mc Kenzie, *op. cit.* p167, footnote 32.

58 See, for example, Brosnan and Rea, *op. cit.*

59 Charles Brown, *op. cit.*

- empirical results showed a consistent yet small adverse effect of the minimum wage on teenage employment;[60] the effect on black teenagers was worse than on white teenagers but not dramatically so; and
- there was a surprisingly weak relationship between being a worker whose hourly wage is low and being a member of a family whose annual income is low.

Brown's 'bottom line' (in what he admitted was a short paper which did not discuss either the fringe benefit effects or the political economy aspects) was that the minimum wage issue is over-rated by its critics as well as its supporters. But he added that:

> If one comes to the issue willing to suffer some efficiency loss for a real distributional gain – at least until someone isolates a lump-sum grant – then the real surprise is not the disemployment effects but the very tenuous connection of the minimum wage to poverty.

5.5 Further Studies in the 1990s

5.5.1 The 1991 Cato Journal Article by Thies

The most recent US literature included a reassessment by Thies of the available data on the first minimum wage laws enacted by states in the United States. These were often promoted by social reformers and the churches who helped popularise the idea that a decent living wage could only be established by some authority beyond the parties immediately involved.

Available data from surveys of women workers from about 1912 to 1923 by three types of organisation – state authorities, the Federal Department of Labor and a body called the United States Women's Bureau – showed wages were highly correlated with experience, age and occupational skill level. Weekly wages below the legal minima were found to be common, with a frequency as high as 53 percent in some categories, although almost exclusively the workers concerned were beginners, part-timers, juveniles and handicapped people.

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60 Brown's 1988 article provided assurances that some of the conclusions in his co-authored 1982 review were holding up well. For example, he said that from the "two dozen" or so time series studies of teenage employment it could be said that a 10 percent increase in the minimum wage would decrease teenage employment by 1 to 3 percent. By contrast, he stated that the formerly predicted response of a rise in the unemployment rate of zero to 3 percentage points had in more recent studies become something like "0.75 percentage points or less."

Notwithstanding the various interpretations placed on the data by some contemporary observers, Thies concluded that:

> Over time wage gains due to experience (as well as overall real wage progressions in a free economy) lifted the vast majority of working women well above their original earning ability. For these women, low wages were the start of a journey leading to higher more decent wages.

Against this general observation, Thies looked closely at one sub-category of workers where the impact of minimum wage laws can be isolated. In essence, his work followed the approach of Meyer and Wise in their 1983 article. It focused on the changes in the shape of the frequency distribution of wage rates.

In 1912, Massachusetts introduced a board to set wages for women equal to the cost of living. Thies compared the frequency distribution of wage rates of all women employed in Massachusetts in the years 1911 to 1914 with those of women employed in the Massachusetts brush industry in the same years. Across manufacturing industries the frequency distribution was found to approximate a bell-shaped normal distribution. In the brush industry by contrast, which exhibited approximately a bell-shaped distribution in 1911 and 1912, the distributions in 1913 and 1914 following the imposition of wage minima reflected truncation, with the lower tail cut off. This, Thies concluded, was because women workers in the brush industry were either given wage increases or lost their jobs.

His finding differed from the Massachusetts Wage Commission's benign assessment in 1915. It had said that the 14 cents per hour minimum set by decree in 1914 had been complied with and that:

- the wage increase had been large;
- the employment of women and minors had not given way to men; and
- the fall in women's employment had been "mainly due to the general business downturn rather than to the ... minimum wage."[61]

Thies differed on each of these points. Moreover, he presented evidence that the brush industry reacted to the 1914 minimum wage law before it was enacted – the most dramatic change in employment occurred in 1913, a year after a wage board was set up and an official survey of women's wages in this industry was conducted. Another researcher found that

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61 Massachusetts Minimum Wage Commission, *2nd Annual Report of the Massachusetts Minimum Wage Commission for the Year Ending December 31, 1914*, Boston, 1915, p12, cited in Thies, *op. cit.* p735.

the employment declines in Massachusetts were not observed in the New Jersey brush industry and that the increased wages in Massachusetts were accompanied by greater supervision, training and care in hiring, and changes in hours.[62]

The tendency to dismiss the disemployment effects of minimum wages in official reports was not confined to Massachusetts. Similar statements in the face of reduced employment of women were made in the reports of relevant authorities in Oregon, Washington State and Washington DC at around the same time. Similarly, a 1915 Federal Department of Labor study found that 40 stores in Oregon had put off some women because of the 1913 minimum wage decrees, but it asserted that the law had not put men in positions vacated by women. These Department of Labor survey data for Oregon were reworked in 1959 by another researcher who found that in fact 21 percent of women surveyed had obtained pay rises; men also received pay increases, but of slightly lesser amounts; female employment fell by 14.9 percent compared with 7.4 percent for males, despite a rising trend in female employment of salespeople over the previous decade; female payrolls dropped by 7.3 percent relative to 5.0 percent for males; and girls were substituted for women. Other possible causes were found not to be relevant.[63] These findings were consistent with the contemporary theory of minimum wage effects.

Thies's final empirical observation concerned the role of exemptions. Between 1919 and 1925 there was apparently no bunching of wages at the minimum and significant numbers of women employees were receiving less than the minimum wage. The reason, Thies suggested, was California's liberal policy of issuing exemptions. Licences were issued for some 2,400 sub-standard workers over the relevant period in California, but for just 87 in Washington DC and only 50 in Washington State. Apparently California's policy was adopted later in Massachusetts and other states, especially after the 1923 Supreme Court decision declared Washington DC's minimum wage law to be unconstitutional.

5.5.2 *The Cornell Symposium in November 1991*

After a decade of no change, the 1989 amendments to the federal minimum wage in the United States prompted a new wave of research. For example, in November 1991 a one-day symposium was held at Cornell University. The four papers presented (and one additional

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62 M.L. Stecker, *Minimum Wage Legislation in Massachusetts,* National Industrial Conference Board, New York, 1927, cited in Thies, *op. cit.*, p739.

63 John S. Peterson, "Employment Effects of State Minimum Wages for Women: Three Historical Cases Re-examined," *Industrial and Labor Relations Review,* 12, April 1959, pp406-22.

paper completed by a participant) were published in 1992.[64] This and other recent research is receiving a great deal of attention in the current debate about whether the Clinton administration should honour its pledge to increase the federal minimum wage.

Four of the papers re-examined impacts on employment. The fifth looked at possible effects on lifetime earnings. The first paper, by Katz (of Harvard University and currently the Department of Labor's chief economist) and Kreuger,[65] surveyed fast food restaurants in Texas over the period of the 1990 and 1991 federal minimum wage increases. They found that employment *increased* at firms most affected by the minimum wage increase (a finding consistent with the monopsony model of the labour market). Wage rate increases were concentrated at the low end of the wage scale, so wage relativities became more compressed. Some 90 percent of restaurants offered fringe benefits, but only about 5 percent reduced them and even fewer delayed promotions. Finally, it appeared that relatively few fast food employers had used the youth sub-minimum wage even in an industry where many employers could probably have readily attracted teenage workers at a sub-minimum wage.

These findings were partly at odds with traditional results. However, the authors admitted that this may have had something to do with their failure to survey the businesses which ceased trading before, or commenced after, the minimum wage rises.

A paper by Card (a professor of economics at Princeton University) looked at the proposition that a rise in the federal minimum wage will typically affect a larger fraction of workers in some states than others.[66] The 13 percent minimum wage rise in April 1990 should have affected only 5 percent of teenagers in some New England and West Coast states, but over 50 percent in some southern states. Yet Card found no evidence that the minimum wage rise altered the state-by-state pattern of teenage unemployment or school enrolment. Indeed, average teenage wages rose and, at lower levels, by more than the minimum rate itself. These results are in keeping with the idea that higher wages mostly cause higher work effort.

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64 "New Minimum Wage Research," *Industrial and Labor Relations Review*, Vol. 46 No.1, October 1992.

65 Lawrence F. Katz and Alan B. Kreuger, "The Effect of the Minimum Wage on the Fast Food Industry in Texas," *Industrial and Labor Relations Review*, 1992, *op. cit.*, pp6-21.

66 David Card, "Using Regional Variation in Wages to Measure the Effects of the Federal Minimum Wage," *Industrial and Labor Relations Review, 1992, op. cit.*, pp22-37.

A second paper by Card focused on the July 1988 increase in the California minimum wage from $3.35 to $4.35.[67] He found no empirical support for the conventional prediction for teenage employment; instead, hourly and weekly earnings of teenagers *rose* by 10 percent while the employment/population ratio for such people *rose* by 4 percent. Even in the retail industry, he found employment was not significantly reduced. Enrolment in public high school and undergraduate courses fell in California, while it rose in similar states which did not raise minimum wages, and the difference was *not* fully explained by the faster 15-24 age population growth in California. Moreover, there was no evidence of a spike in the wage distribution of 16-17 year olds in California at the minimum. Nor was there a much higher fraction of 16-17 year olds (not eligible for the minimum) than of 18-19 year olds earning less than the minimum of $4.25 per hour.

Card was reluctant to embrace monopsonistic explanations (which say that a binding wage floor can lead to an increase in wages, employment and industry output and a reduction in selling prices) despite teenagers saying in a 1982 survey that they would require a 26 percent wage rise to change jobs.[68] But he concluded that his results did suggest the monopsonistic labour model "deserves more scrutiny".

The author did not highlight some of his findings which were consistent with the conventional view. For example, Card's paper noted that in the 1987-89 period school enrolments in California from September to December fell less than in comparison states (p48). It also reported that the incidence of sub-minimum pay in California rose by 200 to 300 percent for most groups in the labour force (p42). Further, Card mentioned – but did not follow-up on – the evidence that under-reporting of weekly earnings (or over-reporting of usual hours) was quite common, especially amongst salaried workers (pp39-40); this left a big question mark over his data. Other qualifications were added by authors at the symposium and elsewhere who reviewed Card's unorthodox results, as explained below.

A paper by Neumark and Wascher re-evaluated cross-state data on minimum wages during the 1973-89 period.[69] Their estimates confirmed the traditional finding relating to federal minimum wages that a 10 percent increase in the minimum wage reduced young people's

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67 David Card, "Do Minimum Wages Reduce Employment? A Case Study of California, 1987-1989," *Industrial and Labor Relations Review, 1992, op. cit.*, pp38-54.

68 One exception to the general absence of monopsony in labour markets, according to Card, was the market for highly specialised labour in a particular geographical location. Evidence to this effect was reported by Sullivan in 1989 for registered nurses and by Ransom in 1990 for long-stay academics.

69 Neumark and Wascher, *Industrial and Labor Relations Review,* October 1992, *op. cit.*

employment by 1 to 3 percent. They also found that sub-minimum wage provisions for teenagers moderated the disemployment effects of minimum wages. Interestingly, youth sub-minima, but not student sub-minima, were found to moderate the disemployment effects of minimum wages on teenagers. These findings counteracted challenges to the earlier findings which have come from some analyses of 1980s data (when the minimum wage was falling).

The Neumark and Wascher paper carefully explored modelling issues. For example, it pointed out that 'school enrolment' is conventionally an important variable to include. However, the paper explained that, *a priori*, its sign is not clear (higher school enrolment might be a displacement effect of higher minimum wages; alternatively, higher wage minima may cause smaller enrolments by inducing youths to leave school and join job queues). Moreover, including school enrolments could cause endogeneity bias (because exogenous changes in employment rates or schooling laws may affect enrolment rates). The paper reported results with and without enrolments included.

The authors' discussion of enrolments extended to a review of Card's work on teenagers in California. They found that they could replicate Card's results with their own data if they failed to control for school enrolment. Also they found that they obtained low or even positive elasticities if, like Card, they failed to consider the lagged effects of minimum wages. (Further work on correcting for potential endogeneity when school enrolment is included was nonetheless recommended.)

At an earlier time, the co-host of the 1991 Cornell symposium, Ehrenberg, together with a colleague, Marcus, had looked closely at the educational impact of minimum wages.[70] They found, using mainly 1970s data, that increases in the minimum wage increased the educational levels of teenagers from middle and upper income families, while the educational levels of teenagers from low income families were decreased. Most proponents of minimum wages would consider this a perverse distributional outcome.

A fifth study, by Smith and Vavrichek, completed the symposium papers.[71] These authors found that, of workers employed in the mid-1980s at the minimum wage, higher wage rates (typically 20 percent higher) were enjoyed by 60 percent of them within a year. However, a

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70 Ronald Ehrenberg and Alan J. Marcus, "Minimum Wage Legislation and the Educational Outcomes of Youths," in R Ehrenberg (ed), *Research in Labor Economics* ,Vol 3, JAI Press, Greenwich Connecticut, 1980, p61.

71 Smith and Vavrichek, *Industrial and Labour Relations Review*, October 1992, *op. cit.*, pp82-88.

significant minority, mostly those not having a high school diploma or working part-time, did not advance in that time. The authors argued that their analysis " ... lends only limited credence to concerns that minimum wage workers are unable to begin climbing the wage ladder without a statutory increase in the minimum", which seems a fairly trivial claim.

5.5.3 *The Current Debate*

A Princeton colleague of Card, Alan Krueger, has defended Card's work, citing new work undertaken by Card himself in New Jersey which repeated the California analysis, but this time followed up all stores that may have closed (which earlier work by Card and by Katz and Kreuger, had missed).[72] It appeared to confirm the unorthodox California results Card had obtained.

But as Finis Welch pointed out in the same issue of the journal:

> ... although our new Labor Secretary appears to take these results seriously, it is unlikely they will have a lasting impact on the opinions of most economists. The major weakness is that the studies do nothing to account for changes in product demand among the establishments considered; after all, perhaps employment would have increased had the minimum wage not been increased. A colleague whose opinion I value highly put it as directly as possible: 'I guess we would all be eating hamburgers if the minimum wage were high enough!' [73]

Welch also made the telling point that it would be unfortunate if the relatively low disemployment rates reported in the literature were to leave the impression that the employment effects of minimum wages were unimportant. He reminded readers that a small percentage of a large number is not necessarily unimportant and illustrated this by observing that even a figure as low as 1.5 percent for each 10 percent increase in the minimum implied that the recent changes in the US minimum had caused teenage disemployment of a quarter of a million people.

5.6 Non-United States Studies

Researchers in other countries have not undertaken as much analysis on minimum wage issues, nor analysis of such high quality, as that in produced in the United States. Indeed, Americans have often done the best work on other countries as well.

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72 Alan B. Kreuger, "Have Increases in the Minimum Wage Reduced Employment?" *Jobs and Capital*, 2(2), Summer 1993, pp1,10-11.

73 Finis Welch, "The Cruelty of the Minimum Wage," *Jobs and Capital*, 2(2), Summer 1993, pp1,12.

5.6.1 *Puerto Rico, Chile and Costa Rica*

Three of the non-US studies presented at the 1979 IEA Conference concerned countries in Central and South America.[74]

The first offered stark evidence, perhaps the starkest ever, of the perverse regional effects of minimum wages that have applied since 1938 in **Puerto Rico**. Initially, Puerto Rico had the same legal minimum wage as the rest of the United States. This led to massive unemployment and was changed to a system involving rates set by industry committees under Department of Labor auspices. But the committees continued to set above-market wage rates which have, in effect, protected industries in the rest of the United States while in Puerto Rico:

- very high unemployment rates have persisted;
- labour force participation rates have remained lower than in the mainland United States;
- a much higher percentage of employed workers in Puerto Rico is employed at the legal minimum wage than in mainland United States; and
- only high import duties enable Puerto Rican textile and clothing industries to compete with Asian suppliers in the US market.

The second of the non-US articles provided a crude estimate of the disemployment effects of the minimum wage in **Chilean** manufacturing in 1967 (Chile has had minimum wage legislation since 1937). The study did not investigate substitution amongst categories of workers, or supply responses or other more subtle effects. Its main finding was that cutting the minimum wage by 10 percent (10 percent is a rough estimate of the amount by which revisions of the minimum wage law raised the lowest wage rates in 1967) would have increased manufacturing sector employment by 2.6 percent, or in the case of the lowest paid quartile of manufacturing workers would have created in excess of 10 percent more jobs.

These findings of a significant employment effect were in tune with earlier investigations (not mentioned at the conference) by Gregory.[75] However, they were at odds with later

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74 Rottenberg (ed), *op. cit.* (Simon Rottenberg, "Minimum Wages in Puerto Rico" pp327-39; Vittorio Corbo, "The Impact of Minimum Wages on Industrial Employment in Chile," pp340-356; and Peter Gregory, "Legal Minimum Wages as an Instrument of Social Policy in Less Developed Countries with Special Reference to Costa Rica," pp403-28).

75 P. Gregory, *Wage Policies in Chile,* Country Economic Memorandum, World Bank, Washington DC, 1979.

work by Riveros and Paldam and Riveros which appeared in World Bank papers in 1986.[76] The latter found minimum wage laws had clearly pushed up wages and prices in Chile, but had a significant effect on employment only in the non-tradeables sector – which is somewhat unexpected given that, relative to the traded goods sector, firms in the non-traded goods sector are more likely to have been able to escape cost pressures by raising their prices. Insufficient details are available to comment further.

The final 'other country' paper in the Rottenberg conference volume presents circumstantial evidence relating to **Costa Rica** which has (or had in 1979) a range of minimum legal wages differing amongst industries, occupational groups and regions. The paper found that:

- in the 1970s minimum wage provisions did not affect wage levels much;
- raising minimum wages would have done more for the non-poor than the poor (because fewer people in poor households have jobs, poor households are mostly in rural areas where enforcement is weak, and the lowest income households have low formal education and so are less likely to be part of the group which retains jobs); and
- rises in minimum wages have disturbed occupational wage relativities only temporarily.

5.6.2 *France*

One of the overseas studies reported in the Rottenberg conference volume was by Rosa on minimum wages in France.[77] The author found, in what was claimed to be the first rigorous empirical study in France of the subject, that the French minimum wage law, the 'SMIC', reduced employment and participation of young people, especially young men.

The Rosa study, which applied US 1970s estimation technology to the plentiful French data, has been mentioned in recent work by OECD staff as one of four studies which were undertaken between 1979 and 1990 using a Mincer-type approach.[78] Another study

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76 L. Riveros, "The Chilean Labor Market: From the Structural Reforms of the 1970s to the Crisis of the 1980s," *Discussion Series DRDLM*, World Bank, Washington DC, 1986; and Martin Paldam and Luis A. Riveros, "Minimum Wages and Average Wages, Analysing the Causality," *World Bank Discussion Paper No DRD219, 2nd version*, December 1986.

77 Rottenberg (ed), *op. cit.* (Jean-Jacques Rosa, "The Effects of Minimum Wage Regulation in France," pp357-376).

78 Stephen Bazen and John P. Martin, "The Impact of the Minimum Wage on Earnings and Employment in France," *OECD Economic Studies*, No 16, Spring 1991, pp199-221.

undertaken by Fourçans is considered unsatisfactory because it used the unemployment rate as the dependent variable without allowing for a disemployment effect in the form of a reduction in labour force participation. It also confounded employment effects with effects on the participation rate. One of the additional studies was also by Rosa, in 1984. In his second study, Rosa re-estimated the equations in his earlier work with a longer series of annual data and a procedure to remedy serial correlation. His results were, in summary, that a 10 percent rise in the SMIC relative to the average hourly wage lowered the youth employment rate by 2 to 4.6 percent.[79]

Yet according to Bazen and Martin, neither Rosa's nor the other three studies which they regard as respectable succeeded in demonstrating unequivocally that increases in the SMIC have significantly reduced French youth employment. In 1991 the two authors therefore undertook a new estimation which sought to avoid some of the known problems of the Mincer-type approach that they believed had plagued the earlier attempts – principally the prospect that the average wage, used as the denominator in the specification of the level of the minimum wage, was itself partly determined by the minimum wage.

In brief (as noted earlier in Chapter 3) Bazen and Martin adopted a two-step estimation procedure whereby the impact of a minimum wage increase on youth and adult wages was first estimated and then the estimated pre-increase average wage was used in labour demand equations to estimate the youth employment effect. In the event, youth minimum wage elasticities of -0.1 to -0.2 were found, though the estimates were not considered by the authors to be very robust. The adult employment elasticity estimate was zero.

The care taken by Bazen and Martin, and especially their concern to eliminate serial correlation from the estimates, is impressive and their research report is a useful primer for newcomers to the field. At the same time, it should be noted that their study focused solely on employment effects – fringe benefit aspects were not expressly considered, which is surprising for a paper written in 1991.

5.6.3 United Kingdom

There appears to have been little empirical research on the effects of statutory minimum wages in the United Kingdom. Presumably this is because the minima have been confined to just a few industries.

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79 J.J. Rosa, "Les Effets du SMIC sur l'Emploi des Jeunes: une Analyse Bien Confirmée," mimeo, FNEP, Paris, 1984.

A recent exception is a study by Kaufman.[80] Using a model similar to that employed in Bazen and Martin's study of France, Kaufman looked at the employment effects of UK statutory minima in 1989. His work appears to be the most sophisticated study of UK minimum wages to date. Kaufman criticised some past efforts as *ad hoc* and cited critical reviews of some others. His own estimate was that, on average, it would take a minimum wage rise of about 17 percent to produce a 1 percent decrease in total employment, with women being slightly more prone to unemployment than men. His estimate was smaller than some previous UK estimates (some of which actually estimated that employment would rise), but in line with traditional North American findings.

In connection with the British Labour Party's recent adoption of a policy favouring minimum wage rates, Summers reported that there have been wide variations in the predictions made of how much unemployment that policy would cause.[81] For example, he cited an estimate by James Capel and Co of 64,000 people disemployed over five years, while the Department of Employment predicted 750,000. He noted that Stephen Bazen is one researcher who has criticised the Department of Employment's figures saying that they "bear no relation to estimates obtained by independent researchers". Bazen's point was that in most countries the disemployment impact tends to have been rather small and confined to young persons.

5.6.4 *The Netherlands*

Summers also pointed out that the 1989 OECD Economic Survey of the Netherlands said that the level of the minimum wage in that country was:

> ... thought to have depressed labour market opportunities for those at the lower end of the wage structure (in 1984, 39% of the unemployed were under 25 years old; in 1988, 32%). In the early 1980s, both the level of the gross minimum wage and its ratio to the average gross wage were considerably higher than in other European countries, resulting in high labour costs in low productivity sectors and a narrowing of the wage structure. [82]

It was said that the decline in the minimum wage from 1983 onwards had created employment – for example, among under-25s it increased by 32,000 between 1983 and 1986.

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80 Kaufman, *op. cit.*

81 Martin Summers, "Minimum Wage, Maximum Unemployment," *Economic Affairs*, September 1991, pp36-39.

82 *ibid.*

5.6.5 Canada

In Canada, as elsewhere, there has been a good deal of debate about the degree to which regulations directly affecting the price of labour, as distinct from various 'macroeconomic' factors, have been the causes of unemployment. This has formed a backdrop to the discussion of minimum wage laws as such. An example of a contribution to the debate at this general level is given below. Such questions have assumed a new importance with the advent of NAFTA.

In an article in 1985, Grubel looked at claims that the higher unemployment in Canada than in the United States was due to monetary and fiscal policy failures.[83] He argued that Canada's high fiscal deficit relative to the United States provided evidence that it was not. He also noted that the two countries had similar interest rates and inflation rates, but that the United States had a relatively large trade deficit which ought to have favoured Canada in the employment stakes.

In Grubel's view, the real reason for the difference in employment performance was that Canada's wages were too high. In support he explained that from 1965 to the mid-1980s Canadian real wages *rose by 35 percent*. Over the same period US real wages *fell by 5 percent*, making the difference between the two countries about 40 percent. Adjusting for exchange rates narrowed the gap to about 20 percent, and allowing for Canada's relatively high rates of productivity growth narrowed it further – to about 10 percent. But a substantial difference remained.

Grubel went on to point out that three elements have made Canadian wages more rigid than those in the United States:

- the degree of unionisation in the two countries differed; in 1960 the United States and Canadian labour forces were equally unionised at 23 percent; by the mid-1980s, the US percentage had dropped to about 15 while Canada's had risen to about 35;
- OECD comparisons of unemployment insurance showed that in the mid-1980s Canada had much more generous rates than the United States; for example:
  - for a married person with two dependants, Canada's replacement rate was 83 percent whereas in the United States it was 70 percent;

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83 H. Grubel, "Canadian Wages Are Too High," *Fraser Forum*, April 1985, pp9-11.

- for a single person without dependents earning average wages, the replacement rate was 65 percent in Canada and 30 percent in the United States;
- at more aggregate levels, unemployment insurance benefits in Canada and the United States in 1960 represented 0.8 percent of GDP. In 1982 the US figure was 0.7 percent and for Canada 3.4 percent; and

- deregulation of industry had increased wage flexibility in the United States but Canada had not benefited from similar moves; airlines, trucking, buses, telecommunications and air traffic controllers were cited as examples of deregulation which the United States had achieved but Canada had not.

It is interesting that Grubel did not include minimum wage legislation in his list.

Empirical work in Canada on the minimum wage appears to have rarely considered the federal law. But it has included both time series analyses within provinces and comparisons across provinces.

During the 1980s, Riddell confirmed earlier North American work with the finding that a 10 percent increase in the minimum wage rate in Canada would produce a reduction in employment of about 1 percent. He noted that, in the context of British Columbia, that would imply an eventual elimination of some 15,000 jobs.[84]

A cross-sectoral study across five regions over 20 years undertaken in Canada by Swidinsky in 1980 produced the standard finding that a 10 percent minimum wage increase would reduce employment of teenagers by 1 to 2 percent[85]. Swidinsky did not carry out an analysis of youth and student sub-minimum wages, which vary across Canada.

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84 This study was one mentioned by Michael Walker in "Spring Rituals," *Fraser Forum*, April 1988. The title of Walker's article is a reference to the annual reviews of minimum wages which are typically undertaken in spring by the provincial governments in Canada.

85 Robert Swidinsky, "Minimum Wages and Teenage Unemployment," *Canadian Journal of Economics*, Vol 13, 1 February 1980, pp158-71 (cited in Neumark and Wascher 1992, *op. cit.*).

research which found that the unemployment rate of youthful Canadians as a percentage of the unemployment rate of (more productive) adult employees had been highest in Canadian provinces with the highest minimum wages. The relevant data are in Table A5.1.

Table A5.1: Youth unemployment and minimum wages in Canadian provinces, 1985

	Unemployment rate for 20 - 24 year olds relative to employees ages 25+(%)	Provincial Minimum Wage Level ($)
Alberta	182	3.80
British Columbia	190	3.65
Newfoundland	204	4.00
Quebec	206	4.00
Nova Scotia	213	4.00
New Brunswick	237	3.80
Ontario	251	4.00
Saskatchewan	257	4.25
Manitoba	289	4.30
Prince Edward Island	na	3.75

Source: Walter Block, op. cit.

In Block's words:

> ... Manitoba, with the highest minimum wage level ($4.30) has the largest unemployment rate for its young workers, relative to the general population (289%). Saskatchewan, with the next greatest level ($4.25), weighs in with the second biggest relative unemployment rate for youth (257%), and at the bottom of the pack in terms of the disenfranchisement of their young people, come BC and Alberta with two of the country's lowest minimum wage levels.[86]

Alberta, which had the lowest minimum, also had the lowest unemployment amongst its young and unskilled workers. Alberta was at the time suffering one of its worst economic performances in decades.

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86 Walter Block, "The Minimum Wage Law Discriminates Against Youth Workers," *Fraser Forum*, August 1985, p5.

5.6.6 *Australia*

Analytical work on the Australian wage setting system has emphasised macroeconomic issues and the award structure as a whole, rather than the consequences of particular awards or provisions. Concern is typically expressed by Australian economists about total wage costs and the (national) average wage level in relation to other macroeconomic indicators, rather than about the impact of particular regulations affecting the price of labour.

The eleven papers presented by academics at a two-day conference on unemployment held in February 1993, for example, tended to address general processes and institutions rather than particular interventions in the labour market.[87] Certainly, the 'minimum wage' (which became part of the language used in the Australian industrial relations system from 1966) was not identified as a significant labour market feature in its own right. It seems that nobody has seen much point in addressing the question begged by the admission of the Conciliation and Arbitration Commission in a major wage case in 1974 that it had not been told how many people received the minimum wage, but that it believed the number was not large and that its new level would have no serious impact on the economy.

A common belief that, for whatever reason, Australian labour is over-priced has given rise to some work on the price elasticity of demand for labour. It includes such aggregate studies as that by Russell and Tease in 1988[88] who found that a real wage cut of 1 percent would raise employment by as much as 0.55 percent (based on data for the 1967-87 period). This seems rather high by international standards, but Quiggin recently re-estimated the model including data for the recent recession and found a similar elasticity.[89] Overseas, Australia has achieved some notoriety for its minimum wage laws. In the words of a recently published outline of the economics of minimum wages:

> Australia provided one of the earliest practical demonstrations of the harmful effects of minimum wages when, in 1921, the federal court institutionalized a real minimum wage for unskilled men. The court set the wage by estimating what employees needed, while ignoring what employers could afford to pay. As a result unskilled workers were priced out of the

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87 "Unemployment: Causes, Costs and Solutions," a conference organised by the Centre for Economic Policy Research, Australian National University, and the Department of Employment, Education and Training, Canberra, 16-17 February, 1993.

88 B. Russell and W. Tease, "Employment, Output and Real Wages," *Research Discussion Paper 8806*, Reserve Bank of Australia, 1988.

89 John Quiggin, "The Rise in Unemployment: An Analysis and a Program," Paper at "Unemployment: Causes, Costs and Solutions" conference, *op. cit*.

> market. These laborers [sic] could find work only in occupations not covered by the law or with employers willing to break it. Aggressive reporting of violations by vigilant unions made evasion difficult, and the historical record shows that unemployment remained a particular problem for unskilled laborers throughout the rest of the decade.[90]

Gregory has conjectured recently that, in the circumstances observed in the early 1980s, a reduction of real wages of 35 percent (an average of around A$10,000 per employee at current wage levels) would be required to restore the economy to a full employment level of about 3 percent unemployment.[91] Explaining how difficult it is to imagine that such a large adjustment could be brought about, he points out that during the depths of the depression in the 1930s the Arbitration Court tried to cut real wages by 10 percent and failed.

One recent product of Australian research which bears directly on the subject of the present investigation and is likely to prove important to future empirical work is a theoretical study by Hartley.[92] It brought workplace quality effects and effects on the number of people employed together into a formal framework. The framework captured the costs to employers and employees of a minimum wage law which upset the effort/wage trade-offs to which they would voluntarily agree. Empirical applications of the model will be keenly awaited by labour analysts worldwide.

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90 David R. Henderson (ed.) *The Fortune Encyclopedia of Economics*, Warner Books, New York 1993 p.500.

91 R. G. Gregory, "Aspects of Australian Labour Force Living Standards: The Disappointing Decades 1970-1990," *The Copland Oration, 21st Conference of Economists*, University of Melbourne, July 1992. (See also R. G. Gregory, "Jobs and Gender: a Lego Approach to the Australian Labour Market," *Economic Record*, 667, 1990, pp S-20 - S-40.)

92 Peter Hartley, "The Effects of Minimum Wage Laws on Labour Markets," Paper presented to the H R Nicholls Society's XIIIth Conference, *The New Province of Law and Order*, The Terrace Hotel, Adelaide, 13-14 November 1992.

APPENDIX 6

CUMULATIVE DISTRIBUTION OF WAGE AND SALARY INCOME

Table A6.1: Cumulative Distribution of Wage and Salary Income: All New Zealanders aged 20 and over: 1984, 1987 and 1990 (1990 dollars; deflator is average wage of relevant group)

1984		1987		1990	
$/hr	No	$/hr	No	$/hr	No
1.79	3,357	1.29	895	1.00	1,183
3.59	13,148	2.58	3,579	2.00	2,592
5.38	26,576	3.87	11,036	3.00	6,936
7.18	62,104	5.16	20,581	4.00	14,918
8.97	170,927	6.45	42,355	5.00	22,970
10.77	362,836	7.74	90,675	6.00	41,329
12.56	537,680	9.02	211,474	7.00	70,343
14.36	662,449	10.31	333,466	8.00	137,897
16.15	750,850	11.60	463,810	9.00	235,335
17.94	818,550	12.89	570,889	10.00	317,781
19.74	874,780	14.18	664,546	11.00	428,684
21.54	906,112	15.47	733,745	12.00	520,127
		16.76	793,309	13.00	608,054
		18.05	844,313	14.00	680,447
		19.33	882,790	15.00	735,796
		20.62	910,529	16.00	781,907
				17.00	820,466
				18.00	858,625
				19.00	882,586
				20.00	905,707
Total	991,405	Total	1,008,868	Total	1,024,804
Minimum Wage	$3.77	Minimum Wage	$6.77	Minimum Wage	$6.125

Source: New Zealand Department of Statistics

Table A6.2: Cumulative Distribution of Wage and Salary Income: All New Zealanders Aged 20 to 25, Not Married, No Qualifications, 1984, 1988 and 1990
(1990 dollars; deflator is average wage of relevant group)

1984		1988		1991	
$/hr	No	$/hr	No	$/hr	No
1.67	450*	1.11	0	1.00	0
3.34	450*	2.24	0	2.00	0
5.02	900*	3.36	0	3.00	0
6.68	4,817	4.48	0	4.00	450*
8.36	14,329	5.60	450*	5.00	900*
10.03	26,358	6.72	3,103	6.00	2,011
11.70	30,834	7.84	7,902	7.00	4,831
13.38	31,453	8.95	12,864	8.00	10,431
15.05	33,352	10.07	18,432	9.00	14,871
16.72	33,352	11.19	22,846	10.00	17,475
18.39	33,352	12.31	24,762	11.00	21,579
20.06	33,352	13.43	25,732	12.00	23,353
		14.55	26,182	13.00	23,803
		15.67	26,632	14.00	24,253
		16.79	26,692	15.00	24,832
		17.91	26,632	16.00	24,832
		19.02	27,082	17.00	24,832
		20.14	27,532	18.00	25,282
				19.00	25,732
				20.00	26,182
Total	34,702	Total	27,532	Total	26,632
Minimum Wage	$3.58	Minimum Wage	$6.30	Minimum Wage	$6.125

* *default values inserted by ACIL for confidential non-zero entries.*

Source: New Zealand Department of Statistics

Table A6.3: Cumulative Distribution of Wage and Salary Income: All New Zealanders Aged 20 or over, Not Married, No Qualifications, 1984, 1988 and 1991
(1991 dollars; deflator is average wage of relevant group)

1984		1988		1991	
$/hr	No	$/hr	No	$/hr	No
1.71	450*	1.21	450*	1.00	450*
3.42	900*	2.43	900*	2.00	900*
5.12	1,739	3.64	900*	3.00	900*
6.83	5,935	4.86	1,350	4.00	900*
8.54	19,363	6.07	2,441	5.00	1,350
10.24	38,386	7.28	6,590	6.00	2,524
11.95	49,017	8.50	14,123	7.00	3,617
13.66	54,053	9.71	25,143	8.00	8,974
15.37	57,690	10.92	35,619	9.00	19,427
17.08	59,089	12.14	43,553	10.00	27,871
18.78	59,539	13.35	47,676	11.00	33,118
20.49	59,989	14.57	49,522	12.00	39,641
		15.78	50,511	13.00	42,222
		16.99	51,328	14.00	43,725
		18.20	51,778	15.00	44,819
		19.42	52,228	16.00	45,828
		20.63	52,678	17.00	46,278
				18.00	46,278
				19.00	46,278
				20.00	46,278
Total	61,339	Total	53,578	Total	48,259
Minimum Wage	$3.58	Minimum Wage	6.83	Minimum Wage	$6.125

* *default values inserted by ACIL for confidential non-zero entries.*

Source: New Zealand Department of Statistics

Table A6.4: Cumulative Distribution of Wage and Salary Income: All New Zealanders Aged 20 - 25, 1984, 1987 and 1990 (1990 dollars; deflator is average wage of relevant group)

1984		1987		1990	
$/hr	No	$/hr	No	$/hr	No
1.72	450*	1.23	0	1.00	0
3.44	3,248	2.46	450*	2.00	0
5.16	4,927	3.68	1,643	3.00	0
6.89	15,278	4.91	3,433	4.00	1,992
8.61	51,086	6.14	8,504	5.00	3,866
10.33	107,875	7.37	16,557	6.00	6,803
12.05	151,516	8.60	52,051	7.00	13,637
13.77	178,652	9.83	89,633	8.00	30,735
15.49	192,360	11.05	122,443	9.00	53,479
17.22	201,032	12.28	146,305	10.00	71,662
18.93	205,228	13.51	164,798	11.00	98,287
20.66	206,067	14.73	173,746	12.00	116,727
		15.97	182,098	13.00	132,204
		17.20	185,976	14.00	144,609
		18.42	188,362	15.00	150,393
		19.65	189,853	16.00	152,680
		20.88	191,941	17.00	155,557
				18.00	159,873
				19.00	161,571
				20.00	162,392
Total	209,996	Total	195,672	Total	165,175
Minimum Wage	$3.61	Minimum Wage	$6.44	Minimum Wage	$6.125

* *default values inserted by ACIL for confidential non-zero entries.*

Source: New Zealand Department of Statistics

Table A6.5: Cumulative Distribution of Wage and Salary Income: All Unmarried Women Aged 20 or Over With No Qualifications, 1984, 1988 and 1991
(1991 dollars; deflator is average wage of relevant group)

1984		1988		1991	
$/hr	No	$/hr	No	$/hr	No
1.71	0	1.21	0	1.00	0
3.42	0	2.43	450*	2.00	450*
5.12	0	3.64	450*	3.00	450*
6.83	1,958	4.86	450*	4.00	450*
8.54	8,952	6.07	900*	5.00	450*
10.25	14,267	7.28	3,117	6.00	900*
11.95	17,344	8.50	6,877	7.00	1,350
13.66	18,743	9.71	11,991	8.00	4,288
15.37	19,193	10.92	16,624	9.00	10,624
17.08	19,643	12.14	18,524	10.00	12,846
18.78	20,093	13.35	19,884	11.00	14,513
20.49	20,093	14.57	19,884	12.00	15,503
		15.78	20,334	13.00	16,100
		16.99	20,334	14.00	16,550
		18.20	20,334	15.00	17,000
		19.42	20,784	16.00	17,000
		20.63	21,234	17.00	17,450
				18.00	17,450
				19.00	17,450
				20.00	17,450
Total	20,543	Total	21,234	Total	17,900
Minimum Wage	$3.58	Minimum Wage	$6.83	Minimum Wage	$6.125

* *default values inserted by ACIL for confidential non-zero entries.*

Source: New Zealand Department of Statistics

Table A6.6: Cumulative Distribution of Wage and Salary Income: All New Zealanders Aged 20 Years and Over and Not Married 1984, 1987 and 1990 (1990 dollars; deflator is average wage of relevant group)

1984		1987		1990	
$/hr	No	$/hr	No	$/hr	No
1.75	450*	1.24	0	1.00	450*
3.49	2,688	2.48	450*	2.00	900*
5.24	4,646	3.72	1,643	3.00	900*
6.99	14,158	4.96	4,029	4.00	2,722
8.73	47,728	6.19	8,801	5.00	5,505
10.48	102,160	7.43	19,539	6.00	8,845
12.22	142,724	8.67	46,682	7.00	16,538
13.97	170,140	9.91	81,878	8.00	35,263
15.72	186,925	11.15	117,959	9.00	64,697
17.47	198,954	12.39	146,006	10.00	87,160
19.21	204,829	13.63	170,166	11.00	125,395
20.96	208,746	14.87	182,992	12.00	145,734
		16.10	192,238	13.00	169,628
		17.34	201,484	14.00	189,908
		18.58	206,555	15.00	201,042
		19.82	209,836	16.00	211,167
		21.06	214,012	17.00	218,276
				18.00	225,004
				19.00	227,585
				20.00	231,414
Total	216,701	Total	220,574	Total	242,513
Minimum Wage	$3.67	Minimum Wage	$6.50	Minimum Wage	$6.125

* *default values inserted by ACIL for confidential non-zero entries.*

Source: New Zealand Department of Statistics

APPENDIX 7

QUARTERLY LABOUR STATISTICS AND REGRESSION RESULTS

This Appendix presents

- the descriptive quarterly data relating to the minimum wage which were inspected prior to the regression study reported in Chapter 5;
- a summary of the results of six ordinary least squares regressions conducted on HLFS data; and
- the definitions of terms and the data series employed in the regressions.

A7.1 Key quarterly data

Table A7.1: Key Quarterly Data on Young Adult and Teenage Employment, New Zealand, December 1985 to December 1995

1 Quarter	2 Hourly minimum wage	3 Min. wage as proportion av. wage	4 Employment young adults vs. teens	5 Unemployment young adults vs. teens
	($)	(%)	(%)	(%)
85.4	4.250	0.48571	1.32699	0.48867
86.1	4.250	0.44596	1.31068	0.47198
86.2	4.250	0.42163	1.41540	0.43607
86.3	4.250	0.41103	1.47971	0.44863
86.4	4.250	0.40553	1.38051	0.38040
87.1	5.250	0.48209	1.37311	0.46130
87.2	5.250	0.46917	1.31562	0.64067
87.3	5.250	0.45652	1.41172	0.64408
87.4	5.250	0.45142	1.34259	0.58906
88.1	5.625	0.46680	1.36947	0.62431
88.2	5.625	0.45436	1.35987	0.65911
88.3	5.625	0.44572	1.41774	0.66646
88.4	5.625	0.44152	1.41383	0.72171
89.1	5.625	0.43369	1.39767	0.71916
89.2	5.875	0.44847	1.50662	0.74631
89.3	5.875	0.44407	1.53055	0.80185
89.4	5.875	0.43942	1.44226	0.66191
90.1	5.875	0.42634	1.47353	0.63981
90.2	5.875	0.42175	1.45715	0.71411
90.3	5.875	0.41756	1.45003	0.69518
90.4	6.125	0.43043	1.47959	0.62507
91.1	6.125	0.42535	1.51231	0.72981
91.2	6.125	0.42241	1.56500	0.75043
91.3	6.125	0.41895	1.55958	0.76463
91.4	6.125	0.41695	1.50170	0.79954
92.1	6.125	0.41329	1.53898	0.84900
92.2	6.125	0.41190	1.72726	0.67308
92.3	6.125	0.41246	1.72623	0.70426
92.4	6.125	0.41190	1.63925	0.69161
93.1	6.125	0.41218	1.69701	0.72572
93.2	6.125	0.40997	1.82599	0.61838
93.3	6.125	0.41135	1.74671	0.68050
93.4	6.125	0.41080	1.58767	0.72324

Column definitions:

2 The hourly minimum wage.
3 The minimum wage as a percentage of the average, ordinary-time hourly earnings of all workers taken from the Quarterly Employment Survey in the preceding month.
4 Employment propensities of young adults (aged 20-24) divided by the employment propensities of teenagers (aged 15-19).
5 Unemployment rate of young adults (aged 20-24) divided by the unemployment rate of teenagers (aged 15-19).

Source: HLFS and QES data

7.2 Regression results

The following table summarises the results of the six regressions conducted using quarterly data. The rationale for the regressions and the interpretation of their results are contained in Chapter 5.

Table A7.2: Summary of Results of Regression Analysis

Regression (33 observations)	Name of Dependent Variable	Estimated Values of Independent Variables (and T values)							Adjusted R^2
		ONE	LNMW	UR25	TREND	QTR1	QTR2	QTR3	
1. Employment propensities 15-19 year olds	LMEMP15	+0.10(1.3)	+0.20(1.1)	-0.14(1.4)	-0.31(3.6)	-0.13(0.7)	-0.62(3.5)	-0.71(3.9)	0.91
2. Employment propensities 20-24 year olds	LNEMP20	+0.15(2.6)	-0.16(2.0)	-0.18(4.3)	-0.71(0.2)	-0.13(0.2)	-0.21(2.8)	-0.26(3.4)	0.85
3. Unemployment rates 15-19 year olds	LNUR15	+1.23(3.7)	-0.32(0.8)		-0.66(7.6)	-0.21(0.5)	-0.34(0.8)	-0.11(2.6)	0.75
4. Unemployment rates 20-24 year olds	LNUR20	+2.02(6.3)	+1.61(4.0)		+1.17(2.0)	+0.11(0.3)	+0.68(0.2)	-0.35(0.8)	0.32
5. Employment propensities 20-24 year olds, no qualifications	LNEMP20	-0.16(1.2)	-0.42(2.4)	-0.43(4.5)	-0.58(0.7)	+0.31(1.7)	-0.15(0.9)	-0.69(0.4)	0.87
6. Unemployment rates 20-24 year olds, no qualifications	LNUR20	+2.67(5.7)	+1.64(2.78)		+0.11(0.9)	-0.79(1.3)	+0.47(0.8)	+0.12(0.02)	0.19

Source: Regressions estimated using econometric package LIMDEP

7.3 Definitions of variables

The variables employed in the regressions were defined in accordance with the list below.

I. Dependent Variables (All from Household Labour Force Surveys 1985:4 to 1993:4)

LNEMP15 – Natural logarithm of the ratio of the employment propensities of teenagers (aged 15–19) to the employment propensities of older adults (aged 25 and over).

LNEMP20 – Natural logarithm of the ratio of the employment propensities of young adults (aged 20–24) to the employment propensities of older adults (aged 25 and over). (The second set of regressions pertains to the employment propensities of young adults without qualifications.)

LNUR15 – Natural logarithm of the unemployment rates of teenagers (aged 15–19) to the unemployment rates of older adults (aged 25 and over).

LNUR20 – Natural logarithm of the unemployment rates of young adults (aged 20–24) to the unemployment rates of older adults (aged 25 and over).

II. Independent Variables

LNMW – Natural logarithm of the ratio of the hourly minimum wage to the average, ordinary-time hourly earnings of all workers in Quarterly Employment Survey in the preceding month.

UR25 – The unemployment rate for those aged 25 and above (taken from the Household Labour Force Survey).

TREND – Computed annual trend (i.e. 1985:4=0, 1986:1=.25, 1986:2=.5, etc.). The coefficient on this variable is thus the annual growth rate in the dependent variable, all else held constant.

QTR1 – Dummy variable equal to one in March quarter; zero otherwise.

QTR2 – Dummy variable equal to one in June quarter; zero otherwise.

QTR3 – Dummy variable equal to one in September quarter; zero otherwise.

YEAR – Year.Quarter.

MW – The hourly minimum wage.

MWREL – The minimum wage as a percentage of the average, ordinary-time hourly earnings of all workers taken from the Quarterly Employment Survey in the preceding month.

EMPREL – The employment propensities of young adults (aged 20–24) divided by the employment propensities of teenagers (aged 15–19).

URREL – The unemployment rate of young adults (aged 20–24) divided by the unemployment rate of teenagers (aged 15–19).

7.4 Data employed

The raw data for the regressions are listed in Tables A7.3 to A7.5 below.

Table A7.3: Data for regressions — Set 1

QUARTER	YEAR	CPI	MW	PO	EO	UO	P1	E1	U1	WAGE
1	85.4	737	170	295.8	176.5	21.6	280.5	222.1	12.5	8.8
2	86.1	754	170	294.4	176.0	23.4	278.6	218.3	12.8	9.5
3	86.2	774	170	297.0	163.4	22.7	275.2	214.3	11.5	10.1
4	86.3	800	170	297.4	156.6	18.0	272.6	212.4	10.3	10.3
5	86.4	871	170	298.1	173.4	22.1	271.6	218.1	9.8	10.5
6	87.1	892	210	299.1	174.1	22.4	270.5	216.2	12.0	10.9
7	87.2	921	210	299.7	174.5	20.0	268.4	205.6	14.5	11.2
8	87.3	936	210	300.0	164.3	16.0	266.7	206.2	12.5	11.5
9	87.4	955	210	300.2	175.3	21.1	266.2	208.7	14.1	11.6
10	88.1	972	225	300.2	164.2	24.3	265.4	198.8	17.4	12.1
11	88.2	980	225	299.5	156.6	23.3	263.7	187.5	17.5	12.4
12	88.3	988	225	298.2	148.9	23.0	262.6	185.9	18.2	12.6
13	88.4	1000	225	296.9	152.1	23.7	262.6	190.2	20.5	12.7
14	89.1	1011	225	295.5	148.4	29.0	262.0	183.9	24.5	13.0
15	89.2	1023	235	293.7	134.4	25.1	260.5	179.6	23.9	13.1
16	89.3	1059	235	291.9	130.2	23.4	260.0	177.5	24.7	13.2
17	89.4	1072	235	290.6	145.1	27.4	261.2	188.1	22.1	13.4
18	90.1	1082	235	289.4	139.9	28.0	262.1	186.7	22.3	13.8
19	90.2	1101	235	287.8	138.0	26.6	262.2	183.2	23.9	13.9
20	90.3	1112	235	285.8	134.4	26.9	262.8	179.2	23.5	14.1
21	90.4	1124	245	284.1	134.8	33.2	264.8	185.9	26.2	14.2
22	91.1	1131	245	282.8	127.4	34.1	266.7	181.7	33.1	14.4
23	91.2	1132	245	281.4	119.2	31.7	267.6	177.4	33.2	14.5
24	91.3	1136	245	279.7	114.2	34.1	268.7	171.1	36.5	14.6
25	91.4	1135	245	277.9	122.3	34.7	270.7	178.9	38.4	14.7
26	92.1	1140	245	276.4	116.7	33.8	272.4	177.0	41.7	14.8
27	92.2	1143	245	274.9	106.2	29.9	272.9	182.1	31.6	14.9
28	92.3	1147	245	273.1	103.1	28.8	273.6	178.3	32.4	14.9
29	92.4	1150	245	271.4	111.9	32.2	275.2	186.0	34.0	14.9
30	93.1	1151	245	270.0	105.8	31.3	276.4	183.8	36.5	14.9
31	93.2	1158	245	269.0	98.3	30.3	276.8	184.7	31.5	14.9
32	93.3	1164	245	267.5	103.0	24.1	277.0	186.3	27.6	14.9
33	93.4	1166	245	266.0	113.2	28.8	278.1	187.9	32.3	14.9

Definitions:

QUARTER	-	Indexes 33 quarters in time series (1985:4-1993:4).
YEAR	-	85.4-93.4.
CPI	-	New Zealand CPI. Base period is 88:4 (1000).
MW	-	Weekly adult minimum wage.
P0	-	Working-age population of teenagers (aged 15-19).
E0	-	Employment of teenagers (aged 15-19).
U0	-	Unemployment of teenagers (aged 15-19).
P1	-	Working-age population of young adults (aged 20-24).
E1	-	Employment of young adults (aged 20-24).
U1	-	Unemployment of young adults (aged 20-24).
WAGE	-	Mean ordinary-time hourly earnings (Quarterly Employment Survey).

Source: NZ Statistics

Table A7.4: Data for regressions — Set 2

QUARTER	YEAR	PT	ET	UT
1	85.4	2420.0	1569.1	62.2
2	86.1	2428.9	1544.1	67.5
3	86.2	2425.5	1540.2	65.7
4	86.3	2428.7	1537.1	60.3
5	86.4	2436.6	1555.1	63.1
6	87.1	2445.9	1559.0	67.0
7	87.2	2451.4	1553.0	66.4
8	87.3	2456.0	1545.7	63.4
9	87.4	2463.8	1569.7	67.2
10	88.1	2470.5	1533.7	80.9
11	88.2	2472.8	1510.9	84.5
12	88.3	2474.7	1485.2	95.8
13	88.4	2479.6	1502.9	95.0
14	89.1	2484.1	1472.0	116.6
15	89.2	2485.4	1457.4	114.5
16	89.3	2488.3	1457.9	109.2
17	89.4	2497.2	1486.2	109.9
18	90.1	2507.6	1480.0	116.2
19	90.2	2514.4	1485.0	119.1
20	90.3	2521.1	1473.6	122.5
21	90.4	2532.0	1487.1	140.4
22	91.1	2543.7	1471.3	160.9
23	91.2	2551.4	1462.5	163.1
24	91.3	2557.2	1446.2	172.5
25	91.4	2565.0	1463.1	173.2
26	92.1	2573.7	1459.9	181.4
27	92.2	2579.7	1469.4	162.3
28	92.3	2584.5	1455.0	162.3
29	92.4	2592.7	1482.1	169.5
30	93.1	2599.9	1475.0	168.4
31	93.2	2607.3	1486.5	159.2
32	93.3	2613.5	1496.8	147.3
33	93.4	2622.8	1525.0	154.1

Definitions:

QUARTER - Indexes 33 quarters in time series (1985:4-1993:4).
YEAR - 85.4-93.4.
PT - Aggregate working-age population.
ET - Aggregate Employment.
UT - Aggregate Unemployment.

Source: NZ Statistics

Table A7.5: Data for regressions — Set 3

YEAR	ENQ0	UNQ0	PNQ0	ENQ1	UNQ1	PNQ1
85.4	74.5	13.9	154.4	51.0	6.9	77.8
86.1	66.3	13.3	130.1	50.4	4.8	76.0
86.2	63.8	13.6	133.7	50.0	6.9	75.9
86.3	64.5	11.6	140.4	52.6	5.6	75.6
86.4	76.8	13.8	158.0	50.9	3.7	72.1
87.1	60.9	11.8	124.5	48.8	4.8	72.5
87.2	65.6	11.3	134.0	50.3	6.4	76.4
87.3	64.1	10.2	143.7	53.3	5.2	77.6
87.4	73.9	12.0	150.3	52.1	6.7	78.9
88.1	55.8	11.8	122.6	52.0	9.2	83.0
88.2	55.1	11.9	127.6	47.1	8.4	82.6
88.3	54.2	12.4	136.7	46.8	10.4	79.9
88.4	57.1	13.0	147.7	44.9	10.4	76.3
89.1	43.6	13.6	119.8	46.2	11.8	80.0
89.2	41.4	12.5	125.1	40.2	11.7	75.9
89.3	42.3	14.3	131.7	38.6	11.6	72.6
89.4	49.1	13.8	136.8	40.6	9.1	73.7
90.1	40.3	11.9	107.8	41.2	9.4	72.4
90.2	38.2	10.8	102.1	35.2	10.0	65.7
90.3	39.4	12.6	112.8	33.3	9.0	64.8
90.4	40.4	14.8	121.8	34.4	10.1	63.2
91.1	30.2	11.6	94.5	33.5	11.4	64.1
91.2	30.2	13.3	96.6	32.2	13.3	64.7
91.3	30.6	13.9	107.6	31.9	15.0	67.1
91.4	34.0	13.3	115.9	29.7	13.4	61.7
92.1	24.7	12.3	89.7	29.0	13.2	59.7
92.2	32.0	13.3	110.8	30.4	11.7	60.9
92.3	25.6	11.6	92.4	29.3	13.1	62.3
92.4	23.9	11.0	96.2	33.1	12.3	65.1
93.1	27.6	9.9	104.5	31.3	10.6	60.3
93.2	23.9	11.0	96.2	33.1	12.3	65.1
93.3	27.6	9.9	104.5	31.3	10.6	60.3
93.4	36.6	11.1	114.4	29.0	11.1	60.2

Definitions:

YEAR - 85.4-93.4.
ENQ0 - Employment of teenagers (aged 15-19) w/o qualifications.
UNQ - Unemployment of teenagers (aged 15-19) w/o qualifications.
PNQ0 - Working-age population of teenagers (aged 15-19) w/o qualifications.
ENQ1 - Employment of young adults (aged 20-24) w/o qualifications.
UNQ1 - Unemployment of young adults (aged 20-24) w/o qualifications.
PNQ1 - Working-age population of young adults (aged 20-24) w/o qualifications.

Source: NZ Statistics