CHAPTER VI

THE FREEZING INDUSTRY - A CASE STUDY

6.1 INTRODUCTION

The Freezing Industry has been chosen for a case study to illustrate some of the general points about levies, and the ways in which safety incentives operate in the present method of funding. Some limited data is available and this is used to explore various bases for rebates and penalties. The Accident Compensation Commission has not published industry-wide or firm experience, but when this is available, it is an obvious source of material for such an analysis. The data which is available is used to provide estimates of missing information. Thus the analysis makes no pretention to absolute accuracy and is sensitive to assumptions made, but nevertheless provides some interesting approximate results.

6.2 BACKGROUND AND NATURE OF THE INDUSTRY

The Freezing Industry has a crucial role in the structure of the New Zealand economy. Meat and associated products make up a major proportion of exports of animal origin which in turn account for over 65% of total value of New Zealand exports.[1] Some unique features such as a volatile workforce, dangerous and often unpleasant work, high wages and strong unionisation, contribute to the generally contentious environment within this industry. Problems with the

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1. New Zealand Official Yearbook, 1977, p.503.

operation of the Accident Compensation Act have been one of the many controversial issues surrounding the operation of the industry in recent years. Because prices and often quotas are fixed on the overseas market, any extra costs either have to be absorbed by the companies or passed back in the form of higher killing charges to the farmer, affecting profitability and investment. If extra costs imposed on the industry result in a decline in the farming sector, the community pays, not directly through prices as envisaged by early proponents of the A.C.C. law, but indirectly through loss in export opportunity, decline in the rural sector and balance of payments problems.

The industry itself is compsed of about forty-eight major and sixteen minor employers all differing considerably in type of operations undertaken, degree of seasonality, nature of workforce, wage-rates and type of ownership. This makes it very difficult to compare one works with another and suggests that differences in accident experience may be strongly correlated with differences in the above features. Nevertheless, for the purposes of the A.C.C. levy, all members of the indsutry belong to class 303 and pay $2.50 per $100 of levied payroll. Of this group, 40 works belong to the Freezing Companies Association and it is this group to which this case study refers.

Soon after inception of the Act, concern was expressed at the high costs experienced under the new scheme. In November 1976, the Freezing Companies Association collated data from its members on accident rates and cost experiences of the first two years of the Act. This indicated that while

total works injuries in 1975/76 had increased 20% over the 1972/73 figure, actual lost-time injuries had increased by 92%, with a shift towards a higher proportion of 1-7 day lost-time injuries.[1] Under Workers' Compensation, direct costs in the form of premiums paid in the year preceding the Act were approximately $2.6 million. In 1975/76 direct costs had more than doubled to 5.1m in the form of levies 4.2m and first-week payments 1.4m.[2] These costs were understandably the subject of increasing criticism by the Freezing Companies and as a result Sir Arnold Nordmeyer was commissioned to undertake a special investigation into the industry. He could find no indication that the freezing works had suddenly become more dangerous places to work, nor that the trends could be significantly attributed to better benefits allowing legitimate time off for injuries which previously workers would have endured without lost time. His investigation and recommendations supported the view that the phenomenon of moral hazard was prevalent in the industry and that unless those involved could 'put their house in order' Government would have to consider legislative changes.[3] Since the Nordmeyer Report, the Freezing Companies Association have prepared recommendations for the Commission to consider and the Employers' Federation have presented their case, but

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1. New Zealand Freezing Companies Association, Analysis of Freezing Industry Injuries and Compensatable (Lost-Time) Injuries, November 1976, pp.5 and 13.
2. Ibid. p.37.
3. A. Nordmeyer, 'Report of Sir Arnold Nordmeyer to the Accident Compensation Commission as a result of a Special Enquiry into the Nature of and the Extent of Incapacity Resulting From Personal Injury in the Freezing Industry...' mimeo, August 1977.

firm proposals and recommendations to Parliament have yet to be made.

The problems of cost besetting the industry which give urgency to the problem are succinctly summarised in the submissions to the Nordmeyer Committee made by I. Campbell:

> It would not be difficult to point out many obvious hazards of the working environment. Undoubtedly some of them could be overcome with a complete change in the layout of the works, changes in methods and systems, etc. However desirable this may be, we cannot overlook the economics of the industry already saddled with massive costs to meet hygiene and other requirements. There would be little point in having the safest plants in the world if our products were too costly for the world market. [1]

6.3 OPERATION OF THE MORAL HAZARD PHENOMENON

There are two significant ways in which the moral hazard phenomenon operates in this industry - both of which are alluded to in the Nordmeyer Report. Firstly, the nature of the work produces a predominance of relatively short-term injuries, e.g. cuts, bruises, burns. These require time off for diverse reasons, two of which are hygiene regulations, and union rules, which preclude reallocation of workers to jobs where their injuries would not be a handicap. Because the worker now suffers no financial loss in ordinary wages for an accident requiring seven days or less compensation, the incentive exists for abuse and overuse of the scheme. The seasonal nature of the work encourages this phenomenon

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1. I. Campbell, 'Submissions to the Special Inquiry into the Nature and Incidence of and the Extent of Incapacity Resulting from Personal Injury by Accident or Occupational Diseases in the Freezing Industry', 25 July 1977, mimeo, p.17.

because workers who face an uncertain future or the prospect of layoffs can be tempted to try to go out 'on compo'. Figures supplied by one company substantiate this occurrence; for this firm in the 'off-season' May - October in which only 45% of the total annual kill is made, compensation for first-week is 58% of the annual total. The six months of the height of the season results in 55% of the kill and only 42% of the annual compensation total.

In addition, high wages prevail in this industry. The 100% liability on the part of the employer for the first week, frequently means that, with bonus and incentive earnings, well in excess of $300 (the maximum on which the Commission pays compensation) is received. The worker has also considerable incentive to disguise non-work injuries and aggravation of existing conditions, as new-work injuries.[1] The percentage of work injuries to which these latter aspects may be applicable is uncertain, though thought by those in the industry to be significant.

Secondly, moral hazard appears to operate in the provision of medical services. The Commission pays doctors on a bulk-billing system for cases involving accident. Thus not only does medical care appear free to the patient, but the doctor has pecuniary incentive to over-prescribe medical care by

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1. No compensation is payable for the first week of non-work injuries, nor in the case of disability for which no specific event can be attributed with causation.

either bringing back accident cases as unnecessarily for return visits, or charging excessive amounts per visit to the Commission, or by giving over-generous time off which encourages patronage by workers who seek a holiday on compensation.[1] Section 112, subsection 2, allows that an employer or the Commission may require before any payment to an employee is made: '... satisfactory evidence of the accident, injury and incapacity or any of them including (if desired) a certificate by a registered medical practitioner.' But this provision does not in itself allow a company to refuse compensation because of the lack of confidence in the doctor who has given the certificate. Where the works' doctors, familiar with the nature of injuries sustained and their effect on the job in hand, are circumvented, then there is often little the company can do. It must be remembered also that refusal to pay compensation will frequently result in union involvement and management may feel it is simply not worth costs of stoppages etc. which may result.

6.4 ANALYSIS OF ACCIDENT RECORDS AND CLAIMS EXPERIENCE

6.4.1 Use of Frequency Data.

The Nordmeyer Report contains a breakdown of all accidents requiring compensation by number of days lost for each of the forty association member works. However, these are not related to manhours worked, and thus give no basis for

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1. For a discussion of physician and patient related moral hazard, see K. Arrow, 'Uncertainty and the Welfare Economics of Medical Care', American Economic Review, v.53, 1963, pp.961-2. There are other ramifications in the New Zealand scheme, e.g. physiotherapy and other associated medical services, such as sports medicine clinics have flourished.

comparison excepting that it is interesting to see the huge variation in proportion of accidents of each time-loss duration between the works. This suggests that either the nature of the injuries differ, or that there are significant differences in assessment of time off made by medical personnel for essentially similar accidents.

As discussed in Chapter V the Commission are to give rebates and penalties on an accident experience basis. To begin with, more conventional measures of each works' performance are calculated:

(a) the frequency rate for total compensatable accidents f_1;

(b) the frequency rate for accidents of over seven days' duration, f_2

which are thus subject to an A.C.C. claim. To accomplish this, man-hours data from Labour Department surveys are used for each of thirty-six works.[1] Four works were omitted because of data errors and the remaining works represented by a number preserve anonymity - see Table 6.1.

(a) Accident frequency rate for industry F_1 $= \frac{\text{Total No. of compensatable accidents}}{\text{Total man-hours worked}}$

$= \frac{15724}{49,213,258}$

$= 31.9$ per 100,000 man-hours.

1. Department of Labour 'The Meat Freezing Industry in 1977', Mimeo undated. For the purposes of this analysis it is assumed that these figures are accurate, although the technique used to produce them is an estimating one from selected data. More crucially these man-hours worked will generally include man-hours worked within the industry which are levied under other classes, mainly clerical and management. From individual works surveyed, differences in calculation of this division were apparent, but for the calculation of f_1 and f_2 figures this difference in proportion is assumed negligible.

(b) Accident frequency rate for industry F_2 = $\frac{\text{No. of accidents over 7 days}}{\text{Total man-hours worked}}$

$= \frac{5711}{49,213,258}$

= 11.6 per 100,000 man-hours.

F_1 and F_2 are assumed to be the true frequencies for the industry.[1]

Table 6.1 lists the actual frequency (f_1) achieved by each of the works. The expected number of accidents, E_a, is calculated for each works as F_1 x man-hours and listed in Column 3. The 95% confidence interval for E_a is calculated using the simple technique outlined in Chapter IV. Where the firm's actual accident experience, A_a,[2] lies outside the 95% confidence limits, then the most conservative estimate of the firm's true expected number of accidents, E_a' is made. This allows a rate modification factor to be calculated. Table 6.2 lists similar data for f_2 data, using the industry frequency rate of F_2 = 11.6 accidents/100,000 man-hours.

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1. If p = probability of accident in one man-hour, and p is estimated by

$$\frac{\text{total no. of accidents}}{\text{..... man-hours}}$$

$\hat{p} = 0.0003$

$\text{var}(\hat{p}) = \frac{\hat{p}(1 - \hat{p})}{49.10^6}$

Standard deviation = 0.002×10^{-3}

Hence $F_1 \doteq 30 \pm 0.4$, 95% certainty criteria.
Thus ceteris paribus, one would expect small variation in the F_1 figure calculated in successive years.

2. To preserve anonymity once again, Accident data from Nordmeyer Report is omitted.

TABLE 6.1

DATA FOR TOTAL COMPENSATABLE ACCIDENTS BASED ON AN INDUSTRY FREQUENCY, F_1 = 31.9 FOR THE YEAR APRIL 1976 - MARCH 1977.

RANK	FREQ.RATE	E_a	E_a'	RATE MODIFICATION FACTOR
1	6.1	220	57	0.26
2	9.2	466	160	0.34
3	9.7	319	120	0.38
4	11.8	501	215	0.43
5	13.1	552	262	0.47
6	15.4	234	137	0.58
7	15.9	447	255	0.57
8	17.3	229	148	0.65
9	18.7	470	310	0.66
10	19.9	163	125	0.77
11	20.4	577	410	0.71
12	22.0	136	114	0.82
13	22.9	680	535	0.78
14	23.0	192	163	0.85
15	25.2	286	258	0.90
16	25.5	426	380	0.89
17	25.6	182	172	0.95
18	26.7	401	375	0.94
19	29.7	1154	1140	0.99
20	31.7	-	-	-
21	32.4	-	-	-
22	32.8	-	-	-
23	33.9	-	-	-
24	34.1	-	-	-
25	34.8	-	-	-
26	35.3	500	510	1.02
27	37.6	836	925	1.11
28	38.6	403	445	1.10
29	42.6	234	280	1.20
30	43.1	502	630	1.25
31	45.5	114	139	1.22
32	49.3	907	1330	1.47
33	52.8	740	1155	1.56
34	59.9	825	1450	1.76
35	64.7	320	600	1.88
36	83.4	107	248	2.31

TABLE 6.2

DATA FOR ACCIDENTS > 7 DAYS LOST TIME - BASED ON INDUSTRY FREQUENCY F_2 = 11.6 FOR YEAR APRIL 1976 - MARCH 1977

RANK	FREQ.RATE	E_a	E_a'	RATE MODIFICATION FACTOR
1	1.3	80	17	0.21
2	3.5	170	68	0.40
3	4.7	116	63	0.54
4	2.5	182	53	0.29
5	2.0	200	48	0.24
6	6.1	85	60	0.70
7	7.1	162	125	0.77
8	4.1	83	55	0.66
9	3.3	171	65	0.38
10	13.7	-	-	-
11	12.7	-	-	-
12	14.7	-	-	-
13	9.4	247	231	0.94
14	10.7	-	-	-
15	9.9	-	-	-
16	8.0	160	140	0.88
17	13.0	-	-	-
18	12.9	-	-	-
19	3.6	420	155	0.36
20	19.0	114	164	1.44
21	9.0	268	238	0.89
22	14.5	-	-	-
23	9.4	176	170	0.97
24	7.6	206	160	0.78
25	8.7	109	102	0.94
26	14.4	182	198	1.08
27	21.5	304	518	1.71
28	10.4	-	-	-
29	22.1	85	135	1.58
30	26.7	183	382	2.01
31	20.5	41	58	1.41
32	17.8	330	465	1.41
33	27.0	269	580	2.16
34	7.1	300	212	0.71
35	31.9	116	285	2.46
36	21.8	39	58	1.49

The data pertains only to accidents within the time span of one year, but because of the high frequency of accidents in this industry and the relatively large size of firms in the sample, the E_a is large enough to allow quite substantial rate modification factors to be calculated where the A_a departs significantly from E_a.

Table 6.1 lists the firms in order of F_1; however, the rate modification factors which are based on the statistical reliability of such frequency rates do not follow this order in some cases. In other words, the larger the firm the more significant its own experience. A small firm may have an apparently very good f_1 figure, but because its expected number of accidents is small, the firm's experience may be within the 95% confidence interval. Table 6.2 maintains the order of Table 6.1 and highlights the difference for several firms between assessment of rate modification under this frequency base of accidents > 7 days and the frequency base of all lost-time accidents.

To enable the quantum of rebate or penalty to be calculated, the levy paid by each firm is estimated from wage data and manhour figures - see Column 2, Table 6.3. The adjusted levy, Column 3, is that portion of the levy which remains after non-work and other non-claims expenditure are removed. For each of the two frequency bases, the approximate rebate or penalty is listed in Columns 4 and 5.

Assumptions and data limitations :-

> Labour department data on manhours and wage rates for each of the companies in the study is taken to calculate basic payroll for 1977. To remove the portion of the wage bill which is levied under Class 800, an adjustment factor of 0.96 is applied. For some companies this adjustment may not be

adequate, particularly those whose head-office operations are included in the immediate precincts of the works. For others, through a desire for simplicity or other motives, no breakdown into clerical-management is made.

Because levies are calculated on the basis of the previous years wage-bill, an adjustment factor of 0.85 is then applied to the 1977 figure to reduce it to the appropriate 1976 base. For companies from which direct information was obtained, this adjustment figure was appropriate.

Finally, the levy paid to Class 303 is calculated as $2.50 per $100 of wages. But this will not be the appropriate figure to which to apply a rate modification factor as some portion will be required for non-claims expenditure. For the purposes of this analysis 40¢ is removed for non-work accidents and 20¢ for other non-claims related expenditure: safety promotion, disaster reserve, administration, etc. $1.90 remains as the portion of the levy which is subject to adjustment according to the firm's experience. The size of rebate or penalty is somewhat sensitive to the assumptions made about the adjustable portion. The legislation also specifies only that rebates not exceed 50% of the levy paid and the penalties 100%. Firms for which this limitation is significant are asterisked, assuming that the appropriate ceiling is the unadjusted levy.

TABLE 6.3

REBATES AND PENALTIES FOR FIRMS USING TWO-FREQUENCY BASES, 1976-77.

Works No.	Estimated Levy Paid	Adjusted Levy	Rebate (+) or Penalty (-) F_1 Data.	Rebate (+) or Penalty (-) F_2 Data.
1	58,000	44,000	+ 29,000*	+ 29,000*
2	116,500	88,500	+ 58,000*	+ 53,000
3	86,000	65,500	+ 40,500	+ 35,500
4	164,000	124,500	+ 71,000	+ 82,000*
5	91,500	69,500	+ 37,000	+ 45,500*
6	60,000	45,500	+ 19,000	+ 13,500
7	97,500	74,500	+ 32,000	+ 17,000
8	41,000	31,000	+ 11,000	+ 10,500
9	141,500	107,500	+ 36,000	+ 66,500
10	43,000	32,500	+ 7,500	-
11	182,500	138,500	+ 40,000	-
12	31,000	23,500	+ 4,000	-
13	131,000	99,500	+ 22,000	+ 6,000
14	51,000	38,500	+ 6,000	-
15	71,000	54,000	+ 5,500	-
16	126,000	96,000	+ 10,500	+ 11,500
17	38,000	29,000	+ 1,500	-
18	90,500	69,000	+ 4,000	-
19	266,500	202,500	+ 2,000	+129,500
20	82,500	62,500	-	- 27,500
21	224,000	170,000	-	+ 18,500
22	39,000	29,500	-	-
23	135,000	102,500	-	+ 3,000
24	163,000	123,500	-	+ 27,000
25	111,000	84,500	-	+ 5,000
26	126,500	96,000	- 2,000	- 7,500
27	207,000	157,500	- 17,500	-111,500
28	101,500	77,000	+ 7,500	-
29	55,000	41,500	- 8,500	- 24,000
30	103,000	78,000	- 19,500	- 79,000
31	36,000	27,500	- 6,000	- 11,500
32	183,000	139,000	- 65,500	- 57,000
33	230,000	174,500	- 97,500	-202,500
34	198,500	151,000	-115,000	+ 44,000
35	91,000	69,000	- 60,500	- 91,000*
36	34,000	26,000	- 34,000*	- 12,500

* Rebate or Penalty is subject to maximum, 50% of Levy paid for Rebate, 100% for Penalty.

6.4.2 Incorporation of Severity Data.

Without any actual claims data, and only a limited breakdown of duration of accidents of greater than seven days provided in the Nordmeyer report, it is rather difficult to take severity into account. The use of pure frequency weighs minor and serious accidents equally, which may be justified if one accepts that there is a great deal of chance involved in the outcome of a given accidental occurrence. The Commission, however, seem to be proposing a claims basis for rebates and penalties. To use actual claims data could be highly arbitrary for reasons outlined in Chapter V, pp.107-8. If instead, accidents are categorized, for example, as minor, major and long-term, each type could carry a standard quantum of claim. For long-term accidents, some portion of the original levy could be set aside to form a pool from which all claims over a certain amount are met. It would then remain to develop a technique to assess rebates and penalties from the assessed claims experience. The very limited data obtainable from the Nordmeyer report[1] will be used as an exercise to illustrate one way in which this could be done.

Each firm has different wage rates, so that the average cost per day of an accident will vary from firm to firm. However, this should not affect the development of a severity modification factor.

Let average expected cost of accidents 8-14 days for firm x be A1 :

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1. See Appendix IV.

Cost of accidents 15-36 days for firm x be A_2

Cost of accidents > 36 days for firm x be A_3

Assume $A_1:A_2:A_3$ = 1:4:10

from the total accident data

Probability of an A_1 type accident, $P(A_1) = 0.694$

" " " A_2 " " $P(A_2) = 0.262$

" " " A_3 " " $P(A_3) = 0.044$.

If the firm's severity experience is the same as the industry average, then for a given accident experience there will be an expected number of accidents in each category.

For Firm 31:

E_A > 7 days = 41

A_A > 7 days = 73.

Frequency Rate Modification formulae = $\frac{58}{41}$

= 1.44.

If the severity is the same as the industry average, one would expect 52 A_1, 19 A_2, 3 A_3 accidents. The actual results are 37 A_1, 32 A_2, 4 A_3.

From the criterion that if the actual number of accidents are within two standard deviations of the expected number, the hypothesis that the firm's true mean is the same as the class mean cannot be justified, the experience of A_1 type accidents is acceptable, A_2 type accidents $\frac{23}{19}$ worse than average, and A_3 type acceptable.

Thus the expected claims E_c = 52 A_1 + 19 A_2 + 3 A_3

= 157 A_1.

The firm is statistically worse than average for A_2 accidents and the best that the E_{A2} could be is 23 so that the

Actual adjusted claims experience of the firm is E_c + 0.21% of A_2 Claims = 173.

Severity Modification factor = $\frac{Ac}{Ec} = \frac{173}{157} = 1.10$.

Thus the firm not only has more accidents than is statistically acceptable, but the accidents are on average more severe and this is sufficient to allow an additional 1.10 factor in the modification formula.

The rebate/penalty modification formula now becomes

$$1.41 \times 1.10 = 1.55.$$

For the other firms' severity modification factors see Table 6.4. Severity is significantly different by the above test in twelve cases. For Firm No. 32 the rate modification changes from 1.41 (penalty) to 0.82 (rebate), the interpretation being that although the firm has many more accidents than are acceptable, the accidents themselves are relatively minor.

The actual figures obtainable from such an exercise as above are, of course, highly sensitive to the assumptions made, particularly the weighting given to major accidents. The assumptions themselves need to be based on a complete analysis of accidents and their costs for the industry and on value judgments as to how much of major accidents to regard as 'excess' and to fund through a common pool.

The more of the levy which is regarded as adjustable, the higher the quantum of rebates and penalties. By the same token, the more responsive the rebate penalty scheme is to the firms' actual experience, the less the loss sharing and the more benefits of insurance are subsequently diminished.

TABLE 6.4

REBATES AND PENALTIES ADJUSTED FOR SEVERITY (F_2 DATA).

Works No.	Severity Modification Factor	Rate Modification Factor (F_2)	Rebate/ Penalty under F_2.	Adjusted Rebate or Penalty
31	1.10	1.41	- 11,500	- 15,000
34	0.96	0.71	+ 44,000	+ 48,000
32	0.58	1.41	- 57,000	+ 25,000
29	0.91	1.58	- 24,000	- 18,000
30	1.23	2.01	- 79,000	-103,000*
18	1.34	-	-	- 23,500
5	1.43	0.24	+ 45,500*	+ 45,500*
35	1.03	2.46	- 91,000	- 91,000*
25	1.11	0.94	- 27,500	- 34,000
6	1.10	0.70	+ 13,500	+ 10,500
4	1.26	0.29	+ 82,000	+ 78,500
28	0.96	-	-	+ 3,000

6.5 THE IMPLICATIONS OF REBATES AND PENALTIES

Recent work done by M. Berkowitz[1] suggests that even when indirect and other costs of accidents are taken into account, the A.C.C. levy is the largest cost item for freezing companies. He suggests that the opportunity to increase incentives by adjusting levies should not be lost. In a case study of one freezing works, he concluded that the potential for increasing safety and thus reducing accidents exists and that if companies could see that safety expenditure had the effect of directly reducing levies, then such expenditure would be profitably undertaken.[2]

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1. Monroe Berkowitz, The Economics of Accidents in New Zealand, Industrial Relations Research Monograph No.5, Industrial Relations Centre, Victoria University of Wellington and New Zealand Accident Compensation Commission 1979 forthcoming (citations drawn from the preliminary manuscript with the permission of the Industrial Relations Centre), 2 Ibid, p.122.

However, as the previous analysis has indicated, the use of rebates and penalties to provide such incentives is likely to be contentious. For many firms the size of rebate or penalty depends arbitrarily on the basis of assessment used. The total accident frequency rate should give the best indication of the firm's performance, but this would require that the Commission collect these accident figures and accurate man-hour data. At present where information on accidents of over seven days duration only is collected, the second measure of frequency would have to be the basis. Even then this would require man-hour data, or employee equivalents. The wage rates vary considerably between works so that use of payroll instead of man-hours would not be justified.

The use of frequency based on accidents of over seven days (method 2) gives roughly equivalent assessments for 9 out of 36 firms - see Table 6.3. Other firms are either advantaged, or disadvantaged, significantly, e.g. Firm 11 receives $40,000 rebate under method 1, and no assessment, method 2.

Firm 19 receives $2,000 rebate method 1, and $129,500 rebate, method 2.

Firm 34 receives $115,000 penalty method 1, and $44,000 rebate, method 2.

The uncorrelated nature of the results for many firms suggests that there may be arbitrary factors operating. Perhaps there is considerable variation among doctors in their assessment of time off for accidents of around one week's duration. This aspect needs careful analysis, as does the inclusion of any kind of severity modification, before rebates and penalties are instituted for this industry.

Several firms were asked their reaction to the rebates and penalties assessed by the above methods. In most cases it was indicated strongly that management does all possible to reduce accidents and that imposing penalties, even of the above magnitude, would be unlikely to have any real impact on the accident figure. Accidents are not seen as a 'management' problem, but as arising from a complex interaction of features of the workforce peculiar to the industry. The view was expressed that to penalise companies, while allowing the anomalous 100% first-week provisions to remain, and the problem of arbitrary medical certification, was self-defeating. In addition, the rather arbitrary nature of the assessment for most firms from f_1 and f_2 figures was a cause of concern and thought to promote claims control rather than accident control.

CONCLUSION

Although the Freezing Industry is a likely candidate for merit rating, caution is indicated before any scheme is adopted. No attempt has been made here to ascertain to what extent rebates and penalties will merely reflect the non-homoegeneity of the different works rather than reward and penalise good and bad safety experience. Where one company owns several works and has rationalised its operations, it may well be that those undertaking the more hazardous procedures will receive penalties, and those undertaking less hazardous procedures will receive rebates. This may have the effect of leaving the company in much the same position overall as before.

The incentive provided by the first-week provisions clearly varies from works to works. In the case study undertaken by M. Berkowitz[1] the first-week payment was only about 11% of the levy paid. For works investigated in this analysis, first-week payments were more significant; in one works the first-week payment was as high as 74% of levy. It seems, however, that for most works the incentive provided by the first-week provision is more than offset by the perverse effect of the first-week provision on employee claims.

This case study has attempted to outline some of the issues involved for the industry. From here it would seem that more research into accident causation on an individual works basis would clarify the role of the worker and the potential for management to improve safety.

M. Berkowitz, op.cit., p.101.