

THE LOGGING SUPERVISOR

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The intention of this paper is two-fold, firstly to present the results of a low level survey carried out amongst logging supervisors late in 1989, and secondly, based on data obtained from the NZ Forestry Corporation, to analyse the management overhead of logging for one company.

While considerable research has addressed the logging workforce at the logger/contractor level, eg Fraser, Murphy and Terlesk (1976), Fielder (1979), Gaskin, Smith and Wilson (1989) to name a few, little research has specifically addressed the supervisor/manager. A study conducted by Crothers and MacPherson (1984) based on published census data for 1971, 1976 and 1981 looked at occupational changes and

occupational profile for this ten year time period. The results from this study are presented in Figure 1 and Table 1 below.

The numbers employed as logging supervisors during this period increased from 146 in 1971 to 156 in 1976 and reduced to 135 in 1981. For the first two observation points, 1971 and 1976, the logging supervisor workforce was 100% male, however, by 1981 4.3% of logging supervisors were women (this represents six out of the 135). The average age increased from 37.5 years in 1971, to 39.6 in 1976 and remained at 39 in 1981.

The ratio of supervisors to contractors and to loggers has been reproduced in Table 1.

Table 1

	1971	1976	1981
<i>Logging Supervisors</i>	146	156	135
<i>Loggers⁽¹⁾</i>	2256	2127	2922
<i>Logging Contractors</i>	282	407	519
<i>Ratio Supervisors to Loggers</i>	1:15.5	1:13.6	1:21.6
<i>Ratio Supervisors to Contractors</i>	1:1.9	1:2.6	1:3.8
<i>Ratio Supervisors to Total⁽²⁾</i>	1:17.4	1:16.2	1:25.5

(1) Sum of those classified as bushman, skilled bushman, leading bushmen, other loggers not elsewhere classified.

(2) Sum of all those employed as loggers and contractors

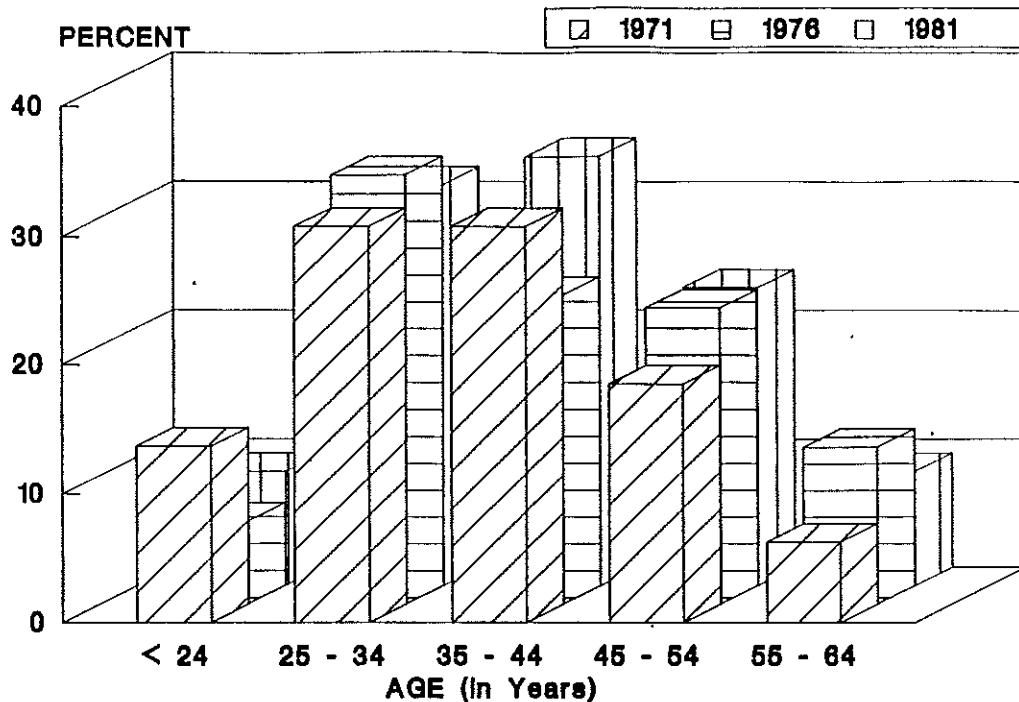


Figure 1 : Age Profile of Logging Supervisors (After Crothers and MacPherson 1984)

These results suggest that the logging supervisors workload increased slightly during the ten year period.

LOGGING SUPERVISOR SURVEY

The results are from a postal survey of supervisors employed by the three main companies; Elders Resources NZFP Forests Limited (10), Tasman Forestry Limited (15) and NZ Forestry Corporation (37). The total number of forms sent out was 62 of which 25 were returned (40% response rate). No follow up reminder was sent to the participants so the response rate is considered 'normal' for such a postal survey.

The questions addressed aspects such as:

- Age
- Length of service
- Previous employment history
- Qualifications

- Salary
- Number and type of crews supervised
- Duties and time involved
- Measure of job satisfaction using the Worker Opinion Survey (Cross, 1973)

Due to the small sample size no inter-regional comparisons are possible.

RESULTS

The average age of the 25 supervisors that responded was 36 years with the range of ages being from a low of 27 years to 49 years. This is three years younger than in 1981. The average number of years spent as a logging supervisor was 4.1 (Figure 2). Over half of the sample had been employed in this role for three years or less and over three-quarters had been logging supervisors for five years or less. Prior to them taking up their present job:

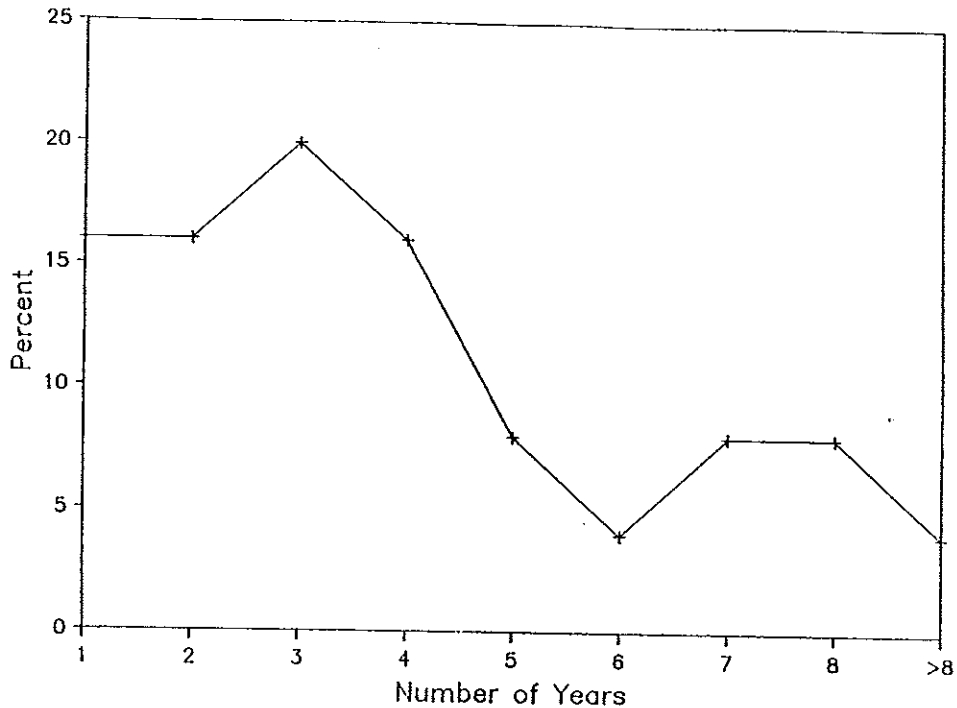


Figure 2 : Length of Service of Logging Supervisors

- 4 were working in a logging crew and had been promoted from a gang into a supervisory role
- 6 were silviculture supervisors
- 4 had administrative or technical roles such as work study officer
- 4 had training roles - for example woodsman instructor
- 2 others (1 ranger trainee and 1 district forester)

The majority (11) had been approached by the Company about the position while only three had actually got the job by answering an advertisement.

Each person filling out the questionnaire was asked about their ethnic origin. The possible responses were caucasian, maori or other, the other being specified. The results of this question (Figure 3) showed a high percentage of maoris employed as logging supervisors when compared with the percentage of the total population (10%). This finding is similar to that which has emerged from recently collected workforce data.

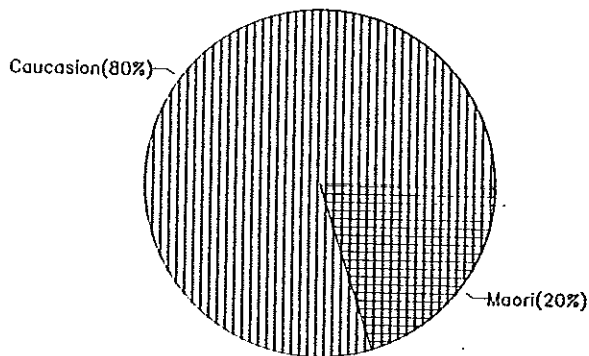


Figure 3 : Ethnic Status of Logging Supervisors

The salary range given was from <\$25,000 pa to >\$40,000 pa in \$5,000 graduations. Figure 4 indicates the majority of logging supervisors earning between \$30,000 to \$35,000 pa. Almost one quarter earned in excess of \$40,000 pa.

Over half of the respondents had some form of tertiary qualification. Typically this was NZ Certificate in Forestry (46%) with

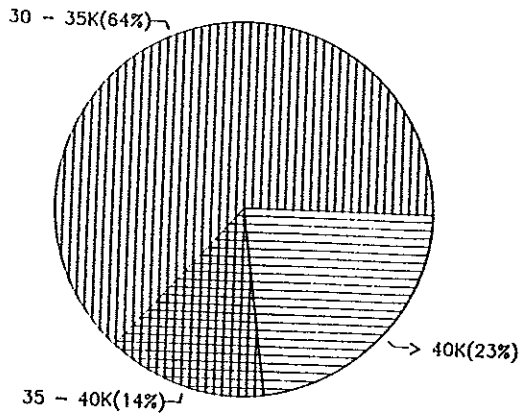


Figure 4 : Salary of Logging Supervisors

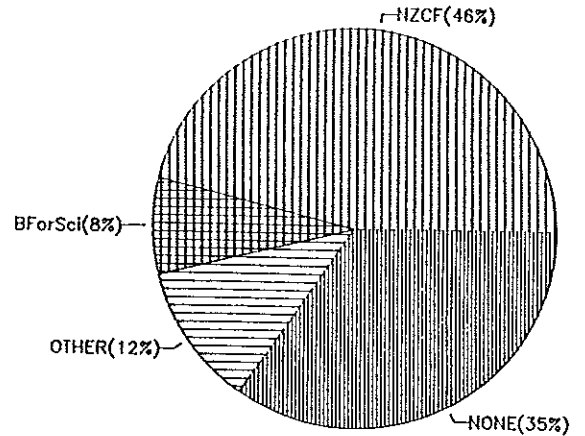


Figure 5 : Formal Qualifications of Logging Supervisors

a much smaller group (8%) having a forestry degree (Figure 5).

Almost a full day each week was spent by the supervisor checking safe work practices. The other main duty was noted as "communicating management instructions". The majority of the supervisors visited their crews either once a day or once every two days.

The final section of the questionnaire addressed the supervisors' satisfaction with six aspects of their job; the company, pay, promotion, the job itself, their supervisor and the people they worked with. The total possible score in each area is 24. As has been evident in similar tests applied to the logging workforce the most noticeable aspect was the high level of satisfaction

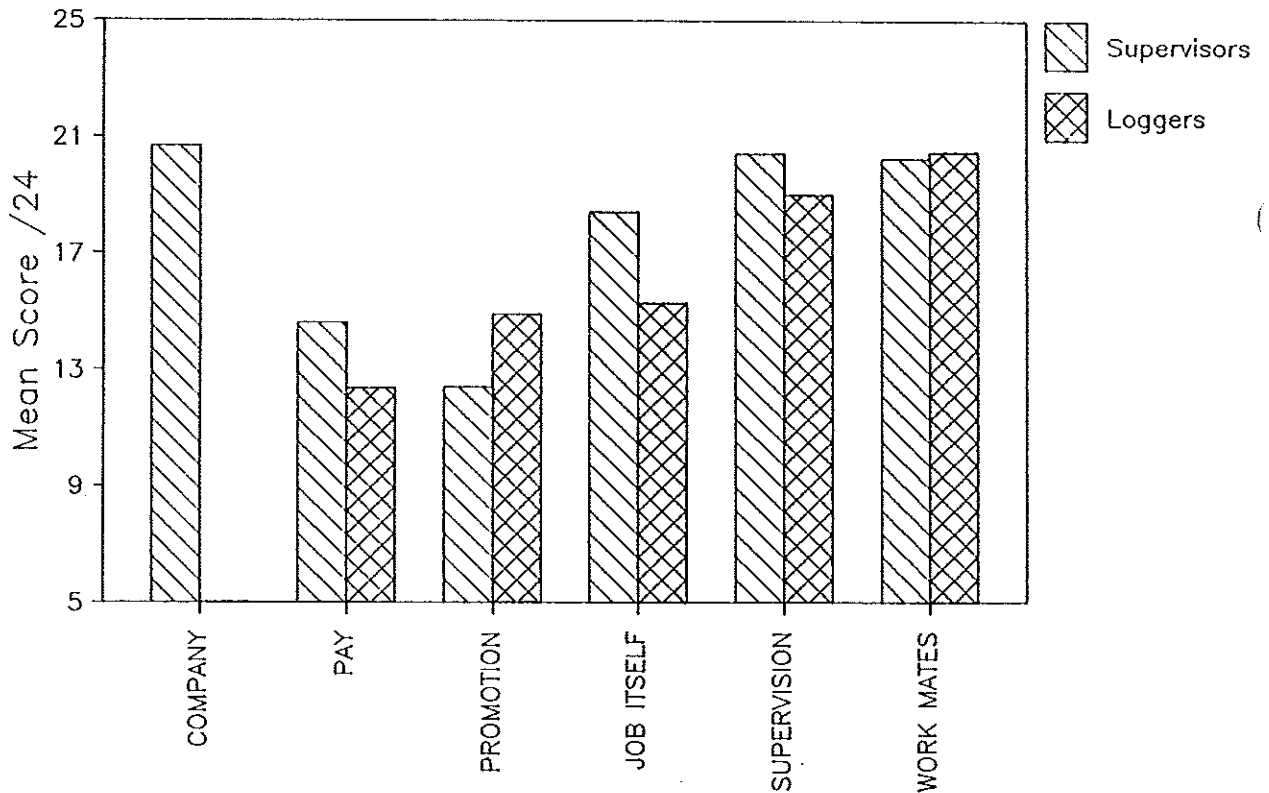


Figure 6 : Levels of Job Satisfaction of Logging Supervisors Compared With Loggers

Table 2 : Logging Management - Numbers Employed and Volume Harvested

Forest Area	Volume	Employed	Direct Supervision	Management and Admin
Northland	99 384	10.6	3.4	3.0
Auckland	411 100	90.0	8.0	6.0
Central NI	2 752 431	346.0	8.2	32.5
East Coast	51 844	32.0	1.5	5.0
Hawkes Bay	98 056	8.3	4.5	6.5
Southern NI	383 010	111.0	8.0	8.0
Nelson	355 000	77.0	3.0	15.6
Canterbury	228 300	33.0	3.0	11.4
Aorangi	54 200	13.8	1.5	3.0
Otago	224 500	47.0	6.0	10.7
Westland	9 650	12.9	4.1	6.8
Southland	102 200	18.0	2.0	5.0
Total	4 769 675		53.0	113.5

with the social aspects of their employment, that is, the company, supervisor and work mates (Figure 6). There was a reversal of the trends evident amongst the loggers relating to pay and promotional prospects. The lack of satisfaction with promotional prospects could be attributed to the substantial uncertainty surrounding the asset sale and the number of Forestry Corporation logging supervisors.

Due to the low response rate which resulted in a very limited sample size these results should be seen as indicative rather than absolute. A certain amount of caution must be stressed when attempting to apply any of these findings.

THE MANAGEMENT OVERHEAD OF LOGGING

The following analysis is based on data obtained through the asset sales documents published by the New Zealand Forestry Corporation. The data used included aspects from the sections relating to:

- Current Employment Levels (year ending 31.12.88)
- Current Production Levels (year ending 31.3.89)
- Area Completed (1988/89 year est)

In some instances log sales are of the stumpage type so the number of contract logging workers may be artificially low.

The data from the twelve forest area classifications are presented in Table 2.

For the purpose of subsequent analysis the Central North Island and Westland forest areas were excluded from the data set due to their atypical nature. No relationship was found to exist between volume harvested and direct supervision and volume harvested and the management and administrative overhead. Figure 7 and 8 represent these graphically with the forest area indicated.

If the two "outliers" in Figure 8 are removed then there does appear to be a relationship between Volume and Management and Administrative overhead. Interestingly, while both of the removed cases, Auckland and Southern North Island, have lower numbers associated with Management and Administration, they have the highest number of direct supervision.

CONCLUSION

The profile of the logging supervisor established by the postal survey showed the relative young average age of the group and a

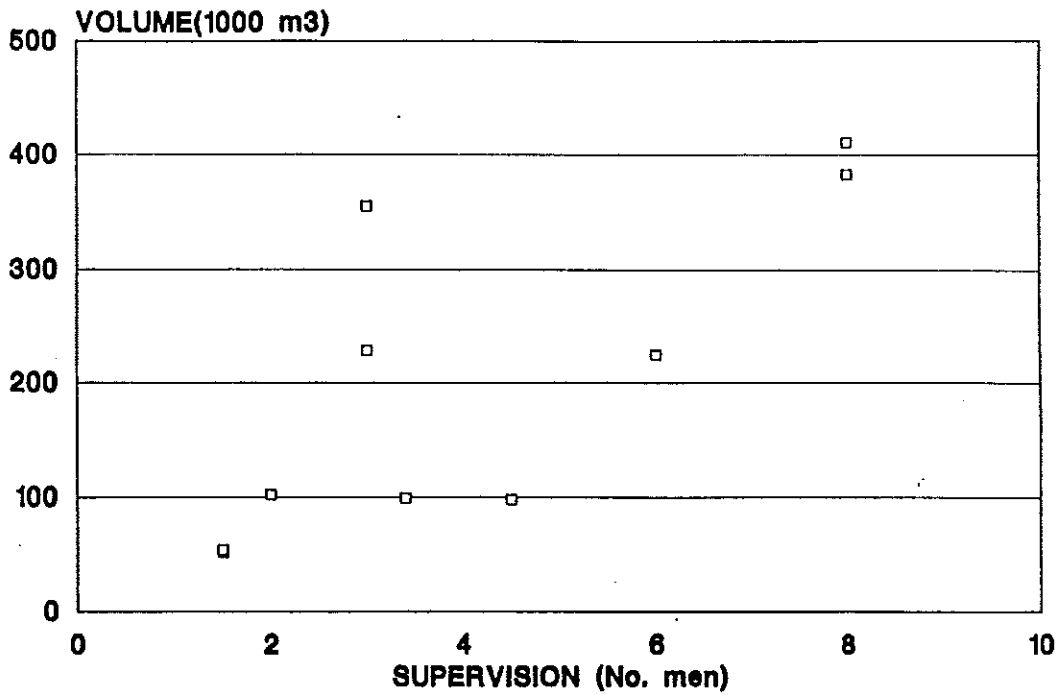


Figure 7 : Direct Supervision Versus Volume Harvested (Bay of Plenty and Westland excluded)
(Source - NZ Forestry Corporation)

reasonably high representation of maori when compared to the New Zealand population. Interestingly, the supervision illustrated similar levels of job satisfaction

to the workers they supervise. The satisfaction with promotion was quite low which is seen as reflecting the uncertainty in the industry.

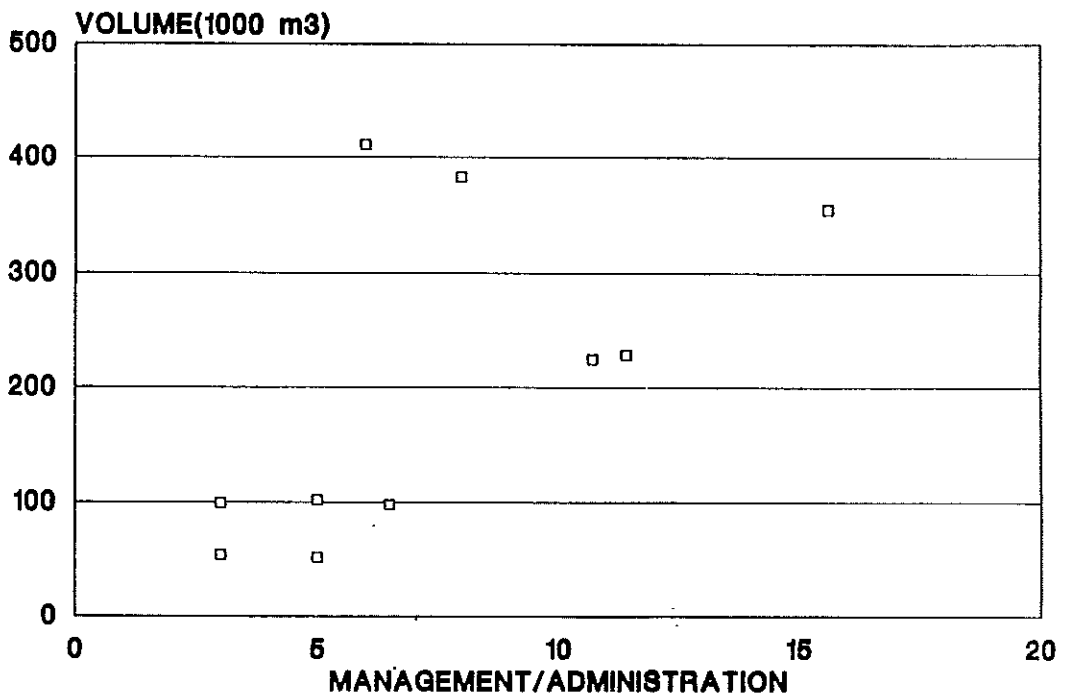


Figure 8 : Management and Administration of Logging Against Volume Harvesting (Bay of Plenty and Westland excluded) (Source - NZ Forestry Corporation)

In reviewing the relationship between direct supervision and volume harvested for one company, no association was found to exist. However there was a relationship between the management and administrative function and volume harvesting. No information was available with respect to the cost of either direct supervision and management and administration.

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