LOGGING INDUSTRY RESEARCH ASSOCIATION
NEW ZEALAND

REPORT

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INDUSTRY INTERFIRM COMPARISONS (IFC)

This report summarises the results of the interfirm comparisons that LIRA promoted in 1976 and 1977 for logging and log transport businesses. The IFCs provided a useful service to the individual firms who participated and gave indicative figures on the financial health of the industry as a whole.

THE OBJECTIVE OF THESE IFCs WERE:

- To enable participating firms or contractors to assess their financial performance, on a confidential basis, in a number of areas compared to the rest of their industry, and to indicate to the participants where action could be taken to improve their performance.
- To look at the overall financial performance of the logging industry as one in which one might invest money or effort.

On a ratio basis, operations as diverse as indigenous logging, and exotic clearfelling and thinning could be compared. An important principle to establish was that the ratio of profit to investment rather than cost to volume of production was the prime indicator for financial success. The IFC simply measured - "if you invest $100, what happens to it? What return do you get from it?"

WHAT DID THE IFC'S PROVIDE?

The Industry Reports indicated national standards of performance in the logging industry in financial terms. The Individual Reports enabled each participant firm to assess its performance compared to the standards indicated for financially weak, median or strong firms. The firms were also able to assess their financial performances according to a series of ratios important to any business.

The participant's Individual Report analysed areas of financial strength and weakness in his business and thus isolated areas where inefficiency was indicated and where improvements could be made to profitability.

Those participants who took the opportunity to discuss confidentially results with the officers of the Productivity Centre who had sponsored the IFCs, gained considerable benefits in financial understanding of their businesses.

The Industry Reports summarised the position of firms based on financial criteria.

THE FINANCIAL STATUS OF LOGGING.

Logging is a highly capital intensive industry. Thus the "Rate of Return on Assets" invested in production machinery can be taken as a prime indicator of profitability.

The "rates of return" varied widely in the three IFC's carried out but could be summarised as follows:

RATES OF RETURN ON ASSETS

	The worst 25% of firms earned less than	*The middle firm earned*	*The best 25% of firms earned more than*
1976 Logging IFC	0.00%	10.52%	27.51%
1977 Logging IFC	-6.23%	16.13%	35.16%
1977 Log Transport IFC	2.67%	6.65%	10.51%

The results indicated that a number of firms were showing such poor returns that, if assets could be sold at the value estimated by participants, they would get better returns by selling and investing in low risk debentures.

LOGGING IFC'S (1977).

Costs measured against income, rather than per unit of volume, are an important measure of business viability. Cost per $100 of income for the middle firm in 1977 was $84 and the two major elements of these costs were direct labour costs at $37 and heavy machinery plant operating costs at $31.5. No other cost element exceeded $5 per $100 of income. *(See Figure 1.)*

A high level of income in logging businesses is committed to finance payments = 13.22%. The debt-equity ratio is also high at 39.25%, and for a number of businesses the ratio was greater than 50%.

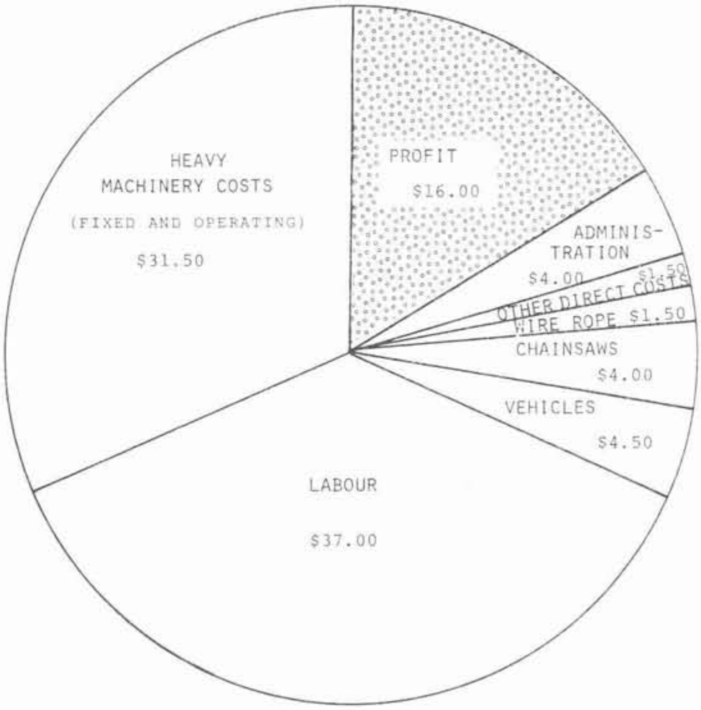

FIG.1 Costs per $100 of income - Middle Logging Firm 1977.

From the 1977 IFC one interesting conclusion which confirmed the 1976 findings, was that single gang operations were generally more profitable than multiple gangs. The fact that single gang operations required smaller investment in plant in relation to income generated was obviously important but the results could also be interpreted as indicating that management was much more effective when the contractor was "on the job". It was noted, for instance, that employee turnover in multiple gangs was twice as high as that of single gangs. Some of the ratios that indicated comparative effectiveness were:

	Single Gang	Multiple Gang
Production per employee	4611 tonnes	3306 tonnes
Operating profit per 100 tonnes	$ 51.85	$ 3.69
Machine costs per 100 tonnes	$105.12	$213.98
Income per 100 tonnes	$439.74	$570.18

The most interesting point in the above shows that the single gangs ran at lower costs per tonne, and achieved much greater operating profit, even though their income per tonne (contract price) was lower. These factors probably also influenced the fact that thinning generally gave better returns on assets than clearfelling. However, it should be noted that single gangs or thinning operations were not always more profitable as some of them showed a negative return on assets.

LOG TRANSPORTERS IFC (1977).

The log transport sector is even more capital intensive than logging, and the rate of return on assets for the middle firm in this IFC was 6.65%; even lower than the logging contractors' rate of return. This indicated that many firms are running unprofitable or marginally profitable businesses, particularly when the risk is taken into account. Fleet owners showed slightly better returns and the rate of return in the North Island was higher than in the South.

The analysis of the costs per $100 of income showed, for the middle firm, costs to be $89 per $100 of income. After labour, the most significant expense is depreciation, followed by repairs and maintenance, or fuel and oils. *(See Figure 2.)*

It was notable in the trucking comparison that for the median firm labour turnover was nil, finance payments were markedly less than that in logging at 1.34% of income, and the debt-equity ratio was lower at 23.86% of income.

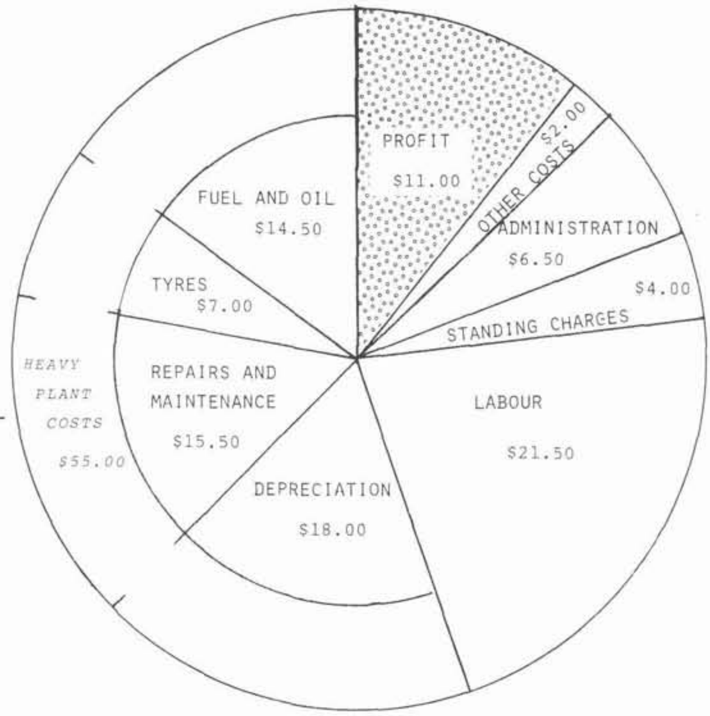

FIG.2 Costs per $100 of Income - Middle Log Transporter Firm 1977.

WHAT WERE THE LIMITATIONS OF THESE LOGGING INDUSTRY IFC's?

In all three IFC's the number of participants was low and there must be reservations about the validity of industry-wide conclusions based on data from a small, self-selected sample. It is believed, however, that these firms were reasonably representative of those in the industry.

Because of the low numbers, sub-division of participants into the number of special interest groups anticipated (e.g. in transport, owner operators had to be grouped with Forest/Mill owners), could not be considered. Also, the figures from the Industry reports, some of *which are reproduced here, have no validity for negotiating contract costs as they do not take into account the specific conditions that affect any one contract. (A participant, of course, can use his individual results to support his own negotiating position.)*

Calculation of the value of Fixed Assets (e.g. heavy mobile machinery) was standardised for the purpose of the IFC and was thus based on the participant's best estimate of current trade value for his owned assets (i.e. the money he could realise if he sold). Unrealistic value estimates would affect individual results, but it is assumed that overall the industry figures provided are reasonable.

CONCLUSIONS:

The interfirm comparison provides a simple effective yardstick for examining business efficiency. Those who participated considered that they:

- *gained a better understanding of costing and became more aware of areas for improvement.*
- *were able to compare results with other firms which have a good indication of their strengths and weaknesses in a variety of ratios in their business.*

The IFC also outlined the use of ratios and established that the vital ratio was $\frac{\text{Operating Profit}}{\text{Assets}}$. It also showed how other ratios such as:-

$$\frac{\text{Profit}}{\text{Income}} \quad \text{or} \quad \frac{\text{R. \& M.}}{\text{Income}} \quad \text{or} \quad \frac{\text{Profit}}{\text{Tonne/Kilometre}} \quad \text{or} \quad \frac{\text{Profit}}{\text{Employee}}$$

could be used in business analysis. LIRA is taking the lessons learned from these to outline a ratio analysis procedure for the logging industry.

Unfortunately the IFC's were not as well supported as hoped. Some of the reasons apparently were:

1. Many operators simply did not have good enough figures to participate.
2. Some had difficulty grasping the concept that you can compare a wide variety of operations on a purely financial basis.
3. There was some reluctance to participate because of the fear that somehow their figures might be used against them. There may have been limited confidence in confidentiality and impartiality.
4. The Productivity Centre reported that the general downturn in N.Z. industry profitability at the time affected participation in all IFC's carried out in 1977.

LIRA has thus decided to drop the IFC's temporarily and instead aim at improving the recording of financial data in the industry through producing a costing handbook, and promoting the concept of the use of ratios. It might then be possible to re-introduce IFC's in consultation with both the N.Z. Loggers' Association and the N.Z.Road Transport Association.

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