



## AN INTERFIRM COMPARISON (IFC) OF LOGGING FIRMS

### AN IFC PINPOINTS Profitability

*Anyone who enters business (contracting or otherwise) does so primarily to earn money. An IFC is aimed at indicating how successful or otherwise firms are in meeting this financial target, - TO MAKE MONEY. An IFC should also pinpoint areas for improvement. This IFC examined financial aspects of logging business, not operational aspects. Thus it is valid to compare all types of logging businesses on financial terms, even though their operational conditions may vary widely.*

*The most significant finding from the LIRA sponsored IFC of 38 participant logging firms, in 1976, was that profitability was highly dependent on effective employment of heavy capital equipment. Highly capitalised firms were the most gravely affected by inflation, and, if this could not be offset by increased production they tended to be less profitable than less capitalised operations.*

### What is an IFC ?

The Productivity Centre of the Department of Trade and Industry promotes and subsidises IFC as a method of improving efficiency in industry.

LIRA considered an IFC in the logging industry with the objective of assessing performances, particularly of contractors, in relation to overall profitability, cost structure, and productivity, would have significant value. The aim was to compare key data for similar firms in the industry on an anonymous basis. Managers or contractors, without disclosing confidential information to competitors, could therefore compare their performance with those actually being achieved by other similar organisations. An IFC has additional value in monitoring the financial health of the industry and identifying areas for closer investigation.

To launch the project, LIRA invited all known North Island logging operators to a meeting in Rotorua. This meeting agreed that an IFC would be worthwhile and moved to set up a steering committee to get it underway. A further meeting was held at a later date in Christchurch, to which all known South Island logging operators were invited. The Steering Committee\*, composed of contractors and others whose expertise was relevant, decided the most important performance indicators for comparison in a logging business and assisted in the preparation of the questionnaire. They decided the policy regarding participation by various sized units and the sub-division of firms into comparable groupings. They also appointed the Department of Management Studies of the University of Waikato as consultants to carry out the IFC.

Confidentiality of the survey was maintained by using LIRA's office as a coding centre. Participants sent the completed questionnaires direct to Waikato identified by code number only, and thus the consultants were the only people who saw the completed documents. The results were sent back to the participants through LIRA who substituted addresses for the code numbers on the sealed envelopes.

\* Members of the Steering Committee were:- P.Bell, B.Cochrane, P.O'Sullivan, contractors of Taupo; L.Gilsenan, contractor of Rangiora; T.Kajavala, contractor of Whakatane; P.Brown, accountant of Taupo; G.Chapman, accountant of Tokoroa; J.Davies, finance company executive of Rotorua; M.Jamieson, Productivity Centre, Wellington; L.Wilson, consultant of Taupo; and, J.Spiers of LIRA.

Although over 350 questionnaires were distributed to all known logging firms in the country, it is believed that only approximately 250 are currently active. Thus, although the 38 firms who agreed to participate were a fairly representative group, there must be some reservation about the validity of conclusions from the report applied to the industry as a whole. The 38 firms participating, classified by type of operation, by size, and by locations were:

## Response

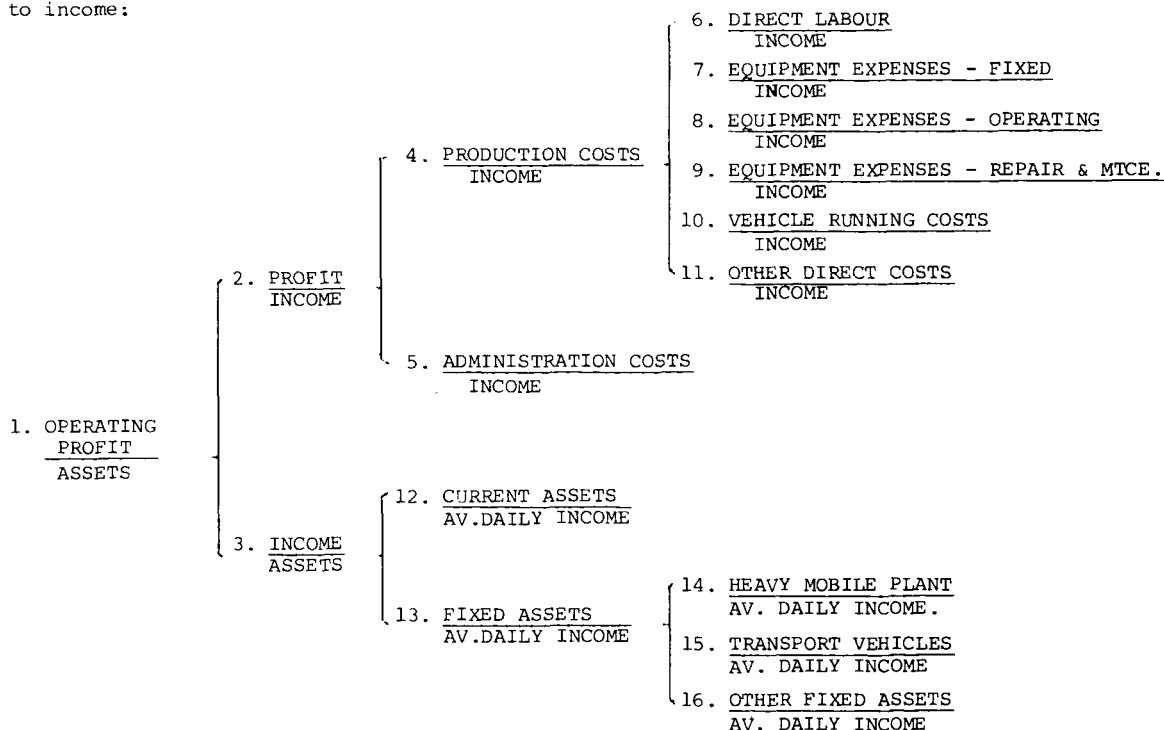
to

## Survey:

|                                      |                      |                      |
|--------------------------------------|----------------------|----------------------|
| (a) Classified by type of operation: |                      | No. of participants: |
| 100% Exotic Clearfelling             |                      | 23                   |
| 100% Exotic Thinning                 |                      | 10                   |
| 100% Indigenous                      |                      | 1                    |
| Mixed production                     |                      | <u>4</u>             |
|                                      |                      | <u>38</u>            |
| (b) Classified by size:              |                      |                      |
| Single gang                          | - contractors        | 24                   |
|                                      | - forest/mill owners | 3                    |
| Multiple gang                        | - contractors        | 9                    |
|                                      | - forest/mill owners | <u>2</u>             |
|                                      |                      | <u>38</u>            |
| (c) Classified by location:          |                      |                      |
| North Island                         |                      | 24                   |
| South Island                         |                      | <u>14</u>            |
|                                      |                      | <u>38</u>            |

### INDICES (RATIOS) USED:

The ratio tree below indicates how profitability, or the "rate of return" measured as the ratio of profit is broken down into significant cost, production, and asset elements related to income:



A further fifteen ratios to compare performance by labour, production, and finance, were selected.

## COMPLETED RESULTS DISTRIBUTED IN TWO PARTS TO IFC PARTICIPANTS:

The first part was an "individual report" and commentary to each participant, indicating his performance in each of the ratios, relative to all the others in the IFC. This analysed separately, the performance as a group, and then contractors and firms combined.

The second part, the "industry report" analysed industry performance in the categories selected by the Steering Committee. It compared and commented on performance by type, size, and location for each of the 31 ratios.

## PROFITABILITY = THE RETURN ON ASSETS EMPLOYED:

Operating profit over total assets is the primary ratio for any business. The calculation of assets value poses problems in the logging industry where a very high proportion is heavy mobile plant with short life, particularly given the current rapidly escalating costs of new plant. The basic aim of the IFC was to compare the performance of each contractor against the relevant group so that he had a practical yard-stick on which to assess operating performances. Thus, to achieve uniformity in measurement, historical valuations of assets based on purchase prices could not be used. The steering committee agreed that current trade-in value of each unit would be used in asset value for the purpose of the IFC and that this value and current new prices would be used in calculating depreciation. *Thus the measurement of operating profit and assets used in the IFC is not the same as that used in most firms accounting records and the use of this asset figure markedly influences the results.*

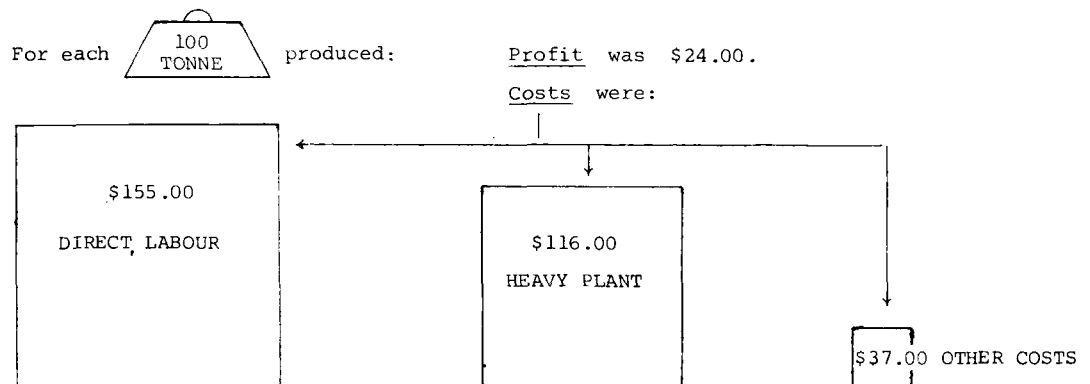
THE IFC RESULTS INDICATED THAT if the "risk" in logging enterprises is taken into account, the rate of return on assets for logging businesses as calculated from the participants figures, compared poorly with the market rate of interest for long term debentures. Even though the valuation of their assets set by participants may be erroneous in some cases, the indications are that for most contractors, an improvement in returns is required, if replacement of assets is to be justified in the economic terms applicable to most businesses.

## PROFIT = RATE OF RETURN

The rate of return on assets for the middle firm in each category was:-

|                     | <u>Middle Firms %</u> |
|---------------------|-----------------------|
| All participants    | 10.52                 |
| Exotic Clearfelling | 10.52                 |
| Exotic Thinning     | 24.10                 |
| Mixed & Indigenous  | -5.31                 |
| Single Gang         | 10.81                 |
| Multiple Gang       | 9.81                  |
| North Island        | 9.94                  |
| South Island        | 10.53                 |

THIS IS HOW THE MIDDLE FIRMS PERFORMED:



(N.B. The above table is only indicative as the middle firm in each ratio calculated was not necessarily the same firm.)

## DISCUSSION:

Some conclusions can be drawn from the IFC:

1. Surprisingly, thinning operations gave better results than the majority of firms in the other categories. This could be related to their lower capital investment.
2. Single crew operations fared better than multiple crew and undoubtedly lower capital involvement and better on the job supervision contributed to this.
3. Although the mid-firm South Island operators performed better than the North, the South Island had a wider range of performance and a larger proportion making negative returns on assets. The results from the small mixed and indigenous group indicated that costs exceeded sales income.
4. The most effective use of assets is achieved by single gangs and thinning contractors who tend to have a higher net income for assets employed. The worse 25% of clear-felling operators take over one year to turn over their assets (i.e. point where income exceeds assets value).
5. The results indicate that those contractors with heavy investment in plant do relatively poorly and will have greater difficulty in financing the replacement of assets. This result may reflect the fact that in this survey depreciation was based on current value whereas in the setting of some contract prices, depreciation might be based on historical cost of assets. It is considered that some measure of current value is essential in order to arrive at a more realistic concept of economic income.  
*"Some employing firms allow depreciation on historical costs and undertake to re-calculate contract prices when an approved replacement of equipment is effected. This may have validity where long term contracting is assured, but it is of little solace to the pure entrepreneur contractor who wishes to remain in business as a long term logging contractor."*
6. A high percentage of income (14.63%) is committed to finance payments. Multiple gang contractors in particular, appear to have high levels of finance payments and external debts. For the worst 25% of contractors in all groups, the owners interest is less than 50% of the current trade value

## Future IFC's:

This IFC compared 38 logging firms indicating to each where improvements might be made. This report is a brief summary of the complete results which are only available to participating firms. Follow up meetings of participants recommended that the IFC be repeated in 1977 to give a wide range of logging firms an opportunity to participate and to monitor trends. It is thus intended by LIRA to again circulate industry and to hold meetings aimed at repeating this valuable exercise. It is proposed to discuss IFC's in Logging and in Log Transportation in the course of seminar sessions on "THE BUSINESS OF LOGGING", to be held at: Rotorua on 15/16 April; Richmond on 27/28 April; and Christchurch on 29/30 April. Anyone wishing for further information on this should contact LIRA direct.

FOR FURTHER INFORMATION CONTACT: **N.Z. LOGGING INDUSTRY RESEARCH ASSOC. INC.**

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