

THE ECONOMIC PROBLEM - A WOOD BUYERS PERSPECTIVE

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The business of processing logs into saleable products is no different to any other commercial business philosophy, that is to make a profit (usually a predetermined profit) under conditions of fair trading. Over the long run the only businesses which survive are those that serve the needs of society effectively and efficiently. That is, they provide the goods and services required by society at a price at least sufficient to cover the costs of producing them and to induce demand at the necessary level.

The conversion of logs into sawn timber and other products has not been a financial bonanza for those organisations engaged in our forestry based industry. This has probably always been the case and it continues to be so today. In the past the industry, like the building industry upon which it depends for it's momentum, has been subject to endless cycles of boom and bust as successive governments here and abroad manipulate building activity for political and fiscal reasons.

Two years ago I remarked at LIRA's seminar then, "that costs were already a matter of considerable concern to the industry. Continuing research and effort into reducing costs of growing, harvesting, processing and transportation, are vital to ensure the continued success of our industry and to enable it's products to remain competitive in international markets". Rising production costs cannot always be recovered in the selling price, especially where the sale of that product is subject to competitive market forces; and futhermore international markets do not have uniform degrees of competitive influences.

In short, standing trees derive their commercial value solely from the ability to convert them profitably into saleable products. Obviously there is a ceiling mill door price which the wood buyer cannot afford to exceed - at least in an average sense. Higher quality logs will wear higher prices because of the higher value out turn. Some of the resource may attract a higher than average price just to ensure it comes on stream when required by the plant. However, "marginal" pricing such as this can only be afforded if a corresponding part of the total supply is at a lower than average cost.

The value per cubic metre of wood varies markedly within the tree, as well as between trees, dependent on it's age, size, defects and position in the tree.

Processing industries are certainly interested in logging

activities and any influences which may increase or reduce the cost of logging. The cost of wood to the mill represents the sum of stumpage (growing costs), logging and transport costs.

To remind ourselves where the really high costs of producing wood from plantations occur, I have attached a graph from Fentons 1972 paper on the economies of growing Radiata pine on a direct sawlog regime. Assuming that the same relativity applies today, it emphasises how logging, transport, and sawmilling costs dominate the costs of producing green sawn timber. Harvesting costs are influenced by tree size, number of stems, extracted piece size, and recoverable volume per hectare. The difference between these younger crop stands and the old crop will certainly affect costs markedly if for no other reasons than :

- (a) Increased logging cost due to smaller tree size.
- (b) Roading and tracking costs in younger stands would increase because of the reduced yield per hectare.

The attitude generally throughout the industry has been to maximise throughput at the least possible cost, rather than to sort for value. Before you can do this however you must know with certainty that the value is there in the log for the purpose for which it is to be used.

Greater emphasis should be made on "maximum value recovery" rather than "minimum wood cost". Some elements necessary to achieve this objective at harvest time are :

- A pre-harvest inventory of recoverable volume by log types to establish exactly what the stand contains.
- Matching the forest potential to market demands and product values.
- Selection of the best log mix to maximise returns.
- Clear precise instructions to the logging gang about the log making strategy they are to adopt.
- Adequate incentives so that the logging gang benefits from applying the desired cutting strategy.
- Adoption of felling techniques that will minimise stem breakage.
- A value audit of the logs produced to ensure instructions are understood and mistakes minimised.

An earlier investigation indicated that up to 25% of the potential value of a mature stand could be lost through making an inappropriate cutting strategy. I suggest that the loss could now be significantly higher. This highlights the need for a rigorous examination of log segregation and allocation opportunities.

Not only is it the responsibility of the wood buyer, but also of the forest owner to establish the values his crops possess, to define log types or log grades that operators can readily recognise, and to institute systems and incentives that ensure the stands are harvested, segregated, and allocated to best advantage. Forest owners have not found it necessary to do much in this line before, but as values for different parts of tended trees widen and are allocated for different products, it will become an increasingly important aspect of their management.

The greater the degree of produce separation and associated value added log making cutting schedules the more able limited scale logging crews are to extend their otherwise available productive time.

Henderson & Pollard have five harvesting gangs working within their various forests (one solely on thinning, one part time on clear felling and three on clear felling or thinning); all described I guess as in the "limited scale logging" category. All crews are equipped to various degrees to undertake roading and in some instances site preparation works for establishment or re-establishment. During the harvesting operations varying log qualities are matched to optimise value recovery relative to market demand. Wherever the stand permits the following is a typical cutting strategy -

<u>No. of Classes</u>	<u>Roundwood Class</u>
3	Peeler logs
1	Slicing logs
2	Sawlogs
possibly 1	Short length specialised low grade recovery
possibly 1	Chipwood
2	Poles of various dimensions
1	Smallwood for special purpose sawing at a scragg mill
1	Small diameter roundwood for horticultural and agricultural use
possibly 1	Batten wood
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In any operation the minimum number of roundwood classes requiring segregation is usually seven having three to four different production costs.

I believe that any successful limited scale logging operator must have the following options :

- Producing the wood requirements of several independently owned plants necessary to provide full employment.



*"Clear precise instructions to the logging gang  
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(LIRA Photo CN281/28)

- Supplying the one organisation who has the ability to sell a wide range of specialised product types.
- To aggregate nearby woodlots so that positioning costs are minimised on a cubic metre of wood basis.
- To have logging equipment that can be deployed on other works and labour who can also undertake other silvicultural operations.

Organisations must also examine the options available for increasing the total productivity of their limited scale logging operators. This engenders co-operation and goodwill from both parties to the ultimate benefit of both. The greater the flexibility and range of opportunities, the greater the rewards.

Although the marked change in log size and type will increase wood costs and may cause some disruptions to established plants, the industry is sufficiently vigorous and diversified to meet the challenges posed by the changing nature of the raw material.

The processing industries interest goes beyond just paying for logging operations. Despite the N.Z.F.S. policy of introducing log sales (where the logging activities lie within the control of the forest owner), for most sales of the privately owned resource control of logging operations is more likely to be with the wood buyer. He may employ contract crews or company crews in this role. There is certainly an incentive to keep logging costs under control.

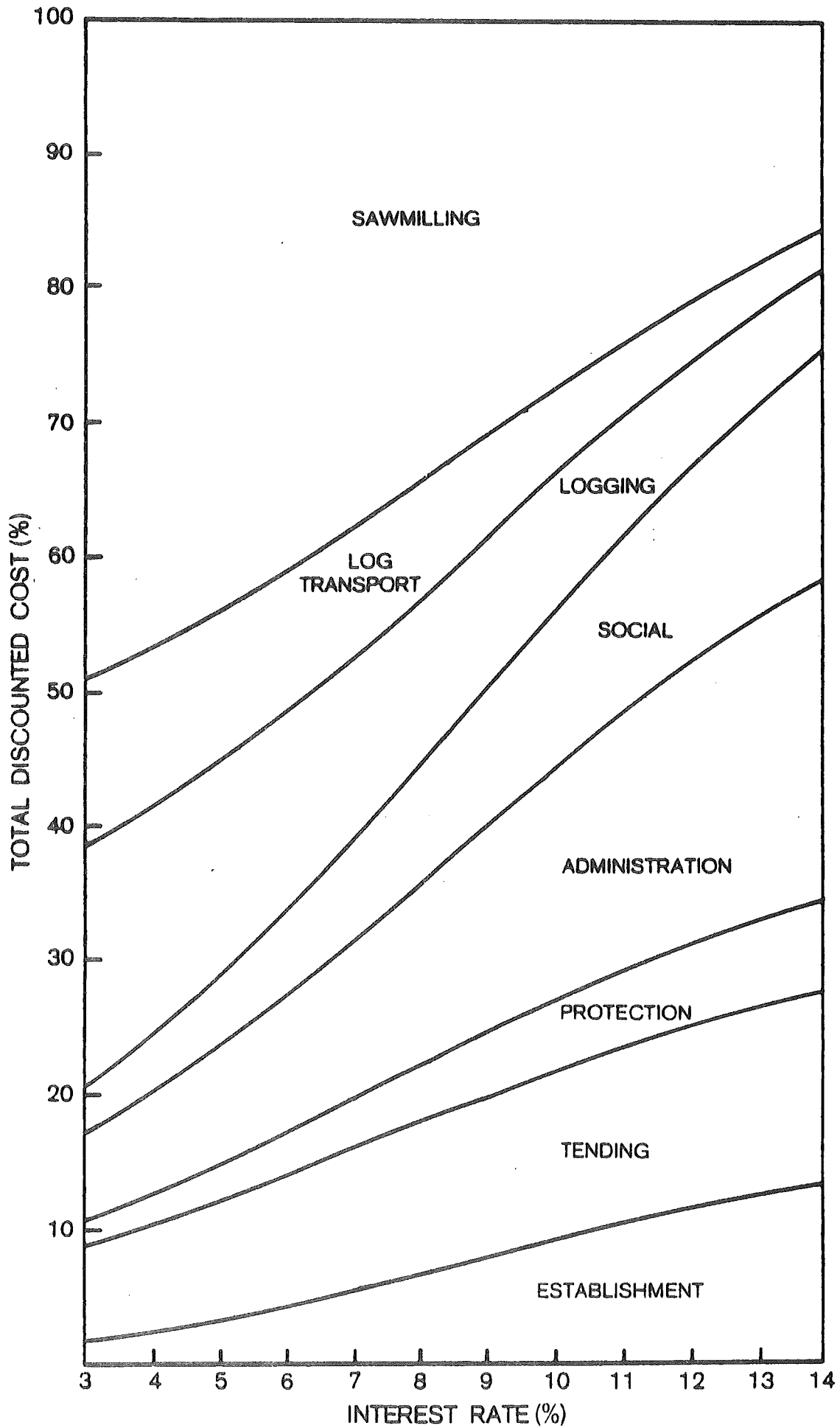
The processing industries increasing recognition of the loggers situations indicates that a higher level of co-operation may arise. Henderson & Pollard, for instance, follows a policy of :

- Encouraging long term contractors: that is continuity of work subject to satisfactory performance, as well as their acceptance of our price calculation and review policy.
- The company takes a role in machinery and system trials.

Furthermore, it is not uncommon for some mills to provide financial backing to contractors acquiring new plant. Such measures may be especially important to the contractor working in the limited scale resource, whose security of continuous work is limited.

The effect of high logging costs or cartage costs on what the mill can afford to pay as stumpage to the smaller private grower will become more critical as the costs of state logs increase. In some parts of New Zealand at least the private growers currently enjoy a sellers market because of the present log supply shortfall. With the forecast dramatic expansion in wood supply, the situation may reverse with a buyers market until processing capacity (and export markets) match supply. With the turn around the private grower whose resource is costly to log may find no interested buyer.

# RELATIVE IMPORTANCE OF FOREST AND UTILISATION COSTS



from Fenton (1972a)

Finally, as I have said earlier standing trees derive their commercial value solely from the ability to convert them profitably into saleable products. To a processor, two logs of identical quality landed at his plant have an identical value, irrespective of where they came from; any difference in harvesting and transport costs being reflected in stumpage value. Therefore the location of the resource relative to the processing plant is of vital concern to the grower.

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