

PRODUCTIVITY CHANGES IN THE LOGGING WORKFORCE

John Schrider
Productivity Management Consultant
FORME CONSULTING SERVICES LTD.

INTRODUCTION

The task in this paper is to address the theory that the real advances in productivity are to be made in improvements to manpower organisation/deployment rather than our obsession with trying to tweak another 5% out of the extraction machine.

To me there is nothing wrong with trying to improve the performance of machinery and we must continue to do this. What we need to question however is how we actually go about doing it. Currently we emphasis the machine e.g. because one machine is technically superior to another we assume it is best when in fact we all know its performance is very much dependent on its operator and how it is used in the system. What we should be doing is asking the question, "How can we educate the operator to utilise better the tools with which he/she is working" ????

My contention is that if we are talking about labour productivity improvements we are trying to achieve two fundamental objectives.

1. Improve the productivity of time.
2. Improve the productivity of knowledge.

LABOUR PRODUCTIVITY

What is it ?

That word, PRODUCTIVITY, is one of the most maligned, misunderstood words in the English language today. Unfortunately, to many it still means

methods by which management gets more out of the worker without paying for it.

To others including logging industry researchers it means "production" i.e., by altering a method we have managed to produce another 20 tonne a day. The outcome is heralded as an increase in productivity not production as it should be.

It is no exaggeration to say that, in the long run, almost nothing counts for the determination of a nation's standard of living but its rate of productivity growth.

What do I mean when I talk about productivity ?

To demonstrate I will use a few examples :

1. In 1929 in the paper industry in the USA \$1 of investment in papermaking produced \$3 worth of paper production per year. Capital was turned over productively about 3 times per year. By 1980 the productivity of capital in the paper industry had fallen to where it then took \$3 of capital investment to produce \$1 worth of saleable paper per year - 1/9 the productivity of capital 50 years ago. Now, in that same time employment per tonne of paper production reduced to 2/5 of the level in 1929. In other words, while there had been a very sharp increase in the productivity of labour as a result of large scale mechanisation it has not been nearly as great as the decrease in the productivity of capital. The trade off has not worked, total productivity in this example has declined.

2. Bryce Heard in his paper "Where to With Education and Training" presented at FI 1990 stated that there had been a 65% improvement in labour productivity i.e., m3 produced per man per hour.

I don't know over what time period this result was achieved as I have'nt seen the visuals which accompanied his talk.

I have no problems with these figures - what I question is - Was that improvement entirely attributable to better performance from the labour component or was part of it brought about by the use of more sophisticated powersaws, machines etc ?

On the other hand is it possible that improved results came about by using improved data capture techniques.

E.g., I doubt whether man hour records employed by NZFS 20 years ago could ever be used with confidence - analysis would reveal week after week, 1/2 hour travel, 7 1/2 hours work when in effect actual productive work rarely exceeded 6 hours.

Thirdly, are those figures representative of long term improvement or short term successes.

The reason I mention this is that an increasing number of companies have a tendency to view outputs and profits on a month to month or quarter to quarter basis.

This not only seriously distorts the true situation, afterall we are talking about 30 year cycles in our industry, but seriously hinders long term improvement by diverting attention to short term sporadic successes.

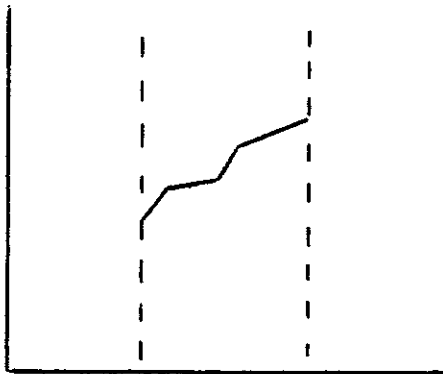
I don't know whether the forest industry is guilty of this but I do believe some of the Government decisions affecting the forest industry of the past 4-5 years and the impact of those decisions will prove to be short term.

I refer in particular to de-skilling in areas of research, industry training and withdrawal of incentives for long term investment and innovation in the industry.

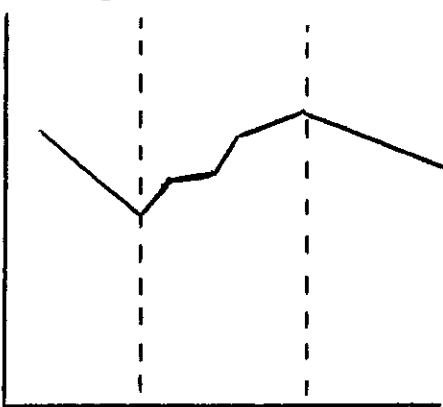
Beware of Illusion v. reality.

Of course, nothing could be further from the truth.

Illusion



Reality



3. A decision to purchase a feller buncher and reduce manpowering by two will certainly lead to an improvement in labour productivity. If however the cost of the feller buncher is \$350/day but we save only \$300/day in wages without any improvement in daily production we have a nett decline in total productivity.

If, at the same time we coincidentally receive an increase in our price which exceeds the \$50 difference in our feller buncher v. manpower costs, our immediate reaction is that we must be doing better.

MISCONCEPTIONS

If we are setting out to improve productivity we must know precisely what it is we are talking about. We must correct the common misconceptions about productivity, i.e.,

Misconception 1

Productivity is the same as profitability. It is not - there are two key differences. Profitability is about revenue in money terms. Hence profitability can increase without a productivity gain simply by an increase in the profit margin on the price a good or service is sold for.

Second, high productivity does not necessarily imply high profitability since that depends on the prices of inputs and outputs.

Misconception 2

Short term gains mean overall long term improvement. Not necessarily so - short run productivity gains may have detrimental effects in the longer run. E.g., reductions of expenditure on R & D (which may reduce the availability of better technology to the firm in the future), and lay-offs of skilled staff.

Misconception 3

Gains in labour productivity mean gains in overall productivity. Very seldom the case - it is used because it is easy to define - it is a tangible physical input. In fact less tangible inputs may be equally important - the most obvious of these is information, around which a whole technology has now developed.

Misconception 4

Productivity is all about inputs and outputs. Not always - definitions of productivity can be wide ranging. They may include any or all of : the degree to which a firm's objectives are achieved; overall efficiency (i.e., how well resources are used to generate quality output which is in demand); effectiveness ("what is achieved compared with (what is possible)"); and "comparability" (how productivity changes over time).

I will use a definition of PRODUCTIVITY as follows :

an improvement in the ability of an enterprise's real inputs to create products or services of a specified quality

(Productivity and Quality in New Zealand Firms - NZIER 1989)

Now, compare this with a common definition of LABOUR PRODUCTIVITY:

a measure of total output divided by the amount of labour that was used to produce it - it is a measure of output per unit of labour employed

I believe it is fundamental to any improvement process that we first understand that "labour productivity" is at best only a partial measurement and provides a very limited indication of the performance improvement process.

IMPROVEMENT

How then can we move from our new found position of knowledge about what productivity really is, and to do something about it.

In my view we have absolutely no choice but to look to successful overseas companies and to emulate and adapt their strategies for our use.

Unfortunately, to those of you who believe Japanese, Swedish, German or Korean production methods and processes don't work, you need to think again.

To those of you who switch off when quality circles are mentioned and gleefully state "they have been tried and have failed" need to look, not at quality circles as a concept but to the methods by which they have been introduced and tried.

The answer to the reason for their failure is almost exclusively found in the implementation processes than in the concepts themselves.

We cannot beat these countries at their own game by doing it the New Zealand way anymore without at first catching up.

What then are some of the things we need to address to begin the long hard grind.

CULTURE

In NZ we place extreme emphasis on individualism and specialisation. The expectation is that everyone will make it on his or her own merits, independent of anyone else.

Take care of Number One.

Don't get lost in group or co-operative efforts if at all possible and certainly don't share with anyone else all that knowledge which has been accumulated over the years for you are in competition with everyone else for a place under the trees.

This ethic has mediated against teamwork and co-operation in dealing with problems and has made our industry a confederation of little kingdoms, segmented and fractioned.

In Japan people work together for the good of the group, they have a strong sense of obligation toward their organisation, their subordinates and peers and they pool effort and information to solve problems.

ORGANISATION OF WORK

Frederick W. Taylor's widely practiced "Scientific Management" says jobs and organisations may be engineered, with human and machine functions relegated to boxes.

Job descriptions, procedures, time and motion studies, and definitive manuals that state every last function and its relation to every other function have become essential tools of management.

These techniques I hasten to add have contributed to the dehumanisation of work, alienated workers and driven them into the arms of organised labour, as well as create an adversarial relationship between the manager and the people upon whom he or she depends.

RETURN ON INVESTMENT

Maximisation of profit in the short term has become the index by which organisations are judged.

This often compromises such things as training, quality and productivity improvement which are more important over the long haul.

The pursuit of immediate results allows for little compassion and people have far too often been simply judged as expendable.

BUSINESS COMPUTER

In this country, since the mid 70's, we have operated in an environment when the computer has ruled supreme. Everything has now been converted to numbers and printout reins supreme.

Managers of course spent more time with numerical reports than they did with the substance of the situation they were managing. People became digits and personal contact tended to be lost.

How then can we solve those problems which now exist because of some of the factors outlined above. We should look at some of the critical differences between our management philosophy and that of the Japanese :

1. We must involve more people in the problem solving process. In the USA between 10-12% of the people will be doing the thinking and problem solving for all the rest who are expected to do as directed. I suspect the situation is similar in NZ.

In Japan on the other hand around 60% of people are solving problems and working to make things better.

2. We must provide people with the resources to solve problems i.e., train them in problem solving techniques.

In Japan the average person coming into an organisation receives 500 days of training in the first 10 years - one day/week of both on - the - job and formal classroom study.

With the skills, we must give the authority and responsibility.

3. We must get an unshakeable, totally sincere commitment by the organisation to improve quality and productivity.

Most importantly this must be stated as the most important concern of management and will not be compromised.

4. The organisation must provide the opportunities for problems to be solved i.e., through scheduled and arranged get togethers preferably in work time.

5. The organisation must provide leadership in the use of problem solving techniques, i.e., support, counselling and coaching.

6. The organisation must provide reward for successful problem solving.

This need not be direct financial reward, it could be an audience to seriously consider and develop solutions. This provides recognition.

The value of a particular solution must be quantified to enable continued monitoring to establish the value of peoples contributions.

7. The organisation must assure long term continuation of its programme of quality and productivity improvement.

Where does this leave our logger ?

This is the tough part.

Extensive studies carried out by McKinsey in the USA indicates that fully 85% of the variables affecting productivity are internal to the organisation and lie within the control of management, while only 15% are external and beyond management control. Further studies suggest that 80% of these internal variables can be changed by executive and managerial actions, while 20% must be effected at the worker level.

This indicates one area for attention.

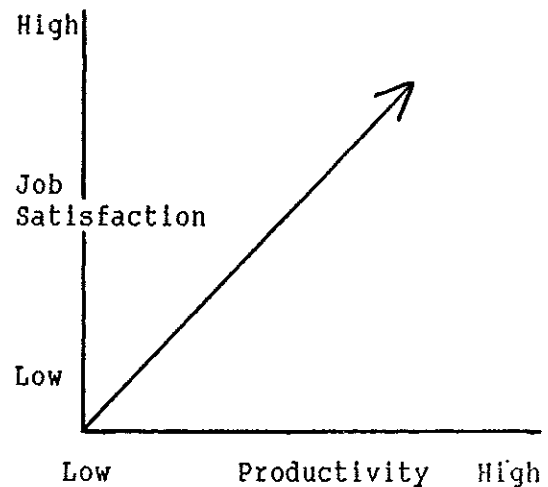
Secondly, if we analyse the role of the feller in the bush who fells, trims and cuts to length, and work our way through the production chain to the sawmiller who decides where to make the first cut, how many other people in the chain either affect or are affected by that feller's actions? If we put our minds to it we could identify almost everyone in that production chain who is affected either directly or indirectly and yet how often does that feller communicate with those people? Apart from being abused by the operator (also usually the contract owner) when he gets behind or drops a tree too close for comfort, quality communication about improvement would be very rare.

In LIRA Report Vol 13 No 3, entitled Job Satisfaction Among New Zealand Logging Workers, findings indicated that job dissatisfaction is linked to :

1. The physically demanding nature of the work.
2. A discrepancy between the pay received by loggers and the pay they feel they deserve.
3. The perception that promotional opportunities are limited and irregular.
4. The feeling that the supervision style does not allow for worker involvement in decision making.
5. Differences in the mutual interests of co-workers.

I believe those findings would be representative and until we address those things we will not make a lot of progress.

There is no question that productivity is directly linked to job satisfaction.



The logging workforce in this country has been well researched, and in my view we have identified many of the problems, what we now need to do is get people working on the solutions.

The success of those solutions are invariably linked to the organisational structures we currently have in the industry at the moment.

What are the solutions ?

My view is that we need to :

1. Increase our skill levels.
2. Provide for job rotation and flexible working.
3. Move towards a single pay system.
4. Get closer management involvement.

Overhaul organisational structure

You will note that each and everyone of these solutions is going to provide major and ongoing problems - for Managers.

CONCLUSION

To finish I would like to say a few words on what to me is the most important factor that MUST be present for any ongoing productivity improvement process. Everything else I have mentioned and in particular some of the suggested solutions WILL NOT be possible without it.

That factor is ATTITUDE.

In my view the predominant negative currently stifling productivity growth in our logging industry is THEM AND US attitudes. Involved as I am in the middle and often privy to views and opinions from both sides I do not believe we can make progress until we eliminate THEM AND US attitudes and cement an environment of common purpose.

To back up all I have said I would like to leave you with Pat O'Sullivan's views on some of the conditions necessary for good logging crews and presumably which lead to increased job satisfaction.

- " - people working in the situation they like best
- when working in pairs, compatibility with an off sider
- personal as well as work interest by the employer
- giving employees an insight into the business
- providing good equipment
- employer not being a skinflint with consumable stores."

(Address to 1988 NZLA annual meeting at Palmerston North)

We need to encourage these types of ATTITUDES in our Company /Contractor and Contractor /Employee relationships.

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