STUDIES IN MANAGEMENT AND ACCOUNTING FOR THE
FOREST PRODUCTS INDUSTRIES

COMPANY/EMPLOYEE GAINSHARING PROGRAMS

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ARTHUR YOUNG & COMPANY
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BACKGROUND
In a recent study sponsored by the Sentry Insurance Company and conducted by Louis Harris and Associates, executives, employees and union leaders were asked for their opinions regarding productivity. Some of the significant findings from that survey are described below.

- 50% of those surveyed believe that the best way to increase productivity is to give employees a share in productivity gains.
- 63% said they are willing to have their earnings linked to productivity.

The survey participants were also asked to rank the best means for increasing productivity. The rankings are set forth below for each group surveyed.

- **U.S. Executives**
  1. Better use of equipment and tools
  2. Productivity sharing—employees share in productivity gains.
  3. Better relations between union and management.
- **U.S. Employees**
  1. Productivity sharing—employees share in productivity gains.
  2. More and better information about decisions that affect their jobs.
  3. More respect and recognition from their supervisors.
- **Union Leaders**
  1. Better relations between union and management.
  2. Employees having better chances for recognition and promotion.
  3. More and better information about decisions that affect jobs.

In summarizing the study, the authors said that U.S. business leaders look to the free market economy and use of incentives to reverse the decline in productivity.

Another recent study indicated that corporate executives as well as labor union representatives were willing to consider the use of some sort of employee incentive plan or gainsharing plan in which compensation is tied to specific goals such as productivity improvement. In a related study, industrial engineers were asked to respond to the question: "Does your experience lead you to believe such a tie-in would result in a significant amount of productivity gain?" A clear majority (62%) of the people responding said yes, but when asked if their organization had installed a gainsharing plan, only a few responded positively.

In a telephone survey of 13 forest product industry companies, we asked about their use of employee incentive programs. Only three of those polled used this approach. Many had management incentive programs, some extending to the supervisor level, but few have extended coverage to hourly employees.

However, a number of forest product companies are about to start gainsharing programs or are determining the feasibility of such approaches. These include companies producing paper and pulp products, plywood, veneer, logs, doors and door parts, etc.

Companies in related industries such as furniture manufacturing have also successfully implemented gainsharing programs.

WHAT IS GAINSHARING?

Simply stated, it is a program in which employees "get a piece of the action." It represents a management style or point of view most often characterized as participative or consultative but with the added element of employees sharing in the economic gains achieved by the organization. In the broadest sense, gainsharing programs fall into four different categories:

- Individual Incentive Plans
- Profit Sharing
- Employee Ownership
- Group Incentive Plans

The term gainsharing, however, is usually applied to group incentive plans and not the other type of plans. A brief description of the other types of plans follows.

Individual incentive plans refer to the piecework type plans in which an individual or crew receives additional money for production over a predetermined level. This level is usually defined by "engineered work standards." The standards are normally developed by trained industrial engineers using techniques such as stopwatch time study, work sampling or predetermined time standards. Pay is tied directly to the performance of the individual or crew. The standards must be adjusted as often as the methods or equipment used on the job change. Individual incentive plans work best where the individual or crew works independently of other individuals and crews in situations where their output does not have an impact on the activities of other employees. While sometimes expensive to maintain, they can produce significant benefits in the right situation.

As work has become more technologically bound and the activities of employees more interdependent, companies have moved away from individual incentive plans towards the other types of gainsharing plans.

Profit sharing increases the stake the employee has in the organization by sharing in the profits of the company not just the productivity gains. A number of companies have seen significant improvement through the use of profit sharing plans. Others, however, have expressed concern about the inability of employees to relate to the system, the lack of a relationship between profit sharing and productivity performance, the difficulty in stimulating employee involvement and the time delay between performance and payment.
Employee ownership goes even further as the employee's income rises and falls with the profits of the company.

GROUP INCENTIVE PLANS

Group incentive plans were developed to counteract some of the negative aspects of individual incentive plans and to capitalize on a team approach to increasing the productivity of the organization. They work best in organizations that need individuals, groups, or departments to work cooperatively with one another to maximize effectiveness and efficiency. They are most effective when combined with a management style that solicits and responds to employee involvement in improving productivity. Exhibit I lists the characteristics that favor a gainsharing plan.

The three most commonly cited group incentive plans are Scanlon, Rucker and Improshare®. There are differences in the measurement formula for each type of plan which can be important in certain situations. The similarities are 1) the emphasis on employee involvement, 2) the use of a base period against which to measure performance, and 3) the provision of frequent bonus payments in return for increased productivity levels.

Under the Scanlon Plan, the ratio of payroll costs to the value of production (sales plus or minus changes in inventory) is determined for a base period. After the plan is installed, the same calculation is made for the current period and, if the payroll costs are proportionately lower than in the base period, the savings are split between the employees and company on a predetermined basis.

The Rucker Plan is similar except that the ratio employed is payroll costs to production value. Production value or value added is determined by adding or subtracting the inventory change from the net sales and then subtracting material and supplies.

The Improshare Plan, which has been installed in forest product industry companies, utilizes labor hours rather than dollars. Labor hour standards are established using the actual results of a base period. The goal under the program is to produce the products in fewer hours per unit of output than in the base period. The plan is not affected by changes in sales prices or volume. The plan provides for adjustments to be made for the introduction of labor saving equipment over $10,000 in cost.

For an example of 40 production and 20 nonproduction workers, the situation might be as follows:

**BASE PERIOD**

<table>
<thead>
<tr>
<th>Product</th>
<th>Work hour standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product A</td>
<td>20 employees x 40 hours / 1000 pieces = 20 hours/1000 pieces</td>
</tr>
<tr>
<td>Product B</td>
<td>1.6 x 500 = 800</td>
</tr>
</tbody>
</table>

**Product B**

\[ \text{Product B} = \frac{20 \text{ employees} \times 40 \text{ hours}}{500 \text{ pieces}} \]

\[ \text{Product A} = \frac{0.8 \times 1000}{800} \]

\[ \text{Product B} = \frac{1.6 \times 500}{800} \]

\[ \text{Total produced hours} = 1600 \]

<table>
<thead>
<tr>
<th>Base Productivity Factor (BPF) =</th>
<th>Total production and nonproduction hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPF = (40 production + 20 nonproduction employees) x 40 hours = 2400/1600 = 1.5</td>
<td></td>
</tr>
</tbody>
</table>

(Note: Nonproduction workers are now added.)

**Improshare Product Standards:**

| Product A | 0.8 x 1.5 = 1.2 hours per piece |
| Product B | 1.6 x 1.5 = 2.4 hours per piece |

**BONUS CALCULATION**

<table>
<thead>
<tr>
<th>Bonus calculation (month X)</th>
<th>Product A = 1.2 hours x 600 units = 720</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product B = 2.4 hours x 900 units = 2160</td>
<td></td>
</tr>
<tr>
<td>Improshare hours (standard hours for actual units produced) = 2880</td>
<td></td>
</tr>
<tr>
<td>Less actual hours = 2280</td>
<td></td>
</tr>
<tr>
<td>Gained hours = 600</td>
<td></td>
</tr>
</tbody>
</table>

| Employee share of gained (saved hours) = | \[ \frac{\frac{1}{2} \text{ gained hours}}{\text{actual hours}} \text{ = 13.2%} \]

The payments are made along with the regular paychecks.

**KEY FACTORS IN ACHIEVING SUCCESS**

Experience has shown that there are a number of critical factors that determine the success or failure of any gainsharing plan. These are briefly described below.

1. **Proper Planning and Analysis**

   As the first step, a survey should be conducted to consider a number of important questions:
   - Are there opportunities for productivity improvement in terms of increasing output per manhour?
   - What is the "climate" within the organization in terms of acceptance of the gainsharing concept on the part of management, the union and employees?
   - In general terms applicable to the organization, how should productivity be measured? Are factors other than output per manhour needed?
   - Is the necessary data, including production and manhour data, available to measure productivity?
   - Is gainsharing appropriate now? Should it be postponed until certain events take place? Should another approach be taken to increase productivity?

The survey should be conducted by people who have had experience in installing gainsharing plans.
plans. It should result in a detailed action plan describing who is responsible for completing each step in the productivity improvement program.

2. Involvement of Employee/Union Representatives

Since gainsharing requires a cooperative and consultative approach to productivity improvement, it is important that union or other employee representatives be involved with the planning and decision making regarding the program. Their assistance is needed to get the program off the ground and in planning and designing the program. Also, changes may be required in the labor agreement.

3. A Sound Measurement System

The foundation for a gainsharing plan is the system for measuring productivity on a continuing basis. For a group type incentive plan such as Improshare, the system should:

- Recognize and provide for the difference in labor hour requirements for different types of products.
- Properly allocate indirect and salaried employees' hours to the measurement standards.
- Provide measurement points to count good finished product either ready for shipment or ready for movement from one separate stage to another.
- Include the necessary measures of quality to reward or penalize for changes.

After the plan is formulated, it should be tested by applying the standards to a representative period of time in the past. This can disclose significant fluctuations that require further analysis and possible adjustments in the measurement system.

4. Development of a Written Plan Covering All Eventualities

A straightforward and comprehensive document should be prepared covering the operation of the plan and how to provide for various items such as:

- New products and how to account for them
- Eligibility for productivity sharing pay
- Changes in standards because of changes which affect productivity.
- Measuring and accounting for the impact of new labor-saving equipment.
- Procedures for “buying back” the standards when this is appropriate.
- Effect of changes in material on the standards.
- Adjustments to the allocation of indirect and salaried hours.

The plan should be reviewed and agreed to by the participants.

5. Removal of Barriers to Improving Productivity

Through existing policies, procedures, work rules or contractual provisions, there may exist barriers to achieving significant productivity improvements. These should be identified as soon as possible and, following analysis and discussion, steps should be taken to remove the barriers. This may require contractual changes or new or revised policies and procedures.

6. Use of Productivity Teams

Most companies which have installed a gainsharing plan have noted that a formalized employee involvement program such as quality circles or productivity teams has yielded substantial benefits. Typically, the teams are made up of five to seven employees from a specific work area who are trained in problem identification and solving techniques. They meet periodically to review operations in their area and develop ideas to increase productivity. The reward for their efforts comes about through higher bonus payments that result from the increased productivity.

7. Training of Management Personnel

The participative or consultative style of management is a key ingredient in the gainsharing approach. Frequently, first line supervisors and middle management personnel need training in this philosophy of management. This training can cover topics such as team building, time management, personnel development, leadership skills, personnel evaluation, communications/listening skills, etc.

8. Union and Management Leadership

Installing the gainsharing plan and related programs will not by itself generate productivity gains. People still need to be motivated—to work smarter and harder. With union representation, this is best accomplished through a joint effort with management and union representatives.

9. Follow-up and Fine Tuning of the Plan

Particularly during the early stages of the operation of the plan, attention should be given to:

- Presenting the program to all employees and explaining their involvement.
- Assuring the accuracy and completeness of the productivity calculation.
- Answering management and worker questions on a quick response basis.
- Getting the productivity teams and management training underway.

The program should be formally evaluated at the end of the first year of operation to determine if it is meeting the original objectives.
## EXHIBIT I

### ORGANIZATION CHARACTERISTICS FAVORING GAIN SHARING

<table>
<thead>
<tr>
<th>Organizational Characteristic</th>
<th>Favorable Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Business, division or work unit of up to 500 employees</td>
</tr>
<tr>
<td>Age</td>
<td>Enough time has elapsed that some standards can be based on six-month performance history</td>
</tr>
<tr>
<td>Productivity measures</td>
<td>Simple, with a good history</td>
</tr>
<tr>
<td>Market for output</td>
<td>Good; can absorb additional production</td>
</tr>
<tr>
<td>Product costs</td>
<td>Controllable by employees</td>
</tr>
<tr>
<td>Organizational climate</td>
<td>Open; some level of trust</td>
</tr>
<tr>
<td>Style of management</td>
<td>Participative</td>
</tr>
<tr>
<td>Union status</td>
<td>If union present, one that is favorable to a cooperative effort</td>
</tr>
<tr>
<td>Seasonal nature of business</td>
<td>Relatively stable across time</td>
</tr>
<tr>
<td>Work floor interdependence</td>
<td>High to moderate interdependence</td>
</tr>
<tr>
<td>Product stability</td>
<td>Few product changes</td>
</tr>
<tr>
<td>Controller</td>
<td>Trusted; able to explain productivity measures</td>
</tr>
<tr>
<td>Communication policy</td>
<td>Open; willing to share productivity measurement results</td>
</tr>
<tr>
<td>Plant Manager</td>
<td>Trusted; committed to plan; able to articulate goals and ideas of plan</td>
</tr>
<tr>
<td>Management</td>
<td>Technically competent; supportive of participative management style; good communication skills; able to deal with suggestions</td>
</tr>
<tr>
<td>Corporate position (if part of larger organization)</td>
<td>Favorable to plan</td>
</tr>
<tr>
<td>Work force</td>
<td>Technically knowledgeable; interested in participation and higher pay; financially knowledgeable and/or interested</td>
</tr>
<tr>
<td>Plant support services</td>
<td>Maintenance and engineering groups competent; willing and able to respond to increased demands</td>
</tr>
</tbody>
</table>

Adapted from "Pay and Organizational Development," Edward E. Lawler, 1981.
MONOGRAPHS PUBLISHED TO DATE

"The Rush to LIFO: Is it Always Good for Wood Products Firms?" issued in December 1974 and published in condensed form on the April 1975 issue of Forest Industries. This monograph was revised and reissued in January 1976.

"Accounting and Financial Management in the Forest Products Industries: A Guide to the Published Literature," issued in June 1975. (A supplement to this monograph was issued in March 1977 and January 1981.)


"Log Inventory Controls," issued April 1981.


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