An Analysis of Selected Incentives as Stimuli to Increased Productivity for Production Employees.

Leon C. Megginson
Louisiana State University and Agricultural & Mechanical College

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AN ANALYSIS OF
SELECTED INCENTIVES AS STIMULI TO INCREASED PRODUCTIVITY
FOR PRODUCTION EMPLOYEES

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy

in

The Department of Business Administration

by

Leon Cassity Megginson
B. S., Mississippi College, 1947
M. B. A., Louisiana State University, 1949
August, 1953
MANUSCRIPT THESSES

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Finally, the writer wishes to express his appreciation to the businessmen whose cooperation made this study possible.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENT</td>
<td>11</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vi</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>viii</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>xii</td>
</tr>
<tr>
<td>Purpose of study</td>
<td>xii</td>
</tr>
<tr>
<td>Method of approach</td>
<td>xii</td>
</tr>
<tr>
<td>Delimitations</td>
<td>xiii</td>
</tr>
<tr>
<td>I. NEED FOR INCENTIVES</td>
<td>1</td>
</tr>
<tr>
<td>How volume affects profits, prices, and</td>
<td></td>
</tr>
<tr>
<td>wage earnings</td>
<td>6</td>
</tr>
<tr>
<td>Philosophy of incentive management</td>
<td>9</td>
</tr>
<tr>
<td>II. THE NATURE OF INCENTIVES</td>
<td>12</td>
</tr>
<tr>
<td>The relationship between desires, motives,</td>
<td></td>
</tr>
<tr>
<td>and incentives</td>
<td>12</td>
</tr>
<tr>
<td>Motives and motivation</td>
<td>14</td>
</tr>
<tr>
<td>Thorstein Veblen's instincts</td>
<td>16</td>
</tr>
<tr>
<td>Currently held concepts of motivation</td>
<td>21</td>
</tr>
<tr>
<td>What workers want in a job</td>
<td>28</td>
</tr>
<tr>
<td>III. TYPES OF INCENTIVES</td>
<td>35</td>
</tr>
<tr>
<td>Incentives and deterrents</td>
<td>36</td>
</tr>
<tr>
<td>Incentives as rewards and punishments</td>
<td>38</td>
</tr>
<tr>
<td>Classification of incentives</td>
<td>38</td>
</tr>
<tr>
<td>Material incentives</td>
<td>40</td>
</tr>
<tr>
<td>CHAPTER</td>
<td>PAGE</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Semi-material incentives</td>
<td>77</td>
</tr>
<tr>
<td>Non-material incentives</td>
<td>81</td>
</tr>
<tr>
<td>Punishment and fear as incentives</td>
<td>88</td>
</tr>
<tr>
<td><strong>IV. CASE STUDY, PHEOLL MANUFACTURING COMPANY</strong></td>
<td></td>
</tr>
<tr>
<td>Management's incentive philosophy</td>
<td>89</td>
</tr>
<tr>
<td>Material incentives</td>
<td>91</td>
</tr>
<tr>
<td>Semi-material incentives</td>
<td>95</td>
</tr>
<tr>
<td>Non-material incentives</td>
<td>100</td>
</tr>
<tr>
<td>Summary and conclusions</td>
<td>106</td>
</tr>
<tr>
<td><strong>V. CASE STUDY, MISSISSIPPI PRODUCTS, INCORPORATED</strong></td>
<td></td>
</tr>
<tr>
<td>Background</td>
<td>108</td>
</tr>
<tr>
<td>Material incentives</td>
<td>110</td>
</tr>
<tr>
<td>Semi-material incentives</td>
<td>122</td>
</tr>
<tr>
<td>Non-material incentives</td>
<td>124</td>
</tr>
<tr>
<td>Summary and conclusions</td>
<td>127</td>
</tr>
<tr>
<td><strong>VI. CASE STUDY, TENNESSEE COAL AND IRON DIVISION,</strong></td>
<td></td>
</tr>
<tr>
<td>UNITED STATES STEEL CORPORATION</td>
<td>130</td>
</tr>
<tr>
<td>Background</td>
<td>130</td>
</tr>
<tr>
<td>Material incentives</td>
<td>132</td>
</tr>
<tr>
<td>Semi-material incentives</td>
<td>141</td>
</tr>
<tr>
<td>Non-material incentives</td>
<td>145</td>
</tr>
<tr>
<td>Summary and conclusions</td>
<td>145</td>
</tr>
<tr>
<td><strong>VII. CASE STUDY, JONES &amp; LAUGHLIN STEEL CORPORATION</strong></td>
<td></td>
</tr>
<tr>
<td>Corporation</td>
<td>147</td>
</tr>
<tr>
<td>Background</td>
<td>147</td>
</tr>
<tr>
<td>The equipment utilization incentive plan</td>
<td>148</td>
</tr>
<tr>
<td>Summary and conclusions</td>
<td>157</td>
</tr>
</tbody>
</table>
LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Factors Affecting Employee Attitude Toward Their Work and Company</td>
<td>31</td>
</tr>
<tr>
<td>II</td>
<td>Order of Importance of Factors Affecting the Employee Relationship, as Summarized from Available Surveys</td>
<td>33</td>
</tr>
<tr>
<td>III</td>
<td>Extent and Type of Incentive Plans for Plant Workers in Selected Manufacturing and Non-manufacturing Groups, 1945-46</td>
<td>48</td>
</tr>
<tr>
<td>IV</td>
<td>Wage Payment Plans Used by Sixty-five Plants to Calculate Gross Pay of the Greater Part of Their Productive Employees in 1946</td>
<td>52</td>
</tr>
<tr>
<td>V</td>
<td>Wage Payment Plans Used by Ninety-six Plants in 1948</td>
<td>53</td>
</tr>
<tr>
<td>VI</td>
<td>Results of Employee Morale Survey, Showing Attitudes of Forty-five Supervisors Toward the Company, Management, and Working Conditions</td>
<td>105</td>
</tr>
<tr>
<td>VII</td>
<td>Weekly Direct Labor Efficiency Percentages, Dimension Mill, Mississippi Products, Incorporated, September 22, 1952 - April 25, 1953</td>
<td>114</td>
</tr>
<tr>
<td>VIII</td>
<td>The Relationship Between the Percentage of Practical Machine Capacity and Direct and Indirect Workers' Wage Rate</td>
<td>151</td>
</tr>
<tr>
<td>TABLE</td>
<td>PAGE</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>IX. Changes in Production Rate Subsequent to Installing Equipment Utilization Incentive Plan at Jones &amp; Laughlin</td>
<td>155</td>
<td></td>
</tr>
<tr>
<td>X. Number and Per Cent of Louisiana Industrial Concerns Using Selected Incentive Factors as Stimulants to Increased Productivity</td>
<td>188</td>
<td></td>
</tr>
<tr>
<td>XI. Relative Value of Selected Incentive Factors as Stimulants to Productivity as Determined by the Personal Judgment of 125 Personnel Managers</td>
<td>189</td>
<td></td>
</tr>
</tbody>
</table>
ABSTRACT

Considerable interest is currently being shown in ways of reducing production costs by improving employee output and efficiency. Although infinite improvement of this nature is not possible, the consensus is that significant savings can be achieved by stimulating workers, through the judicious application of incentives, to use their abilities more effectively by finding improved methods of performing their jobs and by reducing wasted efforts and materials. Although much has been written about incentives, little has been written concerning their relative effectiveness as stimuli to production. This study has analyzed several incentives to determine their relative ability to stimulate production.

In this analysis, the literature in the field was reviewed and summarized; case studies of several companies with effective incentive programs were made; and a survey of the incentive practices of selected Louisiana industrial concerns was conducted.

The material incentives use tangible, physical rewards as inducements. The most effective of these is an incentive wage plan relating earnings directly to worker output and efficiency. Merit promotions and wage increases have a high inducement value, for they also offer a reward based upon individual productiveness; merit promotions are probably more effective, for a material gain is combined with the
intangible factors of authority, prestige, and recognition. Profit sharing has a high motivating effect through combining material rewards with a proprietary interest in the business. If a bonus is based on production, its effectiveness is high; if not, it has a slight result through encouraging cooperation. Stabilized employment has some incentive value by appealing to workers' desire for security. Suggestion systems with financial reward, discounts on purchases, and low cost housing increase an employee's material position and thereby indirectly affect productivity.

Semi-material incentives which have only an indirect, and often deferred, ability to satisfy employee wants affect employee productiveness by creating high morale and job satisfaction. Proper selection and placement, whereby the qualifications of an applicant are matched with job requirements, and training which permits employees more adequately to develop and utilize their capacities have a high effect upon productivity. Paid holidays and vacations, by providing chances for the employee to rest and relax without a financial loss, increase morale and job satisfaction. The inducement value of retirement and insurance plans which appeal to the employees' desire for security evidences itself through improved morale and reduced turnover.

The non-material incentives are intangible factors affecting the relationship between the employee and his associates; they induce productivity by strengthening human dignity and developing within the workers pride in themselves
and their work. The motivating value of personal recognition, 
group spirit, and creative workmanship is about equal. To 
the extent an esprit de corps is developed in an organization 
and workers feel important as individuals, productiveness 
will improve.

To be most effective, incentives must be superimposed 
upon adequate wage rates and work standards and be administered 
by the line supervisor who is the one most responsible 
for increasing productivity.
INTRODUCTION

One of the continually recurring goals of business managers is increasing the productiveness of their employees. This goal is especially desirable in business organizations operated for a profit, for, everything else being equal, a greater profit can be earned by reducing the cost of production. Although infinite improvement in efficiency and productivity is not possible, the consensus of those in the field of management is that in the majority of cases considerable savings in labor and overhead costs can be achieved by increasing the output per employee per unit of time.

There are many ways in which management can obtain this increase. These ways include: planning, scheduling, and routing the work more adequately; improving the machines, equipment, and buildings; determining a more efficient layout; and developing more effective systems and procedures. A survey of management literature reveals that considerable interest currently is being manifest in another method of increasing output and decreasing cost, i.e., the judicious application of incentives as stimulants to employees to increase their individual and collective productivity. By applying these stimulating factors, management endeavors to induce the employees to be more effective producers through finding improved methods of performing the work and through reducing wasted efforts and materials.
There is a variety of methods of stimulating increased productivity ranging from forced labor conditions, on the one hand, to development of the individual's desire to increase personal output for individual economic gain, pride, and recognition. Attitudes concerning employee motivation have ranged from the "work-or-starve" to the "give-them-bread-and-circuses-too." The incentives that have been used by management to increase production have varied from negative sanctions of fear and punishment to positive rewards and inducements.

PURPOSE OF STUDY

The purpose of this study is to explore the field of motivation and incentives in order to determine their effects upon the productivity of workers. An analysis of selected material, semi-material, and non-material incentive factors available for management's use is made in order to determine their relative value as stimuli to production workers to increase their productiveness. An attempt is also made to ascertain the circumstances under which the individual factors will operate effectively.

METHOD OF APPROACH

The method of approach used in this analysis was to summarize, from primary and secondary sources, the existing information that pertains to the effects of incentives as stimuli to production. A second aspect of the study was the conducting of case studies of six companies having well
developed incentive programs. A third method of approach was a questionnaire survey conducted among the personnel managers of the larger industrial concerns in Louisiana to determine the extent of utilization of the selected factors and estimates of their relative value as inducers of increased productivity per worker.

DELIMITATIONS

The conscious utilization of incentives as stimulants to increased productivity is only one segment of management's activities. Therefore, even if an extensive incentive program is established, most of the responsibility for obtaining increased productivity will still rest upon management's shoulders - for that responsibility can not be delegated to the employees. Management will still be responsible for providing adequate physical facilities, developing an efficient organization, having the best method of distribution of the product, developing a sales force that can profitably dispose of the increased production, and performing the other important managerial functions. Much could be written on these other methods of obtaining maximum production, but that is beyond the scope of this study.

In utilizing incentives, management must be careful not to make their use an end within themselves, but must make them a means to an end, which is a better living for more people. In striving for efficiency the manager must remember that too much emphasis on, or the mechanical application of, "tools"
such as incentive wage plans, profit-sharing arrangements, and other incentive factors, will build up active as well as passive resistance to a program of increased production and lead to its defeat. To achieve this increased production with a minimum of resistance the first desire of management should be to treat the workers as individual human beings - not as automatons.

Robert E. Wood, Chairman of the Board of Sears, Roebuck and Company, in a statement before the American Management Association very succinctly summarizes this point by saying:

"We complain about government in business, we stress the advantages of the free enterprise system, we complain about the totalitarian state, but in our industrial organizations, in our striving for efficiency, we have created more or less of a totalitarian organization in industry -- particularly in large industry. The problem of retaining efficiency and discipline in these large organizations and yet allowing our people to express themselves, to exercise initiative, and to have some voice in the affairs of the organization is the greatest problem of large industrial organizations to solve."  

The use of incentives is based on the assumption that the workers can control the rate of output of the good or service that they are producing. Otherwise, even though management might apply the incentives for good employee-employer relations, there would be little increased production and decreased cost.

Also, there are certain limitations that are inherent in any incentive program. For example, it may be possible

---

to increase the productivity of machine operators by 100 per cent if they are paid an abnormally high wage, but if the value of the product is such that this amount can not justifiably be paid this incentive can not be used. Promotions as a stimulus to production also have a practical limitation on the extent to which they can be utilized, for there are only a given number of positions available for such promotions. However, there is a wide field within which the application of incentives is practical and it is with this realm of activity that this investigation is concerned.

**DEFINITION OF INCENTIVES**

For purposes of this study the definition of incentives is: the external stimuli which react upon the mind in such way as to motivate men; the response being to redirect, or increase the aim and intensity of the person's mental and/or physical behavior.²

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² This definition has been influenced greatly by Ronald B. Shuman's writings concerning incentives. See Ronald B. Shuman, *The Management of Men* (Norman, Oklahoma: The University of Oklahoma Press, 1948), p. 37.
CHAPTER I
NEED FOR INCENTIVES

The present productive capacity of the American economic system is no accident, but has been caused by a series of inventions and innovations and the application of initiative and hard work. Many elements have contributed to the growth and expansion of this system. These elements include interchangeable parts; standard measurements, which make it possible to have standardized parts; and the introduction of the assembly line production technique with its consequent increase in output per worker.

However, these factors are inanimate; they are translated into "productivity" only when people are introduced. The factor of people injects a variable into the productive scheme over which management has limited control. When management is dealing with the inanimate factors of production, such as machines, materials, and money, it can very accurately predict what the input-output relationship is going to be and can vary the factors accordingly in order to achieve a desired rate of production. When dealing with people, however, the intangible factor of volition is introduced. Workers will react the way management wants them to only as long as they choose to react that way, for they can increase or decrease their productivity as they desire. This human peculiarity causes one of management's greatest problems, that of increasing productivity per worker.
Herman W. Steinkraus, President and General Manager of Bridgeport Brass Company, very forcefully emphasized this point in 1944. He said:

"Here you have the biggest job of management; the handling of the men and women in the organization. This is much more important than handling the plants or machines, or any other physical assets of a business. The efficiency of a machine or an engine can be measured to the minutest detail; but the efficiency or capacity of a single human being, when properly trained and tied into a program, is beyond measure...."

Increased productivity has long been the goal of American industry, but the need is especially true today when American industry is attempting to achieve maximum production to meet the requirements of a limited war and the usual peace-time demands for goods and services.

What factor of production offers the greatest potential opportunity for increasing efficiency and productivity and decreasing the cost of the goods or services being produced?

---


2What is referred to as "productivity" is likely to be misleading. It is the total output (of machines and workers) divided by the number of man hours worked. The total production of a country is obviously the amount of goods and services turned out by everyone with the aid of all the machines and other facilities. A nation's level of living (scale of living) is determined by the output per person in the population, less what is taken by the government for purposes unproductive of civilian goods. Total output for a country can also be increased by a higher proportion of the population coming into the work force, as is the case when former unemployables such as women, the handicapped, and the aged are employed.
Probably the most promising potential for savings of this nature is found in the charge for labor, for this expense element accounts for approximately 75 to 80 per cent of the total cost of the national product and services.  

This potential source of productivity was emphasized by Clarence Francis, Chairman of General Foods, before a recent convention of the National Association of Manufacturers. He said, "It is ironic that Americans - the most advanced people technically, mechanically and industrially - should have waited until a comparatively recent period to inquire into the most promising single source of productivity; namely, the human will to work. It is hopeful, on the other hand, that the search is now under way."  

If increased productivity can be achieved, it will mean that more goods and services are produced, the cost per worker will be reduced, and (if the decreased cost is reflected in the selling price) more people will benefit by having more goods and services. For the employer, this will mean greater profit; for the worker it will mean better wages so that he can buy more goods. It should be pointed out, however, that increased productivity does not necessarily mean that the worker will have


4 "Are YOU Fit to Manage?" Management Methods, III (1952), 25.
to give greater sacrifices of physical energy; it does imply that he will produce more by using his abilities more efficiently, by finding better ways to perform the work, and by reducing wasted efforts and materials.

This problem of increasing productivity is explained by Oliver Sheldon in a slightly different manner. In discussing the determination of wages, he said, "The problem of wages is the determination of that part of the proceeds of industry which is payable to labor." He indicates that this is not an easy task and before it can be decided it is necessary to determine how big the "cake" will be and then how to divide this "cake." Wage earnings and profits can be compared to the sides of a triangle with a fixed apex, the base of which is production. If this base -- production -- is decreased, the sides are contracted; if the base is increased, the sides are extended. Earnings and profits are then conditioned by production.

How can earnings of employees be increased? The sources of such increased earnings are (a) reduced profits, (b) increased selling price, (c) reduced cost of raw materials, and (d) increased efficiency and better work on the part of workers. With the exception of the last of these factors, the ability to increase earnings is limited. The rate of profit is conditioned by the necessity of attracting new capital; an increase in the selling price is limited by the willingness

of customers to substitute their money for the goods; and reduced cost of raw materials is limited by the ability and willingness of suppliers to furnish those materials. Therefore, the primary source of increased earnings is increased efficiency and production on the part of the workers, with the only boundary being the human genius and the amount of energy a worker can expend.\(^6\)

Wages are not only payment for effort expended, but are inducements to increased effort. This increased effort, which leads to increased production, is not only to be sought for the satisfaction and pride that goes with a job well done, but also for the sake of those benefits which accrue from it.

Any attempt to increase worker efficiency runs into the obstacle of human inertia, which is an unknown, but ever present, factor in any situation involving people. Human inertia is especially prevalent in a business organization where the tendency is to perform a task the same way it has always been performed. This tendency is the result of the accepted training method under which the new worker learns his job from an experienced worker whose skill he admires and respects. The new worker performs his work just as the older worker does; he perpetuates the same mistakes and inefficiencies; he carries on the same restrictive practices. (In order to have increased productivity, it is necessary to overcome this inertia.

\(^6\)Output per worker can be increased by working longer hours or by working "harder," that is, by applying more skill, care, and effort. The individual worker is customarily paid extra for any longer hours he works and for increasing his output per hour through use of his own inner resources of skill, care, and effort. Output per worker can also be
There are many ways of accomplishing this but they all call for the judicious application of incentives.

HOW VOLUME AFFECTS PROFITS, PRICES, AND WAGE EARNINGS

Until recent years, many cost accountants and managers considered only the savings in direct labor cost that resulted from increased production, with little emphasis on the effects it had on fixed expenses, or burden. The managers wanted to increase production but only in order to reduce the direct labor cost per unit. It was not realized that other savings could be accomplished.

When applying the proper incentives, savings can be realized by either reducing direct labor cost per unit or overhead cost per unit. These reductions are achieved by either increasing the workers' productivity faster than the direct labor and overhead cost, or decreasing the labor and overhead cost at a more rapid rate than production.

When the direct labor cost is higher than the overhead cost, greater savings can be realized (when increasing productivity) by decreasing the higher cost, i.e., labor cost. The converse is also true. If the overhead cost is higher, there is greater incentive to reduce this cost by increasing output per employee.

*principally is increased through improved materials, designs, tools, methods, and other facilities bought by management with the savings which the owners of the business have risked in the hope of profit. In most instances, the increased output per employee thus achieved requires less skill, care, and effort on the part of the worker.*
When production is increased, everything else being equal, there is likely to be increased profits, even if management distributes part of the savings to the workers as increased wages.

The following three examples illustrate how increased volume will affect profits by utilizing more effectively the physical facilities and thereby spreading the burden, or fixed expenses, over more units of production.7

Example A assumes production of 10,000 units, without an incentive plan. The costs appear below:

<table>
<thead>
<tr>
<th></th>
<th>Single Unit</th>
<th>10,000 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Material</td>
<td>$5.00</td>
<td>$50,000</td>
</tr>
<tr>
<td>Direct Labor (5 Hrs. @ $1.50)</td>
<td>7.50</td>
<td>75,000</td>
</tr>
<tr>
<td>Variable Burden</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.50</td>
<td>75,000</td>
</tr>
<tr>
<td>Total Cost</td>
<td>$20.00</td>
<td>200,000</td>
</tr>
<tr>
<td>Selling Price</td>
<td>$26.50</td>
<td>265,000</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>6.50</td>
<td>65,000</td>
</tr>
<tr>
<td>Less Fixed Burden</td>
<td>4.00</td>
<td>40,000</td>
</tr>
<tr>
<td>Net Profit</td>
<td>$2.50</td>
<td>$25,000</td>
</tr>
</tbody>
</table>

Example B assumes availability of labor and machine capacity to turn out 14,000 units simply by employing more men and using idle machine hours. It is also assumed that the additional volume of production can be sold or absorbed. No wage incentive plan is used. The costs would be as follows --

---

7 Based upon an article entitled "Wage Incentives For More Production" by the George S. May Business Foundation. The Article appeared in the May and June, 1943, issue of Modern Machine Shop and was later published by the Foundation as its Report No. 141.
Comparison with Example A reveals net profit under Example B has increased from $25,000 to $51,000, although material and labor costs per unit remained unchanged. By spreading the fixed burden over 14,000 units instead of 10,000, the unit charge for fixed burden is lowered from $4.00 to $2.86, which accounts for the greater net profit.

It is scarcely necessary to add that the foregoing example suggests a wasteful use of manpower and machines.

Example C also assumes production of 14,000 units with an incentive wage plan in operation.

Although the direct labor cost remains the same, the processing time is reduced from five to four hours per unit, due to the influence of the incentive. Freeing the plant for other production reduces variable burden from $7.50 per unit to $6.00 per unit. Net profit consequently rises from $3.64 to $5.14 per unit, or $21,000 in the aggregate, as shown below. (If the workers in question received the same amount of earnings in four hours as they previously did in five and they worked the same number of hours as before, their earnings were increased by 25 per cent.)
<table>
<thead>
<tr>
<th></th>
<th>Single Unit</th>
<th>14,000 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Material</td>
<td>$5.00</td>
<td>$70,000</td>
</tr>
<tr>
<td>Direct Labor (5 Hrs. @ $1.50)</td>
<td>7.50</td>
<td>105,000</td>
</tr>
<tr>
<td>(4 Hrs. actually worked)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable Burden (4 Hrs. @ $1.50)</td>
<td>6.00</td>
<td>84,000</td>
</tr>
<tr>
<td>Total Cost</td>
<td>$18.50</td>
<td>$259,000</td>
</tr>
<tr>
<td>Selling Price</td>
<td>$26.50</td>
<td>$371,000</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>$8.00</td>
<td>$112,000</td>
</tr>
<tr>
<td>Less Fixed Burden</td>
<td>$2.86</td>
<td>$40,000</td>
</tr>
<tr>
<td><strong>Net Profit</strong></td>
<td><strong>$5.14</strong></td>
<td><strong>$72,000</strong></td>
</tr>
</tbody>
</table>

It can readily be seen from these examples that increased production leads to increased profit. It can also be seen from Example C that when an incentive plan is used the employees earn more wages. If management is so inclined, the price of the product could be lowered and the customers could receive some of the benefits of the increased productivity.

**PHILOSOPHY OF INCENTIVE MANAGEMENT**

It must be pointed out that the concept of incentive management as envisioned in this study is more inclusive than just the application of specific tools as stimulants to production - it is a philosophy, or way of life. This type of management, which is founded upon the needs and desires of the workers, is the encouragement of workers to produce more units of goods and services per unit of time. It is reducing the number of man hours required to produce a product or service so that the workers, owners, and customers can have a higher scale of living.

Basic to any study of the philosophy of incentives is the necessity for the understanding of the problem of "feather-bedding." Workers - and labor unions in particular - have long
believed in the "lump of work" theory, i.e., there is a given quantity of work to be done and when this work is done the workers will be unemployed. The worker, to protect himself, then should restrict his output so that he will not work himself out of a job. There is much justification for this belief on the part of the workers, for during the past the worker who has been efficient in his production has often had the feeling that he was helping to keep someone from working, or that he was working himself out of a job. Before incentive management will function properly, this feeling must be removed from the workers' minds by showing them that management will do everything practical to prevent these occurrences.

Incentive management should permeate the organization from top to bottom. Management should realize that workers have a stake in the business and are usually willing to produce if given a job to do and the incentive to do it. The gains from increased production must be shared with the workers for, if they feel they are being left out, they will not accept the philosophy of incentive management as a reality.

Top management is the key to incentive management, for it is this group that formulates the incentive philosophies. These managers do not always realize that the same incentives that stimulate them also stimulate their employees. John Slezak, President and Chairman of the Board of Pheoll Manufacturing Company, recognized the place of top management in formulating a policy of incentive management when he said:
"It seems to me that the main reason for this situation is not that we do not know enough facts about the problem, but that the top management of our corporations much too often do not even recognize that there is a problem much less give it the personal attention it deserves. ... It seems to me that the most important factor in any employee motivation program toward greater productivity is the recognition of the problem, together with carefully planned and scheduled objectives to be attained, and a genuinely sincere interest in its execution by the chief executive -- the president of the corporation. ... It is obvious that human understanding of his personnel on the part of the chief executive is paramount in a program of effective utilization of the human potential in his employ. Without that even the best organized and administered employee relations program falls short of achieving what is normally possible."

In summary, the philosophy of incentive management is that management should create an environment that is conducive to each worker applying himself willingly, as an individual, to increase productivity, so the scale of living of those concerned will be increased.

If the fundamental philosophies of incentive management are adhered to, the details are of little importance. James Lincoln, who has successfully put incentive management to the test, emphasizes this philosophy in the following words: "Whether the division to the worker is made monthly or yearly or at the end of his active life is of little importance, provided he believes in the plan and wants to do his best...."

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8 Slezak, op. cit., pp. 40-44.

CHAPTER II
THE NATURE OF INCENTIVES

The previous chapter emphasized the need for applying incentives and the philosophy of incentive management. Before discussing the specific types of inducements that management can use, it is necessary to understand something of their nature. This chapter discusses this subject under the following headings: the relationship between desires, motives, and incentives, motives and motivation, Thorstein Veblen's "instincts," currently held concepts of motivation, and what workers want in a job.

THE RELATIONSHIP BETWEEN DESIRES, MOTIVES, AND INCENTIVES

F. C. Hooper, sometime Director of Business Training, Ministry of Labour and National Service for Great Britain, tries to answer the question of why men work by concluding that they have to, but that there is a difference between men performing a job in a dilatory manner and performing the same job in an enthusiastic, expeditious, efficient way. This difference is explained by the word "incentives." The increment of production that is brought about by this incentive, i.e., the difference between workers producing because they have to and because they want to, is the real productive power in the world. "Incentives are strong magic. ... The difference between the absentee miner and the same man working to exhaustion at the risk of his life to rescue comrades trapped in the pit till he has to be ordered to the surface, is a
What is the nature of these incentives that cause men to work? Ronald Shuman, Chairman of the Department of Business Management of the University of Oklahoma, has said, "We may consider the motivations of men as booster charges, set off by the fuses of specific incentive."2 That is, there are certain fundamental motives behind all human activity and these motives are stimulated by applying specific incentives to specific motives.

Carrying this analogy further, it can be seen that behind every human activity there is an incentive, either material or non-material.3 These incentives are the forces that act upon a person's reason, or emotion, in order to bring about the desired response that is revealed in either physical or mental behavior. According to Shuman, "Incentives are stimuli operating on the motivations of men. They consist of some force, external to the personality, which works by affecting one or more relationships of the situation. The result is to re-direct, increase, or decrease the aim and intensity of reaction."4

Leading to this response that is stimulated by the incentives, is another force called a motive; behind every incentive there

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3. In its broadest sense the term "incentive" may be applied to any of the impelling forces that induce a person to perform a task or to accomplish an achievement.
is a motive. The difference between an incentive and a motive is that an incentive incites a person to action, while a motive determines the choice of action. Some motives are instinctive while others are the result of reflection and reasoning, but both are derived from the desire or longing for something, the lack of which leaves an unfilled want in a person's life. Petersen and Plowman agreed with this concept when they said, "Desire identifies that which is wanted and motive determines the choice of the way to achieve it. But accomplishment is not attained without 'incentive,' which is the stimulus or inducement which brings about action that leads to the realization of desire."\(^5\)

Therefore, the relationship between desires, motives, and incentives is as follows: there is a desire or longing for something; then follows the choice of alternative goals or choice of alternative methods of attaining this goal - this is motivation; finally, an incentive is given to the person to induce him to attain that goal. To more fully understand this relationship, it is necessary to understand the nature of motives and motivation for they are an integral link in the use of incentives as stimuli to production.

MOTIVES AND MOTIVATION

The problem of motives and motivation is essentially the same whether it be discussed in relation to business, 

religion, education, or any other phase of life. Broadly stated, the problem is one of explaining human behavior, i.e., why do people do the things they do. These explanations of human behavior are meaningful only when applied to actions that are purposive and variable. The problem is not concerned with simple invariable or stereotyped actions such as breathing, sniffing, shrinking, and wincing.

The study of motivation is the study of why people do things; why they behave in a certain way; why they conform to a certain pattern. This study enables one to predict with a reasonable degree of accuracy what a worker will do when a certain stimulus is applied in a certain way. With this information, management will be able to choose the incentive factors that can be used as fuses to ignite the "booster charge," or motive, in order to increase productivity per worker. Management will then be able to predict with a limited degree of accuracy the behavior of workers and therefore will be able to control that behavior.

Many attempts have been made to understand the problems of motives. All of these begin with the assumption that there is some inner force, or drive, that impels men to act. One of the earliest of these attempts was an explanation of man as a "transcendental ego," having a "vital urge." Another explanation was the hedonistic concept that the great driving force was man's desire for more pleasurable alternatives and the avoidance of pain. Next, there was the concept of unconscious desire as motives. During the early part of this
century the emphasis changed to an accent upon "instincts" as motivating forces. The exponents of this concept emphasized that there were inherited, conscious and unconscious, instincts that act as springs of action. William McDougall, one of the most influential proponents of this school of psychology, said, "Directly or indirectly the instincts are the prime movers of all human activity."\(^6\)

Carlton Parker, in an early article on economic motivation, said, "Man is born into this world accompanied by a rich physical disposition which furnishes him ready-made, all his motives for conduct, and all his desires, economic or wasteful, moral or depraved, crass or aesthetic. He can show a demand for nothing that is not prompted by this galaxy of instincts."\(^7\)

From an economic point of view, Thorstein Veblen was probably the greatest exponent of the instinct concept of motivation. Because of the influence of his work upon the field of motivation and incentives, his ideas will be presented more fully than the others.

**THORSTEIN VEBLEN'S INSTINCTS**

Prior to Veblen's time attempts were made to separate instincts and reason by emphasizing the role of a person's intelligence in human conduct while at the same time ignoring the reference to the social or cultural framework within

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which the individual behaved. Veblen attempted to show that human behavior is in reality a social or cultural product and that psychology is collective rather than individualistic.

In explaining his social psychology Veblen distinguished between "instincts" and "tropisms." Tropisms, or automatic responses of the individual to outside stimuli, are inherited traits and are deeply embedded in all living organisms. Being automatic reflex actions, they do not call into play the rational faculties or intellectual play of a higher mind. Veblen explains that, "Instinct involves consciousness and adaptation to an end aimed at. (Impulsive action) is in no degree intelligent ... (and) is not properly to be called instinctive; it is rather to be classed as tropismatic." According to Veblen, there is not a clear cut distinction between instinct and tropisms but the two shade into each other. Both are very important in trying to explain behavior at the human cultural level. For mankind, life and culture are conditioned by the complement of instinctive and tropismatic aptitudes with which the group is typically endowed. Not only is the continued life of the race dependent on the instinctive attitudes of the members of the race, but the routine and details of life are also determined by instincts.

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9 Ibid.
These instincts are the prime movers in human behavior. Each one has its own particular end toward which it stimulates the individual to act; each of these ends is separate and distinct from the others. Therefore, it is possible to have instinctive drives which are operating at cross purposes to one another. Here, intelligence or human reasoning enters to determine which end is preferable and how it is to be reached. Intelligence provides guidance for the instincts and mediates between them, for, "The ends of life ... are assigned by man's instinctive proclivities; but the ways and means of accomplishing these things are a matter of intelligence." 10

Veblen uses four instincts in his economic analysis: the acquisitive; the parental; the workmanship; and the idle curiosity instincts. These do not directly give rise to action, but are modified by habit and group action. As an individual grows and develops into a more mature person, the repeated urgings of his instincts begin to take on the form of habitual responses. These habitual responses then intervene between the instincts and the ends, or purposes, toward which the instinct drives the individual. These habitual responses are modified to a great extent by the community in which the individual lives, for:

"The individual is exposed to the discipline of group life as it runs in the community, since all life is necessarily group life. The phenomena of human life occur only in this form ...(and) both in his inherited and in his acquired traits, the individual is a product of group life." 11

10Ibid., pp. 5-6.

11Ibid., pp. 104 and 138.
The first of these instincts, that of the "acquisitive" or "self-regarding bent" instinct, is the one which leads the individual to take thought of his own personal welfare as opposed to, or contrasted with, the welfare of others. This instinct leads a person to acquire property, to consider his own self interest, to attempt to get something without giving anything in return, or to attempt self-aggrandizement. This instinct is referred to by Hopper as love of self and is the most nearly universal of all incentives.\(^1\)\(^2\)

The second of the instincts, the instinct of parental bent, causes an individual to take thought of others than himself. It leads him to take thought of things that give common good to mankind. Beginning with the regard for the welfare of one's offspring it then widens in scope to include the family, the community, the nation, and even mankind in general. This has been referred to by Hooper as love of service or love of others.\(^1\)\(^3\) In most individuals there is the genuine inborn and deep-seated urge to serve something greater than himself. There is the need to have a "cause" toward which he can strive. This instinct leads to the fulfilling of this need.

Veblen's third instinct, the instinct of workmanship proclivity, has been known by many different names. Hooper calls it the love of creation and accomplishment.\(^1\)\(^4\)

\(^1\) Hooper, op. cit., p. 101.
\(^2\) Ibid.
\(^3\) Ibid.
\(^4\) Ibid.
William James once called this the proclivity to construction. This instinct leads the individual to work on materials so he can create useful products and services; it leads him to concern himself with efficiency and economy. This instinct creates in the worker the desire to do a given job in a craftsman like manner.

It must be pointed out that this instinct of workmanship does not determine the jobs that are to be done or the ends that are to be served, for, "The position of the instinct of workmanship ... is somewhat peculiar, in that its functional content is serviceability for the ends of life, whatever these ends may be; whereas these ends to be sub-served are at least in the main appointed and made worthwhile by the various other instinctive dispositions." Thus it can be seen that the workmanship instinct is an outgrowth of the other instincts which determine what the ways and means of life will be. The workmanship instinct itself is concerned with the ways and means of achieving these ends. It leads to the efficient utilization of the available resources in order that the purposes of life may be accomplished. This instinct was declared by Veblen to be of greatest importance in his economic analysis. He said,

16 Veblen, op. cit., p. 31.
"It is chief among those instinctive dispositions that conduce directly to the material well-being of the race, and, therefore, to its biological success."\textsuperscript{17}

The fourth instinctive drive, idle curiosity, leads man to inquire into the nature of things. Mankind has used this instinct to determine and explain the world's events in mythological, and later, in scientific terms. This instinct has two aspects, the irrelevant and the pragmatic.\textsuperscript{18} The former leads to the conception of mythologies and folk legends. The second type of learning is useful and expedient, and leads to a larger output of material goods and services for mankind.

**CURRENTLY HELD CONCEPTS OF MOTIVATION**

Psychologists now explain motivation and incentives in terms of the individual needs of workers. One group says there are two sets of human needs that men try to satisfy. The first set can be classified as primary or physiological needs. This classification embraces those needs which are essential for survival such as food, shelter, and clothing. Certainly, man is motivated by these primary needs for they force him to work whether he wants to or not, for the desire to survive is basic. These needs form the basis for using the material incentives.

During ordinary times when a worker has a job, he is able to satisfy his primary needs, but there are other necessities

\textsuperscript{17}Ibid, p. 25.

\textsuperscript{18}Thorstein Veblen, *The Place of Science in Modern Civilization and Other Essays* (New York: B. W. Huebsch, Inc., 1919), pp. 8-9.
that he must satisfy. This second set of needs can be called the "social" or "social-psychological" needs. Most workers are in a state of stress or tension with their environment because these needs are unsatisfied. One authority states, "The second main kind of need might be referred to as social or social-psychological. Approbation by the worker's fellow men, approval by others, acceptance in formal and informal social groups in the plant, home and community -- these are important motivational forces." These needs form the basis for using other inducements, i.e., the non-material incentives.

Petersen and Plowman believe motives stem from desires that are characteristic of normal human beings. They classify these motives into four groups: (1) the desire to live; (2) the desire for possession; (3) the desire for power; and (4) the desire for recognition.

Shuman, in discussing the motives upon which incentives may operate, gives a three-fold classification of them as follows:

1. Motivation based on the immediate biological necessities of man, including such needs as the satisfaction of hunger and thirst, the provision of warmth, and sexual relations. These may be termed maintenance values, or by popular association, the family values.

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20 Ibid.
21 Petersen & Plowman, op. cit., p. 390.
2. The urge to conquest, including the desire for domination, curiosity, and craftsmanship.
3. The urge to social purpose, including the desire for prestige, the gregarious impulse, and the social desire to reconcile (including the urge to submit)."\(^{22}\)

It must be emphasized that these motivations rarely appear alone as single causes to action or response. They usually appear in larger groups. Man is a complex figure and the more complicated the individual personality, the less obvious and direct the decisive cause for response is likely to be.

Barnard calls motives desires, impulses, and wants.\(^ {23}\)

These are the resultants of "...forces in the physical, biological, and social environments, present and past."\(^ {24}\)

In an unpublished manuscript, psychologists Bernard Bass and William Hurder say that although it would require a long list of motives to account for men liking or disliking their work, the following, which appear to be common to a wide variety of job situations, may be cited: "...(the) need for material comfort; need for recognition, need to perceive attainment of job goals. Each of these motives will have developed as a function of the past history of the individual interacting with biologically inherited drives such as hunger, thirst, sex and so forth."\(^ {25}\)

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\(^{22}\) Shuman, op. cit., p. 34.


\(^{24}\) Ibid.

SOCIAL ASPECTS OF MOTIVATION

So far, the emphasis has been placed upon motivation as it concerns the individual. It must now be emphasized that there are also external factors that influence the motivation of workers as a group of individuals.

Most employees are not motivated solely by the need for acquiring the bare necessities of life to satisfy the biological urgings. Their behavior is also controlled by dynamic psychological forces that are present in their place of work and the community in which they live. During the last few years, increased emphasis has been placed upon social motivation. Professor Elton Mayo emphasized this when he said:

"While material efficiency has been increasing for two hundred years, the human capacity for working together has in the same period continually diminished. Of late, the pace has accelerated ... (and) ... the human capacity for spontaneous cooperation has greatly diminished or, at least, has not kept pace with other developments ... Every social group must secure for its individual and group membership:

(a) The satisfaction of economic needs.
(b) The maintenance of cooperation organized in social routines.

Our methods are all pointed at efficiency; none at the maintenance of cooperation." 26

From 1927-1932, the Western Electric Hawthorne Plant in Chicago was the scene of a series of experiments in increasing productivity. These studies proved that a close correlation exists between the productivity of workers and their social and psychological relations with one another. The attitudes of employees were pegged as being more important to efficiency

and productivity than such material factors as rest periods, lighting, ventilation, or even food.  

Man is influenced by all other men he associates with. His ideas are changed, modified, or eliminated by those with whom he talks and his actions are governed by his associates' opinions of those actions. If he thinks his associates will approve, he acts one way; if he thinks they will not approve, he acts another way. One's attitude toward a situation is influenced by the possibility of his status going up or down as a result of any change in that situation. Barnard said, "Human organisms do not function except in conjunction with other human organisms....The interaction between human organisms differ from those between mere physical objects or between a physical object and an organism in that experience and adaptability are mutually involved."  

In studying motivation, the individual must be considered as a part of the whole shop society, for, "Most men are affected by social purpose to a greater degree than they realize." Management can use the intangible non-material incentives to excite this motive of social belonging. 

ENVIRONMENTAL ASPECTS OF MOTIVATION

There are two aspects of environment - one physical and not materially subjected to change by man; the other cultural and man-made. Both of these affect the worker, for he is

27F. J. Roethlisberger and W. J. Dickson, Management and the Worker (Cambridge: Harvard University Press, 1933), especially chapters XXII and XXVI.

28Barnard, op. cit., p. 11.

29Shuman, op. cit., p. 34.
influenced by both cultural and the purely physical surroundings.

Although no studies are available as proof, the indications are that productivity, as well as morale and job satisfaction, tends to be low in subzero temperatures. This may be caused either by the low temperature or the isolation that goes with it, but both are part of environment. The same relationship is true of very hot, humid areas.

The cultural environment has even greater influence on a worker's motivation. Each group of workers has its own set of standards, work habits, ambitions, sense of values - all of which constitutes its culture. The "underprivileged" workers, as well as the "privileged" group, act in response to their culture and to their system of social and economic rewards. Traits such as irresponsibility, shiftlessness, absenteeism, tardiness, lack of ambition, and drinking on the job which management usually associates with the inherent perversity of the unskilled lower class workers, are in reality normal responses they have learned from their physical and cultural environment. These reactions are normal in that environment, and it is only when they are viewed in the light of a different environment that they become abnormal.

In order to increase the efficiency of workers from poor environments it is necessary to increase their immediate scale of living and then their long range standard of living. This necessity is emphasized by Allison Davis in a report on his studies on motivating underprivileged workers in the Chicago area when he said:
"It is not generally realized, however, that the problem of increasing the efficiency of the underprivileged worker always involves two major kinds of difficulties that must be attacked. First, his cultural goals must somehow be raised; his ceiling of aspiration for education, for respectability, for skills, and for better training of his children must become high enough to motivate him to work harder. Such efforts to change their cultural habits and their social status are the driving force behind those relatively few workers who do rise above the slum environments that I have been describing."

Therefore, in considering the motivation of workers, management must take into consideration the environment from which they come.

**Motives and Causation**

In essence, motives are usually thought of in terms of the end sought, whether this end is biological, economic, or social. These motives are thought of as causers of resultant action and are the result of conscious or unconscious internal desires or aversions; the desires or aversions are modified by external factors over which the individual has only limited control.

A study of motivation, is in reality a study of causation, or a cause and effect relationship. The law of cause and effect says that certain happenings are found preceding certain other happenings more regularly than can be explained by chance; therefore, the first happenings (cause) bring about the second happenings (effect). (It must be emphasized that the causes of any event are usually manifold and varied and may be near or remote from the effect.)

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There is usually a variation between the true motive impelling a person to do a certain thing and the superficial motives assigned to that action. The real cause of an action is sometimes masked behind a cloak of rationalization. If a person acts without a valid reason, he will probably rationalize that action rather than admit the fact that he had no valid reason for the action. This rationalization makes the task of motivating workers even more difficult.

If the motives of workers can be determined, specific incentives can be used as keys to unlock the doorways to increased production. In an attempt to determine these motives, management has turned more and more to surveys designed to find out what workers want in a job.

**WHAT WORKERS WANT IN A JOB**

There are many ways to determine what workers want in a job. One method is to notice the questions asked by a prospective employee during the employment procedure, for these questions are indicative of what he desires from the job. Another source of information is a compilation of employee grievances and complaints. Exit interviews and morale surveys can also be used to obtain the needed data.

Probably the most useful device for this purpose is the survey designed especially to find out what men want in a job. Originally these studies were not directed at problems of workers' attitudes and job reactions; they did not deal with stimulation of interest nor the psychological factors pertaining to
motivation and morale, but were concerned with the effects of changes in physical and physiological factors relating to productivity. However, these studies soon encountered the problems of motivation and human relations. The Hawthorne experiments, which were designed to investigate worker reaction to changes in physical environment, soon revealed that the high morale generated by the creation of a special "in" group which was able to communicate directly with management increased productivity even when working conditions were returned to their original state. The workers in the test group felt that they had a voice in making decisions that directly concerned themselves.

One of the most intensive of these studies was conducted by the National Industrial Conference Board in 1947. Nearly 6,000 workmen (in six plants and five companies) were asked to rank 71 factors according to their relative importance in affecting morale. In addition, the workers were asked to select, in the order of importance, the five factors that had the greatest effect on their attitude toward their job and their company.

31 Elton Mayo, The Human Problem of an Industrial Civilization (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1945), pp. 69-86, and in a conversation with John Slezak, Chairman of the Board of Director and President, Pheoli Manufacturing Company, on September 4, 1952.

The workers favored job security most highly with 31 per cent of them ranking it first. The second factor that was mentioned most frequently was compensation, with nine per cent of the workers listing it first. In third place, with seven per cent of those answering giving it primary importance, was the type of work being performed. The fourth factor, opportunity for advancement in the company, was placed first by five per cent of the workers. (For a more complete listing of the preferences see Table I.)

A slightly different ranking of the desires of workers as far as the job is concerned was presented by Jay Alan Reid before the 1949 Louisiana Personnel Management Conference. According to him, workers prefer steady work, good working conditions, pay, good bosses, self respect, to be doing something worthwhile, a chance to get ahead (or a chance for advancement), and information about the business.

Lee Hill, formerly Vice-President in charge of Industrial Relations, Allis-Chalmers Manufacturing Company, has summarized the findings of available investigations with respect to this subject of what employees want in a job. (It should be pointed out, as he does, that because the researchers used

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33Jay Alan Reid, "What Does An Employee Want From His Job?" Proceedings of the 1949 Louisiana Personnel Management Conference (Baton Rouge, Louisiana: The Division of Research, College of Commerce, Louisiana State University, 1952), pp. 83-85. This survey was conducted among the occupations of skilled and semi-skilled labor classified by the government as wage earners and did not include white collar workers or professional people.

### TABLE I

FACTORS AFFECTING EMPLOYEE ATTITUDE TOWARD THEIR WORK AND COMPANY

<table>
<thead>
<tr>
<th>Rank</th>
<th>Factor</th>
<th>Per cent of employees ranking this factor first</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Job security - employment stabilization</td>
<td>31</td>
</tr>
<tr>
<td>2</td>
<td>Compensation (base pay)</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>Type of work</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Opportunities in the company for advancement</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Profit-sharing plans (excluding employee savings plans)</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Supervisors' temperament and personality</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Vacation and holiday practices</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Practice of informing you of your job status (both of your success and failures)</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Physical working conditions (on-the-job)</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>Employee merit or performance rating (an organized and systematic method of appraising your performance)</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Company's attitude toward employees (its interpretation of policies - whether liberal or conservative)</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Type of company's product (its social importance) during war</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>Your own temperament - ability to get along with others</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Company medical and health programs</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Quality of supervisors</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>All others</td>
<td>21</td>
</tr>
</tbody>
</table>

*The figures are rounded to the nearest whole per cent.*

different factors, different numbers of employees, and different methods of conducting the surveys, the findings are illustrative rather than definitive.) His findings indicated that security is one of the most important of employee wants in a job. The second most important need was the knowledge that their complaints would be thoroughly and promptly heard and appropriate action taken. In third place, was the factor "working conditions." Wages ran a poor fourth in Hill's tabulation. Included with wages was the granting of wage increases when due. (See Table II for the complete tabulation.)

N. P. R. Maier has tabulated the wants of workers and, considering the difference in terminology used, arrived at approximately the same conclusion. He said that the composite average of several such surveys indicates the following are placed ahead of high pay: steady work; comfortable working conditions; good boss; and opportunity for advancement.35

What do these surveys indicate? They indicate primarily that workers are looking for security in their jobs. This is true because the great majority of employees are wage-earners with no other means of subsistence and if their job disappears so does their livelihood. However, this problem of security and its appeal to the workers means more than merely having job security. It also means that the worker can confide in and

### TABLE II

**ORDER OF IMPORTANCE OF FACTORS AFFECTING THE EMPLOYEE RELATIONSHIP, AS SUMMARIZED FROM AVAILABLE SURVEYS**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Security</td>
</tr>
<tr>
<td>2.</td>
<td>Fair adjustment of grievances</td>
</tr>
<tr>
<td>3.</td>
<td>Working Conditions</td>
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<tr>
<td>4.</td>
<td>Wages</td>
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<tr>
<td>5.</td>
<td>Promotion</td>
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<tr>
<td>6.</td>
<td>Safety</td>
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<tr>
<td>7.</td>
<td>Supervision</td>
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<td>8.</td>
<td>Recognition</td>
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<tr>
<td>9.</td>
<td>Benefits</td>
</tr>
<tr>
<td>10.</td>
<td>Job instruction</td>
</tr>
<tr>
<td>11.</td>
<td>Share in management and profits</td>
</tr>
<tr>
<td>12.</td>
<td>Information</td>
</tr>
<tr>
<td>13.</td>
<td>Amount of hours and work</td>
</tr>
<tr>
<td>14.</td>
<td>Job planning</td>
</tr>
<tr>
<td>15.</td>
<td>Self-expression</td>
</tr>
<tr>
<td>16.</td>
<td>Efficient methods</td>
</tr>
</tbody>
</table>

Available surveys as presented in the material on hand are dissimilar to the extent that the same factors do not always appear in each survey.

The number of people who answered each survey is not known; therefore, it is impossible to obtain weighted values per factor used.

The ranking shown on the chart is tentative because all surveys did not contain the same factors. For example, the number one factor was obtained from three surveys, while supervision, which ranks seventh, was based on 15 survey results.

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trust his employer, supervisor, and other workmen. The desire for security grows out of many of the poor management practices of past years including the practice of firing superannuated employes rather than transferring them to jobs that they can perform effectively.

Also high on the list is the demand on the part of the workers for recognition, either as promotions when earned, or recognition of a more active nature when the worker has accomplished something deserving of recognition. The workers ask for self-respect and recognition as individuals just as the managers and self-employed do.

Another concept that is found in these surveys is the idea of interesting work, or the opportunity for the worker to express himself through his work. This need on the part of the workers has been neglected too long.

It is important for management to recognize the wants of workers in a job for only then can it select the right incentives to induce them to increase their productivity and lower the unit cost of production.
The preceding chapter presented the principles underlying the conscious utilization by management of various employment factors as stimulants to employess to increase their productivity and efficiency. In this chapter, selected incentives are classified according to whether their inducement value is material, semi-material, or non-material. A discussion of each of these factors is then presented.

When the word "incentive" is mentioned, one immediately thinks of the financial arrangements for increasing earnings by increasing productivity. However, in a publication entitled Why Men Work, Alexander Heron challenged the belief that economic rewards and punishments are wholly equal to the important task that is entrusted to them -- inducing men to work.¹ He states that perhaps in the upper levels of the business hierarchy and among the ranks of the self-employed these financial incentives are found acting as positive and negative inducements, for these men are able to visualize the direct results of their efforts reflected in increased or decreased financial rewards. But for the great majority of workers who are employed at the intermediate or lower levels, these material incentives are not sufficient to induce them to give their greatest production to the company for which

they work. At this level the lack of diligence will not bring the swift retribution to the worker that it brings to the self-employed or to the manager of a large business.

INCENTIVES AND DETERRENTS

Professor Baldamus, of the University of Manchester, England in discussing the effects of job satisfaction on turnover and absenteeism before the Seventh Annual Louisiana Personnel Management Conference, said the outcome of many studies, both here and in England, have proved that the motivation to work is highly complex and involves under all conditions a large number of varying factors. In attempting to achieve high productivity it is management's responsibility to determine the crucial or determining motives in each work situation and use the appropriate incentives to stimulate the employees.

Professor Baldamus distinguishes between external and internal factors that influence a person's productivity. The external, or objective, factors include such things as financial incentive systems, while the internal, or subjective, factors include the "psychological" factors. The subjective elements are those that give most trouble in inducing people to work but they are just as effective as the others.

The speaker classified the job elements as positive and negative; the positive factors are incentives and tend to increase the willingness to work, while the negative factors are deterrents and tend to restrict a worker's activity. He classifies these factors in the following manner:

<table>
<thead>
<tr>
<th>Economic Factors</th>
<th>Job Factors</th>
<th>Integrative Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive (Incentives)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation of needs (subsistence, sex, luxury, etc.)</td>
<td>Satisfactions inherent in work</td>
<td>Co-operative attitude toward management</td>
</tr>
<tr>
<td>Acquisitive drive</td>
<td>Interest in work</td>
<td>Team spirit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Desire for status and recognition</td>
</tr>
<tr>
<td><strong>Negative (Deterrents)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation of spare time</td>
<td>Boredom</td>
<td>Hostile attitudes toward management</td>
</tr>
<tr>
<td>Interest in spare-time jobs</td>
<td>Fatigue - psychological</td>
<td>Traditional norms of restrictive behavior</td>
</tr>
</tbody>
</table>

* Social factors

All these forces are present in any work situation and the task of the managers is to determine which ones predominate, and apply the appropriate incentive. It is also stressed that, "Whatever the external techniques to control the worker's motivation are, it is clear that they can only be effective in as much as they reach the worker's mind, his attitudes, feelings, dispositions, drives, or whatever you like to call it (the psychological, or internal factors)."\(^3\) This concept was also emphasized by Shuman when he said, "Incentives are related to motivations as keys are to locks."\(^4\)

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\(^3\) *Ibid.*

According to Dr. Lillian Gilbreth, incentives may be in the form of either a reward or punishment as the result of the worker's efforts and that "All the reward can possibly do is to arouse in the individual a natural instinct which will lead him to increase his work." Dr. Gilbreth points out that a reward is the just outcome of one's actions and thus, punishment is really a reward for poor or wrong actions.

The principal rewards that management can offer are: promotion, increased pay, a bonus, shorter hours, or anything else that can be given to a person to benefit him and increase his desire to continue producing. Punishment may be positive, such as fines, assignment to less desirable work, reprimand, discharge, or anything else that will emphasize upon the worker that he has not done what was expected of him. Punishment may also be negative in the sense that there is no reward. These rewards and punishments can be used to induce a worker to produce more. To be most effective as a stimulant to production the reward must be positive, predetermined, personal, fixed, unchanged, assured, and prompt.

CLASSIFICATION OF INCENTIVES

The preceding analysis of what workers want in a job indicates that incentives can be used to stimulate human desires of two entirely different types -- economic and non-economic.

6 Ibid., p. 280-281.
Petersen and Plowman indicate that these human desires are stimulated by incentives of three types, namely, "...financial, non-financial, and social." This classification can probably be defended; however, it appears that the latter two are really part of the same, i.e., the social incentives are also part of the non-financial incentives and stem from the fact that the human individual can not be isolated from his surroundings or environment.

For most purposes incentives may be classified into two types, material and non-material. The former consists of goods and services; the latter of intangible appeals which are satisfaction-yielding from the individual's point of view, including considerations such as pride, position, power, prestige, altruism, religious fervor, intellectual curiosity, comradeship, and negatively viewed, certain forms of coercion.

There is much controversy as to which incentives can be used most effectively in order to stimulate more productivity-material or non-material. The earlier concept was that "economic man" could be sufficiently motivated by the application of the economic incentives, but after the Hawthorne experiments the emphasis shifted to the non-economic inducements.

The two types should not be considered as mutually exclusive for they both have potential motivating power over the actions of men. The issue then is not necessarily one of economic

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8 Shuman, loc. cit.
incentives or human relations, but is a problem of integrating the economic incentives into the pattern of human relations. In other words, the pulling power of financial rewards is strongly affected by the pattern of human relations into which they are introduced.9

For the purpose of this study incentives are classified as material, semi-material, and non-material.10

MATERIAL INCENTIVES

An effective method of increasing productivity is to appeal to the motives based upon an individual's primary needs. This can be accomplished by means of the material incentives, for "Nothing has yet been found to create this desire (to produce) like a financial incentive." The use of this type incentive does not make the work more interesting or satisfactory, but it may stimulate the worker by giving him a proprietary interest in the job.12

Semi-material and non-material inducements have a tremendous effect on the productivity of the worker, but they can be used effectively only when combined with the material incentives. The strongest stimulants are those that appeal to the enlightened self-interest of the workers, for as Shuman said, "In moving from situation to situation in the struggle of life, man seems affected


10 This classification was largely influenced by Webster Robinson, Fundamentals of Business Organization (New York: McGraw-Hill, 1925), pp. 197-222.


by one overwhelming urge, the will to survive. The fundamental drive— the desire for self-perpetuation and self-expression is always present. It is the basic expression of self-interest."  

In trying to find the incentive to which the workers will respond it must be remembered that in their reactions to life situations most men seem to be bipolar in that they desire both perfect security and complete freedom of opportunity. People seem to want the opportunity to advance while at the same time having protection against a regression in their economic or social position. This self-interest must not be construed too narrowly to include only physical preservation. What is implied is that the will to survive is greater in most people than any of the other drives. This will to survive and progress forms the basis for the material incentives. There is no substitute for good supervision and good human relations, but no one should underestimate the extent to which the opportunity to increase take home pay or other material benefits can increase productivity. As one writer has said, "Good supervision, pride of workmanship, and fear of censure all have their place in your shop, but no one has yet found a device more effective than the lure of increased earnings to a continued high level of productivity."  

The material incentives are based upon man's primary needs and can be used to stimulate the "desire for possession,"

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Almost all workers can be stimulated to increase their productivity by the prospect of an additional monetary return. The few exceptions to this statement are people in three categories: those with very low standards of living who, when they have earned enough for subsistence are unwilling to work further; those in the very high economic bracket who have enough of the material goods and are unwilling to expend further energy; and those very rare selfless individuals who are not motivated by the desire for economic gain.

Management has used the material incentives because of the very nature of business, which is profit seeking. The means of measuring the value of goods and services in this country are in terms of money. This concept was so firmly entrenched in the minds of the "owner managers" of the 19th and early 20th centuries that they took it for granted that it was the single important incentive that could be relied upon to produce enthusiastic responses from the workers. This concept is still held by many managers today, but the more enlightened professional managers are able to think in terms of the tangible and intangible incentives.

Up to the point of the attainment of a subsistence income, the material incentives do furnish the principal motivations for people, for at this level they think primarily in terms of keeping alive. As the quantity of goods and services available

\[15\] See Chapter II, pages 19-22.
to them passes this subsistence level the principle of marginal utility comes into play and the inducement value of the non-material incentives increase. In the higher income levels, the inducement value of money seems to be in terms of its prestige value rather than its purchasing power.

However, with the bulk of production workers, the basic appeal to self-interest is found in systems of financial rewards that enable them to increase their earnings by increasing output, for:

"Even the unintelligent employee, on whom the non-material and semi-material incentives probably have little effect, can be stimulated to further energy by the prospect of an additional monetary return. Financial incentives, in the last analysis, are the ones most generally effective. Upon them as a foundation, the rest of the incentive structure must be built, for without a satisfactory wage system all other incentives lose their force."  

The material incentives that are analyzed in this study are incentive wages, profit sharing, bonuses, merit wage increases, merit promotions, guaranteed annual employment, low cost housing, discounts on purchases, and suggestion systems with financial rewards.

**INCENTIVE WAGES.**

Essentially there are only two methods of wage payment. One is to pay for the amount of time the worker spends on the job; the other is to pay for the amount of goods and services he produces. The first of these is called time wages; the second is called incentive wages. Under time wages, the employer pays for the physical presence of the worker and assumes that productivity will result from his presence. Under incentive

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wages the employer compensates the employee in direct proportion to his production in excess of a certain predetermined amount, when this extra productivity is the result of the worker's own added skill and/or concentration. Incentive wage payments to employees are contingent upon performance and are linked to results accomplished rather than to the worker's physical presence on the job. Under the time basis of payment management controls the conditions of work including the setting of pace. Under an incentive wage plan the worker assumes part of management's responsibility for stimulating production, for the responsibility is largely up to him to see that his time and effort are used most advantageously and efficiently. His reward is directly proportional to his productivity - with greater productivity goes greater reward; with smaller productivity goes smaller reward.

Objectives and Definition of Incentive Wages

The principal objectives of incentive wage plans are: to lower unit cost by increasing production; to increase earnings of employees through individual merit and accomplishment (if the increase is due to the application of his skill, or if he gives more concentrated effort to his task); and the reduction of overhead expense. In the case of a piece rate plan the predetermined amount is automatically considered to be zero production. The producer is then compensated in proportion to his production from this point.

The fact that there is a great variety of incentive wage plans makes it difficult to define them with any degree of inclusiveness. However, for purposes of this study the definition given by Donald E. Ackerman, a management consultant for McKinsey and Company, will be used.

"A wage incentive is simply the extra compensation paid the employee for all production over a specified standard amount per day or hour which results from his exercise of more than normal skill, effort, or concentration, when performed in a predetermined manner with standard tools, facilities, and materials, (and) stated operations to produce a specified result."

In order to understand this definition more fully it is necessary to study its component parts. First, there is the phrase, "all production over a specified amount," which implies that there is some method of measuring the goods and services produced. This necessity is inherent in any application of incentive wages. This one fact needs emphasizing -- without a system of work measurement and its application through methods, motion, and time studies, there cannot be an effective incentive wage plan. Incentive and work measurement go hand in hand. It is impractical to have incentives based upon inadequate work measurement for there is too great a chance that some workers will earn wages that are out of line with what the other employees are earning.

The second component of the definition is the statement, "which results from his exercise of more than normal effort, skills, or concentration." This part of the definition implies that the extra production will result from the efforts of the

worker himself rather than from the efforts of management or any other factor. The increased productivity, then, must result from some extra exertion, either mental or physical, on the part of the worker. It should not result from new techniques developed by management, new machines developed as a result of extra capital, or new materials that are used in the production of the commodity. In other words, the worker must have caused the added production.

The last part of the definition is, "when performing in a predetermined manner, with standard tools, facilities, and materials, (and) stated operations to produce a specified result." This statement implies that management will determine the manner in which the work is to be performed rather than leaving this entirely up to the worker. However, it must be assumed that the worker will have some voice in determining the manner of production. This part of the definition considers that management will put in a standardization program; that it will put in a methods analysis program in order to find the best method of performing the job; that quality control will be instituted; and that the proper procedures and tools are provided for the worker. In summary, the worker is to have control over the quantity of goods produced but not over the procedure of operation. This standardization is necessary for control purposes in the present highly interdependent plants.

Prevalence of Incentive Wages

At the present time an increasing number of companies and unions are turning toward incentive pay plans as a method of increasing production and at the same time increasing the
workers' income. This fact was emphasized in a recent study by the Wage Analysis Branch of the Bureau of Labor Statistics.20 (See Table III for a summary of results). This survey showed that about 30 per cent of the plant employees in manufacturing industries were paid on an incentive basis during 1945-46.

Thirty-four per cent of the plants surveyed had some form of incentive wage system. Of these, 85 per cent used the piece rate predominantly and 15 per cent used some form of bonus payment. Thus, the most prevalent method of payment among the incentive plans in use was the piece rate computed according to the output of individual workers.

There was much variation in method of payment among the industries. The apparel, metal working, bituminous coal and textile industries and automobile repair shops used the individual piece rate plans, while the chemical industry and clothing, department, and limited price variety stores paid group bonuses.

Incentive plans were more prevalent among the companies manufacturing wearing apparel than any others. This industry is characterized by the workers spending a large proportion of their time handling the materials as contrasted with a small proportion

20 Joseph M. Sherman, "Incentive Pay in American Industry, 1945-46," Monthly Labor Review, LXV (1947), 535-7. Fifty-six manufacturing industries, including 34,000 establishments with about 5½ million workers were surveyed. This report includes approximately 46 per cent of these plants and 58 per cent of these workers. Also surveyed were eight non-manufacturing industries, including 21,000 establishments with about 1½ million employees. This report included about 35 per cent of these establishments and 40 per cent of the workers.
### TABLE III

**EXTENT AND TYPE OF INCENTIVE PLANS FOR PLANT WORKERS IN SELECTED MANUFACTURING AND NON-MANUFACTURING GROUPS, 1945–1946**

<table>
<thead>
<tr>
<th>Item</th>
<th>Manufacturing</th>
<th>Non-manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total plants</td>
<td>Ap-</td>
</tr>
<tr>
<td></td>
<td>studies</td>
<td>barrel</td>
</tr>
<tr>
<td>Per cent of all employees studied paid on an incentive basis</td>
<td>30</td>
<td>65</td>
</tr>
<tr>
<td>Per cent of establishments with incentive systems for plant workers ...</td>
<td>34</td>
<td>35</td>
</tr>
<tr>
<td>Predominantly piece rate</td>
<td>29</td>
<td>82</td>
</tr>
<tr>
<td>Individual</td>
<td>28</td>
<td>81</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Predominantly bonus</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Individual</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Group</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>With no incentive system</td>
<td>66</td>
<td>15</td>
</tr>
<tr>
<td>All establishments studied</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Number of establishments studied**

<table>
<thead>
<tr>
<th></th>
<th>Manufacturing</th>
<th>Non-manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total plants</td>
<td>Ap-</td>
</tr>
<tr>
<td></td>
<td>studies</td>
<td>barrel</td>
</tr>
<tr>
<td></td>
<td>15,636</td>
<td>2,261</td>
</tr>
</tbody>
</table>

*a* Includes other manufacturing industries not shown separately.

*b* Less than 0.5 per cent.

of time spent on machine operations. Thus, control over output is exercised primarily by the worker rather than by the machine. Also, the danger of spoilage is smaller here than in other industries. Sixty-five per cent of the workers and 85 per cent of the establishments in this industry were on an incentive basis. Although incentive workers were numerically important in all apparel industries they were relatively less important in the manufacture of women's suits, coats, and knit underwear than in the manufacture of work shirts. Approximately three-fourths of the workers in the men's dress shirt and nightwear industry were paid on a piece work basis during November, 1950.21

The next important group using incentive wage plans was the textile group, with 39 per cent of the employees and 70 per cent of the establishments on incentive. This method of wage payment was used more extensively in the full-fashioned and seamless hosiery plants than in other textile groups. Over two-thirds of the workers and more than 95 per cent of the plants in this group were on incentive. The least important users of incentive wages were the textile dyeing and finishing plants that used large amounts of machinery and centralized volume control.

Incentive methods of wage payment are widely used in the synthetic textile industry. In March, 1952, 30 per cent of the production employees in this industry were being paid this way.22

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In the cotton textile industry nearly two-fifths of the mill workers were paid on an incentive basis at the same time. In the metal-working industries only 25 per cent of the workers and 17 per cent of the establishments were on such plans. This figure was even smaller in tool and die jobbing shops where only two per cent of the productive workers were paid on the incentive basis.

Approximately the same situation is true in the chemical industry where only seven per cent of the workers were paid on an incentive basis. This low percentage can be explained by the nature of such production, for the speed of production is typically set by the requirements of the process rather than by the worker.

The method of payment among the other industries varied greatly. In the tobacco industry 73 per cent of the cigar makers and five per cent of the cigarette makers were on incentive. Here again, the reason for the small percentage in the cigarette industry was the extensive use of machinery with the rate of output determined by some factor other than the application on the part of the workers.

Among non-manufacturing industries, 37 per cent of the workers in automobile repair shops, 34 per cent in clothing stores, 28 per cent in department stores, 22 per cent of underground bituminous coal miners, 14 per cent in power laundries, and three per cent in limited price variety stores (in the New England states) were paid on an incentive basis.

Two other surveys dealing with the present status of

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Ibid., p. 2.
incentive wage plans were conducted by Stephen Havasy and Company, Chicago management consultants. The first was conducted in 1946, among 65 companies engaged in the manufacture of machine and metal assemblies. The survey showed that 35 per cent of the plants used the piece rate system for calculating gross pay for the greater part of their productive employees; 33 per cent used the standard hour with 100 per cent bonus; 20 per cent used straight day work; seven per cent used the standard hour with less than 100 per cent premium; and five per cent used the measured day work or the point system.24 (See Table IV)

The second survey, conducted among 96 comparable industrial plants in October, 1948, showed that 70 per cent of them used the time basis of wage payment for paying at least some of their workers and 81 per cent of the plants used some form of incentive payment.25 The most prevalent form of incentive was the piece rate plan; second, was the standard hour with 100 per cent premium arrangement; third, was the over-all bonus plan; fourth, was the measured day work plan; fifth, was the standard hour with less than 100 per cent premium; and sixth, was the point, or unit, plan. (See Table V for the percentages.)

24 "Wage Incentive Practices in 65 Plants," Factory Management and Maintenance, CIV (1946), 126-128. The percentages do not add to 100 per cent because some of the companies use more than one method.

TABLE IV

WAGE PAYMENT PLANS USED BY SIXTY-FIVE PLANTS TO CALCULATE GROSS PAY OF THE GREATER PART OF THEIR PRODUCTIVE EMPLOYEES IN 1946

<table>
<thead>
<tr>
<th>Plan used</th>
<th>Per cent of all plants&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard hour</td>
<td></td>
</tr>
<tr>
<td>100 per cent premium</td>
<td>40</td>
</tr>
<tr>
<td>Less than 100 per cent premium</td>
<td>33</td>
</tr>
<tr>
<td>Piecework</td>
<td></td>
</tr>
<tr>
<td>Straight daywork</td>
<td>20</td>
</tr>
<tr>
<td>Measured daywork</td>
<td></td>
</tr>
<tr>
<td>Point</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> The percentages do not add to 100 per cent because some companies use more than one plan.

TABLE V
WAGE PAYMENT PLANS USED BY
NINETY-SIX PLANTS IN 1948

<table>
<thead>
<tr>
<th>Plan</th>
<th>Number plants using</th>
<th>Per cent of all plants&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight daywork</td>
<td>67</td>
<td>70</td>
</tr>
<tr>
<td>Piecework</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>Standard hour - 100 per cent premium</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Over-all bonus-based on total produc-</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>tion or profits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured daywork</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Standard hour - less than 100 per ce-</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>nt premium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Point or unit</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

<sup>a</sup> Out of 96 plants, 38 use more than one wage plan. Of these 28, two used five plans, five use three plans, and 31 use two. Of the 38, all except five plants use straight daywork as one of their plans. Of the 12 plants using over-all bonus plans, 10 pay in one way only, two pay in more than one.

It is interesting to note the changes that were made in incentives during the four year period from 1944 to 1948. Thirty-three per cent of the 65 plants studied changed their wage plans from 1944 to 1946. Of these, 55 per cent changed from straight day work to some other plan; 30 per cent changed from the piece rate plan; 10 per cent from the standard hour with less than 100 per cent premium; and five per cent from the standard hour with 100 per cent premium.

These companies changed to the following plans: 45 per cent to the standard hour with 100 per cent premium plan; 20 per cent to the piece rate system; 15 per cent to the standard hour with less than 100 per cent premium plan.

There were fewer changes in 1948. Only 19 per cent of the 96 surveyed plants changed during the preceding two years. One-half of these changed from the straight day work plan to some other arrangement; 11 per cent changed from the piece rate plan, the all-over bonus method, and the measured day work system; six per cent left the standard hour with less than 100 per cent premium plan, the standard hour with 100 per cent premium, and the point or unit system.

The companies turned to the following plans: 39 per cent to the standard hour with 100 per cent premium; 22 per cent to the over-all bonus plan; 17 per cent to the piece rate system; and six per cent (each) to the measured day work and point, or unit, plans. In other words, the standard hour with 100 per cent premium is becoming the most popular plan.
The predominant methods of determining labor standards as a basis for incentive plans in 1948, were individual time studies and past performance records. Individual time studies were used as a basis for standards by 54 per cent of Group I plants and 59 per cent of Group II plants, past performance records were used by 16 per cent of Group I plants and 23 per cent of Group II plants, standard time data were used by 24 per cent of Group I and nine per cent of Group II plants used estimates as their standards. (See Appendix D and Appendix E for additional information). The companies are turning to more precise methods of setting their standards.

Unions and Wage Incentives

Most managers are aware that the reaction of the men who must work under a given incentive plan, and those of their union leaders, are strategic factors in its success or failure. Unions, in general, are opposed to incentive wage plans, for they have the tendency to differentiate between workers and destroy the group relationship in a shop. Management judges one worker on the basis of another's accomplishment and the differences inherent in an enterprise economy are accentuated.

26 Group I plants produced: metal parts; assemblies and machines; assemblies made from metal and other materials, such as pens, pencils, and musical instruments. Group II plants produced: sheet steel, sheet metal and tubing; paper products; rubber, plastics, and leather; chemicals; and non-ferrous metals.

Unions were born out of the desire to prevent discrimination and differentiation. A union ordinarily insists upon one rate for one type of work rather than rate ranges, i.e., the union favors the standard job rate. Arrangements for merit determination of individual rates have also been disapproved and the substitution of "standard level of production" has been favored. This level is attained by the unions (and unorganized groups) by exerting pressure on "pace-setters" to confine themselves to the standard rate. The union also insists on the "group rule," whereby a uniform set of rules applies to all workers. If incentive plans are to be successful where unions are involved they must be designed to strengthen rather than destroy group solidarity.

When employers use the increased earnings achieved by employees under such plans as an offset to wage increases or job rate adjustments, there is strong opposition from the workers. Many recent collective bargaining disputes have originated over management's refusal to adjust base rates on this ground.

Unions are opposed to incentive plans that only reward the worker for increases in productivity resulting from increased human application. The unions feel that productivity increases resulting from new methods, better machines, better materials, and improved working conditions should be shared with the workers.

There are wide variations in union attitudes toward wage incentives. In the textile, apparel, and (to a limited extent) the metal goods industries, payment by results is the custom and
is accepted by the union. Solomon Barkin, the Research Director of the Textile Workers Union of America, C.I.O., has said, "Where (wage incentive) plans have operated well in specific plants, the workers are interested in this form of wage payment." 28

The majority of unions are primarily interested in how the plans are instituted and administered rather than the plan itself. The late Philip Murray, while President of the C.I.O., said, "Where morale is high and a good understanding exists between management and union members, almost any wage system can be made to work." 29

This feeling is shared by his successor as President of the United Steelworkers, C.I.O., David J. McDonald. According to him, if a company comes up with an incentive plan that is foolproof and particularly beneficial to workers, the United Steelworkers will seek its acceptance throughout the industry; United States Steel Corporation's present incentive program does not answer that description; the one at Jones and Laughlin Steel Corporation might, but the union wants more experience under it. 30

The United Steel workers helped Jones & Laughlin plan and install the Equipment Utilization Incentive plan in effect in many of its plants. 31


At the other extreme, many unions are vigorously opposed to any system of payment by results. In some instances they have gone to the extreme of writing clauses prohibiting the use of such plans into their constitutions. For instance, the International Association of Machinists' charter states that in shops where no wage incentive system has existed before, no member is permitted to work on such systems. Furthermore, any union member guilty of advocating or encouraging any of these systems where they are not in existence is liable to expulsion.

The unions primarily are interested in increasing the earnings of their members, and if increasing individual productivity is necessary to achieve this goal, they will passively accept that as a goal also. However, such plans must provide for the sharing of the gains in productivity arising not only from increases in human application above standard, but also from all other sources of increased productiveness. Present methods of arriving at standards for wage setting lack scientific foundation and must be used with caution.

Indicative of the degree of union acceptance of incentive wage plans is the record of the War Production Board during World War II. This group had to approve all new incentive plans. The application for the plan had to be signed jointly by the company and the union, if a union was involved. Forty-three per cent of the applications submitted were signed jointly by the company.

33 Barkin, loc. cit.
and union. It was also found that when the unions agreed to the plan they usually rushed the companies into installing it before the company was ready.\textsuperscript{34} The surveys reported by Factory Management and Maintenance in 1946 and 1948, also showed that unions are active in incentive wage activities. (See Appendix G for additional information.)

In summary, most unions do not seem to object to incentive wage plans per se. The opposition is to their potentially disruptive effect, for these plans emphasize the individual rather than the group and give management a basis for appraising the work of one worker in relation to that of another. Unions will accept those plans that share the gains in productivity arising from all factors, not just the increase in human application. A voice in the inception and administration of the plan must also be had by the union for it to favor such plans.

**Effects of Using Incentive Wages**

There are so many variables influencing a worker's productivity that it is practically impossible to segregate the results obtained from using incentive wages and those obtained from other factors. For instance, during the Hawthorne experiments, it was found that the Second Relay Assembly Control Group increased its productivity an average of 12 percent when placed on an incentive plan but "It was quite apparent that factors other than the change in wage incentive contributed to that increase. The condition that all other things remain the same had failed of

\textsuperscript{34}H. B. Maynard, "Changing Philosophies on Wage Incentives," Mechanical Engineer, LXXIV (1952), 278.
realization." Other factors included were: a selected group with the group spirit, the spirit of competition with a former Relay Assembly Test Group, and better working conditions. However, an attempt has been made to evaluate the results of using incentive wage plans.

**Effects on Productivity.** In view of the fact that the primary objective of using incentive wages is to increase productivity, the question may rightly be asked, "To what extent have they increased productivity?"

Albert Ramond and Associates report that studies conducted immediately preceding World War II in hundreds of plants in a great variety of industries showed that labor productivity under the straight hourly rate form of compensation seldom exceeded 60 per cent of the performance obtained with "good wage incentive methods." This meant that:

"Labor costs could be reduced by 20% to 25% while incentive wages of 25% over and above the regular basic hourly wage scale could be paid. The postwar possibilities for increased productivity, lower costs, and additional wages will be at least equal, and probably greater, for not only will the patriotic motive have disappeared, but the old peace time belief that increased productivity contributes to unemployment is sure to return."

The practical war benefits of production incentives have been reported by the War Production Board in a very conclusive manner.

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37 Ibid.
On April 27, 1944, J. W. Nickerson, Director of the Management Consultant Division of the War Production Board, said that, "Considering whole regional areas and including all types of incentive plans, good, bad, and indifferent, they are averaging an increase in productive performance of 25% to 45%."

A more recent study shows that in plants where workers are paid by the hour they are likely to be not more than 50 per cent as efficient as they become after their operations have been improved by methods studies and they are paid extra compensation on the basis of their accomplishment. Consequently it may be said that, "The joint results of improved management and of the financial stimulus are approximately to double efficiency."

Currently there are numerous instances of increased productivity as a result of the use of incentive wage plans. For instance, the Zenith Radio Corporation combined two different types of incentive payment plans into one single integrated (a modification of the standard hour plan) wage system that raised efficiency in various departments from 20 per cent to 60 per cent above the former lever.

The application of incentives to materials handling increased production 25 per cent and reduced manpower by 62 per cent at the Thew Shovel Company's Loraine, Ohio plant. The increase

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38 Ibid., p. 1.


was achieved only after two years of careful study and rearrangement of materials handling facilities to expedite the flow of parts and sub-assemblies needed in manufacturing power cranes and shovels. 41

Similar results were obtained at the Neff Concrete Products, Inc. This company has a group plan that is based on the principle of time saved. Each work crew has a certain quota of concrete pipe to produce; when that goal is reached, the crew is permitted to leave, regardless of how many hours they have been on the job. This plan has resulted in the men finishing their work soon after the lunch hour instead of working until four o’clock or later. This result leads to more efficient use of the machinery, thereby obtaining approximately 20 per cent more production in a day’s time than would be obtained were no incentive in force. 42

Direct labor costs were reduced by about 47 per cent, the production per operator was more than doubled, and a loss of $5,000 per month was changed to a profit of $16,000 per month, after a piece rate plan was installed at the Colt Manufacturing Company. 43

Another incentive plan, which was in operation in a machine shop, caused a production increase of 65 per cent over a 16 month

41 W. J. Allaback, "Incentive Handling System Upped Production 25%," Steel, CXVIII (1951), 82.


During the same period there was a reduction in unit labor cost of 38 per cent.\(^{44}\)

When Jones & Laughlin Steel Corporation introduced the Equipment Utilization Incentive plan in its Pittsburgh plants on December 2, 1951, production increased from three per cent in some cases to 50 per cent in others.\(^{45}\)

Similar results were found at R. G. LeTourneau, Incorporated. When a modified form of the Bedeaux plan was introduced, production on direct operations that were not restricted by some other factor increased by "...at least 50 per cent and sometimes 100 per cent ..."\(^{46}\)

Increases in production following the installation of an incentive wage plan follow a given pattern. The rate of increase is slow at first; then increases rapidly; then becomes fairly static. This pattern was true at Western Electric's Hawthorne plant. J. W. Nickerson, Professor of Industrial Engineering at New York University and a consultant on incentive wages, has stated that on the average, an increase in productivity of about 40 per cent occurs in the first 90 days of operation. Wages increase on an average of 15 to 20 per cent and costs decrease 10 to 15 per cent.\(^{47}\)


\(^{45}\) Letter from Albert E. Martz, Industrial Engineer for Jones & Laughlin Steel Corporation, dated December 12, 1952, p. 2. For more information, see Chapter VII.


\(^{47}\) J. W. Nickerson, "Significance of Incentives in the National Economy," Machinery, LIV (1947), 172.
With a properly developed and administered wage incentive plan, the output per man-hour will increase by 40 to 50 per cent over what it was before the installation of the incentive plan. It has been proved that the output of the individuals in any group of employees on incentives will distribute itself in a pattern which follows the normal distribution curve about the mid-point. According to one author this mid-point is generally found at about 130 per cent of the standard, or at the 30 per cent bonus level. In contrast to this, the day workers are found at 70 to 75 per cent of standard. Therefore, with a properly developed and administered system of payment by results, output per person usually will increase by 40 to 50 per cent.

**Effects of Incentive Wages on Earnings.** Generally, employees operating under an incentive wage plan earn more than employees on a comparable job being paid on the time basis. The differential in earnings between incentive workers and time workers generally varies from zero to about 40 per cent. Some of these differentials are shown in Appendix H. For example, the average hourly earnings of incentive workers in automobile repair shops were 130 per cent of the day earnings; in the full-fashioned hosiery industry the figure was 120 per cent; in power laundries the percentage was 116 per cent; in sawmills it was 134 per cent; and in the wood furniture industry the figure was

108 per cent.*49 In November, 1950, incentive workers in the men and boys' dress shirt and nightwear establishments earned 115 per cent as much as time workers.50 The hourly earnings of incentive workers in the synthetic textile industry averaged about 12 per cent higher than those of time workers during March, 1952.51 During the same period, incentive workers in the cotton textile industry earned about 11 per cent more than the time workers.52

The 1948 survey for Factory Management and Maintenance found that the total financial earnings of an average productive employee on incentive were 124 per cent of straight time base pay.53 (See Appendix I for more details.)

Other Effects of Incentive Wages. Another factor that is affected by the adoption of an incentive wage plan is the number of grievances against a company. While there is little evidence concerning the number of grievances occasioned by the installation of such plans, the available evidence points to the fact that

49Computed from United States Department of Labor, Bureau of Labor Statistics series on "Straight-Time Hourly Earnings for Selected Occupations," numbers 414, 419, 424, 454, 459, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 480, 482, 490, 540, 541, 542, 543, 544, 545, 547, and 548. (These are simple averages. They were computed by adding the average hourly earnings of the time workers and dividing the result into the total of the average hourly earnings of incentive workers.)


52Ibid., p. 2.

while incentive wage plans will quell certain grievances they will also serve as the basis for new ones.

Jones & Laughlin Steel Corporation has usually experienced more complaints after the installation of an incentive than before. Grievances alleging inequitable standards have been filed on approximately 15 per cent of the plans installed. Of the installations that include indirect workers, approximately 50 per cent have caused grievances involving the classification of an employee as an indirect worker rather than a direct worker.

R. G. LeTourneau, Incorporated has experienced "a few more grievances" since installing their incentive wage system. However, these grievances have been of a minor nature and have not concerned standards.

Mississippi Products, Incorporated, which does not have a union, has had very little difficulty with grievances since installing its incentive plans. The effects of the incentive on grievances have been "negligible."

Incentive wages also have an effect on labor turnover. The available evidence indicates that incentives tend to reduce the rate of labor turnover. However, since incentive coverage is only one of many factors involved in the turnover of personnel, the validity of any conclusions drawn from turnover statistics

54 Letter from Albert E. Martz, op. cit., p. 5.

55 Letter from Palmer Bliss, op. cit., p. 2.

56 Obtained in interviews with G. R. Twyman, Chief Industrial Engineer, and other executives of Mississippi Products, Incorporated, February 3, 1953.
should be judged with considerable discretion.

At Jones & Laughlin Steel Corporation incentives had little, if any, effect on the turnover rate. In the opinion of Albert E. Martz, one of the Company's industrial engineers, "The workers who quit usually had a reason such as poor health, couldn't stand the extreme heat, didn't like the work, ... etc., but never had any indication that lack of incentive coverage was a reason for quitting."  

At R. G. LeTourneau, Incorporated, it was felt that turnover was reduced because of the incentive system. Palmer Bliss, the Chief Industrial Engineer, surmised that since the base rates of the employees were comparable to other companies in the area, since LeTourneau paid about 20 per cent over the base rate for incentive payments, and since turnover had been lessened, the incentive wage system had caused the reduction.  

The turnover figures for Mississippi Products, Incorporated were lower than the Bureau of Labor Statistics figures for other companies in the household industry. Although no specific figures were available as to the amount of turnover caused, or prevented, by the use of an incentive wage plan, it was agreed by the individuals interviewed that part of the reduced turnover could be attributed to the increased earnings under the incentive plan.  

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57 Letter from Albert E. Martz, op. cit., p. 3.
58 Letter from Palmer Bliss, op. cit., p. 2.
59 Obtained in interviews with G. R. Twyman and other top executives.
Other effects of incentive wage plans are: lower costs through better methods, smaller number of employees on the payroll, cost control, performance measurement, accurate scheduling, and the pointing out of poor management practices. 60

PROFIT SHARING

A second financial incentive that can be applied by management is the sharing of profits with employees. This device is desirable, for it removes some of the barriers to cooperation between management and non-management groups in a business organization. Alfred Marshall recognized this when he said:

"As a rule the relations between employers and employed are raised to a higher plane both economically and morally by the adoption of the (formal) system of profit-sharing; especially when it is regarded as but a step towards the still higher but much more difficult level of true cooperation." 61

Philosophy of Profit Sharing

The philosophy upon which profit sharing is based is a combination of ethical idealism and hard practicality. 62 Originally the practice was conceived of as giving the employee a creative share in management and the right to share


in the profitability of the business. The depression of the 1930 decade forced business men to subordinate the ideal and altruistic concepts of this practice to the more practical concern for profitability. This latter is to be achieved through the employees increasing their output and efficiency. The worker's claim to a share in the profit is justifiable only to the degree to which he participates in promoting the prosperity of the company. This practice of sharing profits can be justified by management only as long as labor receives a corresponding share in those profits and cooperates fully to achieve them.

There are several other objectives that profit sharers attempt to achieve, including: strengthening the faith of wage earners in the free enterprise system; instilling a sense of dignity and a feeling of status in employees through the partnership concept; promoting social justice in the form of fair shares between capital and labor; and increasing confidence in management.

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64 Balderston, loc. cit., and Thompson, loc. cit.


66 Thompson, loc. cit.

67 Balderston, op. cit., p. 11. There is a great deal of difference in attitude and production between an employee and an owner, and under this arrangement there is at least the tendency for the workers to think like owners.

68 Hooper, op. cit. p. 89. It should be pointed out that this is a problem of semantics for there is a difference between
Of the plans that have been adopted, most were initiated by the owners and not by the workers.

**Definition of Profit Sharing**

The term profit sharing means different things to different people; in fact, the term has been broadened so greatly that it is now a very confusing concept. It is now often used to refer to such plans as cost of living adjustments, guaranteed wage arrangements, health provisions, incentive wage plans, bonus payment plans, stock purchase plans, pensions, and production bonus systems. It does not mean health insurance, a Christmas good-will bonus, or any of a multitude of benefit programs.69

The National Industrial Conference Board, which made one of the most intensive studies of profit sharing, prefaced its study with the statement that the term profit sharing has been loosely used to describe various devices for paying to the employees amounts over and above their regular salaries or wages.70

Dean Balderston indicates two tests that can be used in determining whether given arrangements are profit sharing plans or not. The tests are: "First, does the extra compensation paid to employees bear some recognizable relation to company profit? what is "fair" and what individuals think is "fair." Management might be giving the workers an adequate share of the returns from industry but unless the worker believes he is getting "his fair share" it will cause resentment and the plan will not achieve its purpose.


...Second, does the company announce to its employees in advance, i.e. at the beginning of the period in question, that a profit-sharing plan is in effect?"  

This study adheres to a definition of profit sharing as the prearranged distribution of a specified proportion of the profits to the workers; the amount to be made known in advance.  

Effects of Using Profit Sharing

Henri Fayol believed that profit sharing would work among the higher managers, and probably among middle management, but not for the individual workers, for the relation between their added effort and the added profit is not understood by most employees. This belief is still held by a large number of managers, but there is a growing belief that the plans are advantageous if profit can be traced to productivity per worker and the time interval is not too long between performance and remuneration.

Two examples will illustrate what has been achieved by the use of this incentive factor. The production per hour of labor at Commercial Steel Treating Corporation averaged $3.53 in September, 1947. It had increased to $6.23 during September, 1951. The share of profits that went to the employees averaged 21 per cent of their total earnings in 1951.

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71 Balderston, _op. cit._, pp. 4-5.
72 This definition was largely influenced by Thompson's study. See Thompson, _op. cit._, p. 17.
73 Fayol, _loc. cit._
The management of the Thomas P. Pike Drilling Company reported that the morale of the organization was high and had continued that way after a profit sharing plan was installed. Labor turnover decreased steadily, the volume of sales showed a substantial increase, net profits-after taxes—rose, and worker productivity rose steadily.75

Probably the main limitation of this incentive is the lack of understanding of what is profit and what causes it. The intricacies of accounting often are not understood by the rank and file of employees, so that they do not appreciate the reason for setting aside reserves for contingencies or other purposes, or the necessity for building up a surplus for future operations. Human nature is such that one often counts anticipated gains or income as actual gains with the result that if the anticipated gain is not achieved it is treated as an actual loss. In other words, the workers may anticipate a certain share of the profits and then when the company is required to use large amounts of that profit for the replacement of machinery and equipment, or some other contingency, the worker feels cheated and resentful. Therefore, for any profit-sharing plan to be successful, there must be a close correlation between what the worker expects to receive in a financial way and what he actually receives.

BONUS PLANS

Another material incentive that can be used to stimulate employees is any one of numerous bonus arrangements. These vary in different degrees from profit-sharing arrangements, but all have the characteristic of not being prearranged and based on a proportion of the business profits. Included in this incentive category are awards for exceeding production quotas; gratuitous payments (not directly associated with production) at Christmas, end of year, or other period; and many others.76

Usually a bonus arrangement has only an indirect relation to the employee's productivity for, with the exception of wage incentive bonuses, the remuneration is uncertain as to amount and continuity, for these details are at the discretion of management.

There are two factors limiting the stimulating value of a bonus, other than a production bonus. First, if one is granted periodically, the employees view it as a right and if it fails to materialize, resentment is felt; if not granted regularly, it is not anticipated and comes as a windfall. In either case production is not generated as a result of the bonus. However, other plans of this type have an effect through creating morale and cooperation.

MERIT WAGE INCREASES

A policy of granting increases in wages upon ability and merit rather than upon seniority or a time interval has potential

76 This may be a form of incentive wage.
77 Thompson, op. cit., p. 169.
incentive value for stimulating output and efficiency of production employees. When raises are based upon seniority, or are automatic, there is a tendency to do just enough to get by and not to exert more effort than is necessary. The merit wage policy is usually adhered to in the upper brackets of an organization and reasonably can be expected to operate effectively for other levels. There must be some definite criteria upon which to base merit if inequities in rates are to be prevented. Some factors that serve this purpose are: training, experience, know-how, absences, tardiness, accident rate, ability to get along with other workers, and production (which reflects the others).

**MERIT PROMOTION SYSTEM**

The promotion of men upon their ability and merit rather than seniority and favoritism also acts as a stimulus to increased productivity, for when one knows he will be rewarded for good work the tendency is for him to do more good work. However, if promotions are based upon seniority, favoritism, or nepotism the worker will be inclined to do less than his best work, for the potential reward of increased prestige, authority, and earnings will be lacking.

**GUARANTEED ANNUAL EMPLOYMENT**

Because of the prominent position security has in surveys on job satisfaction, it logically could be concluded that guaranteed annual employment has a high incentive value, for efficiency decreases when doubt and uncertainty concerning his
means of livelihood enters the employee's mind. The demand for this form of wage contract is part of the general desire for security and certainty of economic opportunity.

Under an arrangement of this type, the employer guarantees a certain segment of his employees pay for a stipulated number of hours of work during the year, regardless of whether that amount of work is available or not.

If the fear and uncertainty associated with unemployment can be removed, production should increase, for then the employees could concentrate on the job being performed rather than worrying about their future. The results of this incentive are manifest in a negative manner because it increases effectiveness by preventing a decrease in output.

LOW COST HOUSING

This stimulus to production is ordinarily utilized by companies with locations in areas where inadequate housing prevails. However, many companies in urban areas are finding it necessary to offer this inducement in order to recruit the needed personnel. Its incentive value is primarily indirect and occasioned by a person's desire for adequate housing, reasonably priced, for himself and his family. Its potential value is found in the ability to remove this worry and in generating a pleasant employer - employee relationship.

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78 When the rumor spread that the United States Air Force was dropping 400 B+7's from its production program, morale at the Marietta, Georgia Lockheed Aircraft plant sank so low that an estimated 30,000 man-hours of production were lost. "Result of a Rumor," Newsweek, XLI (April 27, 1953), 85.

79 This term includes free housing also.
DISCOUNTS ON PURCHASES

Under these arrangements management sells its products to the employees at a reduction in price. This practice is the equivalent of increasing the workers' earnings. A modification of this incentive factor is the purchase, at less than the retail price, of non-company products for employees. The incentive value of this factor is in its ability to increase the employee's material position and to create a pleasant relationship.

SUGGESTION SYSTEMS WITH FINANCIAL REWARDS

This factor has both material and non-material incentive value. The workers are given financial rewards for submitting worthy suggestions and are thus encouraged to develop more of a creative interest in their job.

Evidence that this incentive has stimulated productivity is furnished in a survey conducted by the National Association of Suggestion Systems. The results showed that in 177 companies, with 4,650,000 employees, 873,255 suggestions were submitted. Of these, 221,000 were adopted and awards totaling $5,500,000 were paid. As these awards were based upon savings to the company, it can be assumed that production and efficiency were increased substantially more than that.

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80 "Rewarding Employees with Cash for Bright Ideas Has Put Industry on Its Toes," Morning Advocate, January 2, 1953, p. 10A.
The semi-material incentives are those that have only an indirect ability to satisfy men's wants. They are involved with the content and condition of a job and give a worker more interest in his work by making it more attractive to him. Their use tends to offset the loss of creative interest which has been partially caused by mass production techniques. As such, they are necessary for the worker's satisfaction and greater productivity, but only indirectly influence his material gain. These incentives are classified as semi-material because any financial reward obtained from them is indirect and deferred.

The semi-material employment factors discussed are: proper selection and placement, introduction to the job, training programs, holidays with pay, vacations with pay, insurance programs, and retirement plans.

PROPER SELECTION AND PLACEMENT

One of the greatest potential sources of increased productivity in this country resides within the labor force itself. In order to utilize most effectively this productive potential the workers must be assigned to jobs they are best equipped - through education, training, experience, physical characteristics, and inclination - to perform.

Proof that this effective placement has not been achieved is the fact that each year one out of three manufacturing employees leave their job for some reason; 60 per cent of this
number leave voluntary; and only 23 per cent of those "who quit jobs remove themselves from the labor market." In an analysis of employee turnover by the Business Management Service of the University of Illinois, it was found that 42 per cent of the participating employees gave "dislike for job" as one of the three general reasons why they quit their last job; 21 per cent gave "not placed on right job." This same study found that 14 per cent of the manufacturing employees gave "work unsuited to ability" as one of the three reasons why they quit their last job; 12 per cent gave "lack of interest in the job;" 24 per cent said "better job in sight;" and five per cent did "not have enough to do on the job."32

Another source of evidence that proper placement is not always achieved is the results of a 1948 survey conducted among 200 of its members (top executives) by the Society for the Advancement of Management. Eighty-nine per cent of the respondents estimated their employees were producing at, or below, 60 per cent of their possible maximum performance; 59 per cent believed that only one-half of their workers were performing jobs they were best qualified for.33

These studies indicate that the proper selection and placement of personnel can increase the effectiveness of the

81 "Why They Quit," Management Methods, III (1953), 11. These conclusions were based on Bureau of Labor Statistics figures and the results of a study by the Business Management Service of the University of Illinois. In this study, questionnaires were sent to 2,700 ex-employees of a variety of occupations, and personal interviews were conducted with 100 others in their homes.

82 Ibid., p. 12.

employees, and thereby increase productivity and efficiency and reduce unit costs.

INTRODUCTION TO JOB

The first day on a new job is a very difficult time for most workers. The employee is entering a new situation with new relationships; he is disturbing an old set of relations and creating new ones; he is looked upon with suspicion by the old workers, for he is an outsider and a potential competitor. Regardless of the training and experience the person has, he is faced with a new environment and anything that will make the transition easier for him should make him a more productive worker.

One way of making the change easier is to have a good formal introduction program whereby as many of the uncertainties as possible are removed; whereby the employee meets his new associates under the most advantageous circumstances; and whereby he is thoroughly oriented in the use of his new machines, materials, and methods. There should also be a systematic follow-up on the progress of the novice.

TRAINING PROGRAM

An employee who is not properly trained can not be expected to produce to his fullest. To insure that the productivity per worker is increased the employees should be trained in the company's systems and procedures, for regardless of how hard an employee tries, if he does not know how to be the most productive, he can not achieve that goal. This
training should supplement the education and other training the neophyte may have had.

HOLIDAYS WITH PAY

It is felt by most managers that a worker will be more productive if he is given time off with pay to celebrate holidays. This practice gives him time to rest, relax, and get away from the job without fear of financial loss; therefore he should be a better worker. The incentive value of this practice stems from the break in the employee's routine and from the morale and job satisfaction that are generated.

VACATIONS WITH PAY

The same reasoning holds true for paid vacations. By having more free time the employee is able to improve his material position by obtaining greater gain through growing his own food, building or repairing his physical possessions, or some other way; or he is able to improve himself through the more intangible factors of rest and relaxation. Therefore, in anticipation of this vacation—and after his return—the worker should be more productive.

INSURANCE PROGRAMS

The potential inducement value of insurance arrangements reside in their ability to satisfy partially the worker's desire for a form of security. For example, hospitalization and medical insurance policies tend to put the employee's mind at ease concerning the cost of medical care although the necessity for that care is not removed. Life insurance policies tend to
set the worker's mind at ease concerning the loss of earning power suffered by his dependents in case he dies. To the extent that insurance programs remove worries from the individual's mind, they act to increase productivity.

RETIREMENT PLANS

Retirement plans have been compared to the depreciation of the physical plant of a business in the sense that during an employee's productive life a certain portion of his earnings is set aside for his non-productive years. They are a means of assuring an income for the balance of the employee's life. As with the previously mentioned employment factor, the incentive value of such arrangements resides in the partial elimination of worries over future security.

NON-MATERIAL INCENTIVES

One of the primary problems of the administrators of institutions is to determine the incentives that can be used within the practical limitations of the organizational situation to attract a maximum practicable response from members of the organization. The incentives used have value only to the degree to which they satisfy the desires of men to achieve an optimum of satisfaction for the total personality.

In spite of the very impressive records that economic incentives have achieved in increasing workers' productivity and efficiency, there are many indications that they are not capable of achieving the goal by themselves. The value of these stimuli is dependent upon a variety of other influences,
of which personal reaction to the work situation, the working group, and working conditions are important. The following statement exemplifies the interrelationship between the incentive factors (as disclosed during the Hawthorne experiments):

"The efficacy of the wage incentive was so dependent on its relation to other factors that it was impossible to consider it as a thing in itself having an independent effect on the individual. Only in connection with the inter-personal relations at work and the personal situations outside of work -- to mention but two important variables -- could its effect on output be determined."84

What are the non-material incentives? In essence, they are those intangible factors that deal with the relationship between the worker and his superiors, the worker and his subordinates, and the worker and his fellow workers. They induce an employee to produce by creating in him a sense of belonging and a feeling of esprit de corps. These non-material incentives are based upon man's social or psychological needs.85

To determine what non-material inducements are effective and important in motivating people, it is necessary only to consider the human desires which cannot be satisfied in whole or in part by material consideration alone. These incentives have been broadly classified as the desire for place, power, and prestige; the desire for affiliation; and the desire for


85 See Chapter II, page 22.
creative workmanship. Mere satisfaction with a job is not an adequate incentive.

The non-material incentives that are analyzed here are personal recognition, development of the group spirit, and creative workmanship.

PERSONAL RECOGNITION

Two thousand years ago a great teacher emphasized the dignity and worth of the individual. The tenets he propounded form the basis of the non-material incentives and especially those appealing to the recognition of the individual. There are many ways of describing personal recognition, including what has been called the dignity of man.86

Almost everyone has within himself the desire to feel important - to be needed and wanted. This common yearning permeates all levels of a business organization. If management can make the employees feel needed and important; feel wanted by those in a position of authority; feel proud of themselves and their jobs; then the employees will try their best to be more effective employees.

The trouble is not that management fails to realize these facts, but that it takes too much for granted. Not only does management forget how important the employee and his activities are to the worker, but how important the worker is to management.

86 Dr. Frank Groner, Administrator, Baptist Memorial Hospital, Memphis, Tennessee, in an address before the Ninth Annual Louisiana Personnel Management Conference, Louisiana State University, April 30, 1953, entitled "Human Relations in Business."
In other words, management could help the employees find things to be proud of in their jobs by noticing the little things that they do right and telling them about it. This turns disgruntled, dispirited employees into willing, capable producers and helps increase productivity of the workers and the organization.

One of the greatest incentives is the desire to please someone by being of service to him, or the parental instinct as Veblen calls it. For some individuals the desire for material reward does not enter into their desire to work, to any great extent, but their efforts seem to stem from a belief that there is a job to be done and they are the ones that can do it best. In this group are included preachers; teachers; nurses; artists; scientists; and those who work in civic, professional, religious, fraternal, and social organizations. In many organizations people are actively trying to perpetuate the group by working very hard with no financial rewards in sight. Their efforts are directed toward accomplishing what they consider to be a worthy goal -- not in order to obtain economic returns for themselves but for the benefit of others. It is hard to explain the efforts of these people in terms of material incentives, for their motivation is explained by something deeper than their desire for financial gain.

There are many ways that personal recognition can be shown. Some possible means are: personal talks with employees, name
plates on the employee's work station or machine; a personal parking area or locker, with the employee's name attached; a bulletin board listing the names of the employees in a given work area; mention (with pictures) in the employee publication or newsletter; service awards; plant visitations, with emphasis upon the employee's work area; and contests.

DEVELOPMENT OF GROUP SPIRIT

The Hawthorne experiments indicated that group incentive wage plans stimulated greater production than individual incentive plans. The reason for this was the group incentive plan created a group spirit and a sense of social solidarity on the part of the participants. On the other hand the individual incentive system had tended to prevent the emergence of the group spirit.

88 There are two types of service awards; one based upon meritorious achievement, the other based upon length of service. The former is recognition for a worker who performs outstanding work or gives service that is above the ordinary. For instance, Remington-Rand, Incorporated instituted the "Distinguished Salesman" contest as an added incentive to the desire of the salesmen to better themselves. Rewards and recognition were furnished for winners in the various categories during the time period. Union National Life Insurance Company has a "President's Club" for those salesmen who exceed their quota during the quarter. This type of award is important as a stimulant to production in that it gives the employee an aim to shoot for and gives recognition which appeals to an employee's pride and desire for a position of prominence.

The other type of award is that based upon the length of service of the employee. These awards differ in the number of years upon which they are based. For instance, the United States Steel Corporation has service awards that vary from five years to 50 years and Sears, Roebuck and Company has awards varying from five years to 35 years of service.

89 Urwick and Brech, loc. cit.
A business organization is in reality a form of social group. This is more easily understood when it is realized the worker spends half his waking hours during the work week at his place of employment. There are both formal and informal relationships between the workers in the shop. This is true, for whenever a business is launched, a community is also created. Selekman said that only when the manager approaches his shop as a community can he gain insight into the particular sentiments, feelings, and relationships within that context from which both conflict and cooperation spring.90

Not only is the employee part of the shop social group, but he cannot be separated from the outside social groups. Thus, management can not accept responsibility for the individual as a worker, and deny its responsibility for him as a social unit, for as Sheldon said, "The two are inextricably intertwined. It is impossible to dissociate life outside from life inside the factory. The one reacts upon the other because the individual entity remains constant."91

In this connection every human is very subject to a constant tugging between two desires; namely, conflict and cooperation. Most men are by nature gregarious and like to join and cooperate with others in group activities. They must not only belong but must be accepted by the group. However,

91 Sheldon, op. cit., p. 82.
there is in everyone the will to have his own way and sometimes this desire is so strong that it leads to conflict between those who are cooperating. This facet of human nature poses an important problem to the administrator who must be constantly aware that both these desires are evoked in varying degrees and ways by the many group activities and relationships into which the individual is drawn in a given society, including the shop society. 92

The group spirit, or the spirit of comradeship, is one of the guiding forces that gives unity of purpose to a military group. This same sense of oneness should be used by business organizations, for it gives a sense of common purpose and cooperation in the achievement of the objective of the group.

CREATIVE WORKMANSHIP

In general, most workers like to feel that what they are doing is useful and has a purpose. One will work with more enthusiasm and initiative when the creative urge is present. This fact explains the difference between the workman who is indifferent to the part he is mass producing because he can not visualize the finished product and the employee working with enthusiasm on a project he is to complete himself; it explains the difference between the man who watches the clock at work and the same man who disregards time to pursue his favorite constructive hobby.

92 Seleman, op. cit. p. 216.
There are several ways to encourage creative workmanship. One method is to have the employees tour the plant by following the flow of work to see how his phase of the operations fits into the over-all activity. Another method is the use of suggestion systems with public credit given for new ideas developed. Inter-departmental contests are also helpful in this matter.

At an airplane parts plant the production was lagging and morale was low until a visit by a combat-scarred B-17 and its crew. Afterwards, production increased greatly for the plane's maintenance crew explained to the employees what the part they were producing was used for.93

PUNISHMENT AND FEAR AS INCENTIVES

Punishment as an incentive may be either negative or positive. The negative penalties may be the lack of promotion or raise, or some other loss of a desired reward. Positive punishment may include fines; wage cuts; transfer to less desirable work shift, or working conditions; reprimands; lay-offs; or loss of job. Fear of social disapproval by a worker's family, associates, and employers also has an incentive value.

Punishment and fear should be used very sparingly as overt inducers to productivity because of the inherent dangers involved, but it must be realized that they are ever present and do have a stimulating effect.

93 "Are YOU Fit to Manage?," Management Methods, III (1952), 27.
CHAPTER IV
CASE STUDY, PHEOLL MANUFACTURING COMPANY

This chapter is a case study of the incentive program of the Pheoll Manufacturing Company, a Chicago, Illinois manufacturer of screws, nuts, bolts, and allied products. Included in the study is a description of selected employment factors used by the company and an analysis of their value as stimulants to production.

MANAGEMENT'S INCENTIVE PHILOSOPHY

Pheoll's incentive program (which is called "the human relations program) is primarily of a non-material nature, for the semi-material and non-material factors are emphasized more than the material ones. Incorporated in this program are many of the philosophies of John Slezak, the Chairman of the Board and President. He believes that a job is a means

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1 Most of the information in this chapter was obtained through a visit to the plant during the week of September 1-5, 1952. A large proportion of the time was spent talking with supervisory and non-supervisory personnel. The following people were especially cooperative and helpful: John Slezak, Chairman of the Board and President; Dick Zahour, Manpower Supervisor; Charles Mitchell, Wage and Salary Administrator; Paul Jendras, Employee Services Administrator; and F. P. Tisch, Chief Product Engineer. Charles Mitchell and George Ergang, Director of Personnel and Public Relations Division, have been most helpful in furnishing information by means of written correspondence. The Company will be referred to hereafter as Pheoll.

On September 2, 1952, the Company employed 1,027 workers classified as follows: factory, 566 males and 165 females; office, 55 males and 141 females; and supervisory, 100.
to an end—not an end within itself. The end, which is a better life for all parties concerned, can be achieved by providing a worker with an opportunity to work and then encouraging him to produce at his highest ability. This philosophy is called the incentive of effort and reward.²

The incentive philosophy of Pheoll's management can be summarized in the following statements: "Helping the employee help the Company" (A. E. Johnson, Vice President and General Manager); "The best results in industry are gained by dealing with each other on an individual basis" (John Slezak); "The people running the machines are by far the most important part of any manufacturing process. The advantages to be gained by working for and with employees are great." (Mason Phelps, Jr., Works Manager).³

The importance of the individual in the Company's operations was emphasized by John Slezak when he stated:

"Employees are human beings, and to get the most out of them treat them as such. Take time out to see them, to talk to them. Nothing is so reassuring and satisfying to employees as having the boss talk to them. The ring of sincerity in his voice and the feeling of friendliness goes a long way in dispelling the idea that corporations are non-human. A good executive delegates many of his tasks to competent subordinates, but it is a very difficult task to delegate a pat on the back, a sincerely firm shake of the hand, or a friendly smile, and they all are vital factors in helping the employees do their best for you."⁴

² Obtained during a visit with John Slezak on September 4, 1952.
³ Extracted from talks before the Header-Roller Class A Operator graduation, July 24, 1952.
The Management of Pheoll has the stated objective of operating under the guiding principle of the Golden Rule. In a statement of objectives of the Personnel and Public Relations Division, this principle has been included and reads, "To carry on the daily work in a spirit of Christianity." This objective is interpreted to mean operating on a high moral and ethical plane and following the spirit of religion rather than practicing the dogma of the specific Christian sects.

MATERIAL INCENTIVES

The material incentive phase of the incentive program centers around merit wage increases, merit promotions, stabilized employment, and discounts on purchases. There are no incentive wages, profit sharing, or bonuses for the production workers. (Although there was no organized suggestion system in operation in September, 1952, one of the objectives of the Personnel and Public Relations Division is to have one in effect by June, 1953.)

MERIT WAGE INCREASES

There is a minimum and maximum wage rate for every labor grade. A new employee is hired at the minimum rate and is allowed to progress to the maximum as rapidly as he can.

Wage increases are automatic in the three lowest labor grades, but are based on merit in the five higher ones.

5 "Therefore all things whatsoever ye would that men should do to you, do ye even so to them." Matthew VII: 12.

6 Letter from George Ergang, Director of Personnel and Public Relations Division, dated September 11th, 1952, p. 5.

7 Letter from George Ergang, op. cit., p. 2.
Increases are based primarily on subjective appraisals of the employee by his supervisor, department head, and the Wage and Salary Administrator. There are also certain specific factors that are considered, including absences, tardiness, and comparisons with past increases of other workers doing similar activities.

There are two periodic merit rating reviews. One of these is conducted thirty days after an employee is hired. While this is not an automatic review, it is held where there are indications that the worker is receiving a rate that is either too high or too low. The employee may also request a review when he is dissatisfied with his rate.

All employees are given an appraisal every six months. The Wage and Salary Administrator maintains an automatic tickler system of the anniversary (six months) dates of all employees. When the anniversary date arrives, a clerk in the Wage and Salary Administrator's office sends an appraisal form to the employee's immediate supervisor for his appraisal and recommendation for a rate increase.

The supervisor turns the appraisal sheet over to the division head for review. After concurring in the recommendation or suggesting a different rate, the division head signs the form and forwards it to the Wage and Salary Administrator for analysis. He either concurs or makes a counter proposal (after conferring with the worker's supervisor) The supervisor, division head, and Wage and Salary Administrator write the reasons for the recommendations on the appraisal
The Plant Superintendent and the Works Manager also review and sign the forms. The Vice-President and General Manager also checks the appraisals but seldom makes changes. His primary purpose is to check and insure that the merit rating program is functioning properly.

After all the reviews, the appraisal sheet, with or without the increase, is returned to the supervisor, who reviews the form with the employee. The worker is permitted to see the comments, the proposals, and the counter proposals that were made and to discuss the subject matter fully with his supervisor. The employee then signs the appraisal sheet and it is returned to the Wage and Salary Administrator.

In an attempt to see that the individuals are given a fair and accurate review by the supervisor, responsible persons other than the immediate supervisor occasionally sit in on the reviews.

The incentive value of the merit wage program is found in the fact that upward adjustments are made only when the worker deserves it; whether he deserves it depends upon his productivity, his attitude, and his value to the Company. Also, to a very great extent the right to grant raises is left up to the person who is responsible for increased productivity - the supervisor.

**MERIT PROMOTION SYSTEM**

Pheoll has the philosophy of filling positions, whenever practical, by promotion from within the Company. Promotions are possible within and between departments, divisions, and
plants; in fact, promotions are possible anywhere within the organization. To aid in putting this philosophy into operation, the Company maintains complete records on each employee, concerning such job factors as absences, tardiness, accidents, and health. The usual procedure is for promotions to be initiated by the departmental supervisor. When a job opening occurs in a certain labor grade, management interviews the employees in successively lower labor grades whose ability and length of service indicate that they should be considered for promotion. Normally, the individual selected for promotion is in the upper half of the rate range. Thirty days after the promotion becomes effective the employee is given an appraisal, or 30 day review, and can be placed on his original job at either his or the Company's discretion.

STABILIZED EMPLOYMENT

Although Pheoll has no guaranteed annual employment plan, one of its objectives is to provide continuous employment consistent with business conditions. A great effort is continuously made to provide steady work and permanent employment by planning the work so that seasonal variations are eliminated and the effects of cyclical variations are minimized. Recognition is also given to "long and faithful continuous service."  

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8 Ibid. p. 4.
DISCOUNTS ON PURCHASES

The Company sells its products to the employees at a discount. In addition, the Employee Service Supervisor has made arrangements with several retail stores in the Chicago area to issue cards to the company's employees which permit them to purchase goods at "substantial discounts."

SEMI-MATERIAL INCENTIVES

The semi-material incentives used by Pheoll include the following: proper selection and placement, introduction to the job, training, paid holidays and vacations, insurance benefits, and retirement plan.

PROPER SELECTION AND PLACEMENT

A variety of tests are given to job applicants in order to select the best qualified workers and place them on the job they are best prepared to perform. As an adjunct to this practice, each prospective employee is interviewed and those selected are given trial periods on different jobs if necessary. The management believes these practices increase production efficiency, improve morale, reduce employee turnover, and improve transfer and promotion procedures.

9 The tests given are: for production workers - vocational preference test, skill tests, micrometer reading test, blueprint reading test, and intelligence test; for clerical workers - arithmetic, language skill, clerical aptitudes, test on office procedures, and basic intelligence tests; for foremen - intelligence and aptitudes tests; and for staff to top executive positions - Illinois Institute of Technology battery of tests for each specific job. All training programs are pretested.
On repetitive jobs, an endeavor is made to hire persons who are qualified by temperament and nature to do that type of work. An effort also is made to select workers who will be compatible with the other workers.

In January, 1951, the company initiated a program of job evaluation designed to establish job standards by classifying and establishing relative values for all operations in the factory. Most workers have been brought up to the minimum rates, which have been more equitably established under this arrangement.

INTRODUCTION TO THE JOB

In an effort to familiarize them with the plant, the Company, and their fellow workers, all new employees are given a thorough orientation and indoctrination. The initial phases of this induction procedure are the responsibility of the Personnel and Public Relations Division; the latter part is the responsibility of the department supervisors.

The Personnel and Public Relations Division informs the new employee of the company rules, policies, benefits, and other pertinent information. Any questions concerning company organization or operation (which are encouraged) are answered, after which the employee is placed in the hands of the department supervisor. The supervisor shows him his work area and machine and introduces him to his fellow workers. The worker is given a great deal of personal attention during the first day.
Everything practical is done to start the new employee off right, for management realizes that the largest proportion of labor turnover occurs during the first month on the job. Also, an employee who is well adjusted and satisfied with his job is a more productive worker.

TRAINING PROGRAM

One of the main objectives of the Company's human relations program is to encourage ambition and self improvement of its employees through providing education and training opportunities. These programs include formal executive training, supervisory training, and organized classes.\(^{10}\) (The formal executive training project was being organized when this study was made, so none of the details of its operations were available.)

The supervisory training program is conducted two hours each week for 18 weeks and classes are led by either one of the Company executives or an outside instructor. The subjects covered include communications, production, quality control, personnel relations, and manufacturing engineering. There were 80 employees being trained by this method during September, 1952.

Vestibule training, using a "research laboratory," is used for training skilled workers. Here, employees are trained in dismantling and reassembling machines and in performing the

\(^{10}\) As previously mentioned, all training programs are pretested before becoming operative.
the actual operations they will later perform in the plant. Afterwards, the workers are assigned to the tool room where they are instructed in making parts. After their training is completed they are returned to their department as a machine operator or some other skilled technician.

The primary training is done on the job and is the direct responsibility of the departmental supervisors. A few qualified production employees are chosen to train the new employees, usually for 90 days. (They receive a five per cent bonus if they act as trainers for over 45 days.) This practice has proved successful, for if the trainer does a good job he is assigned new students and continues to receive the five per cent bonus.

On-the-job-training is supplemented by organized classes conducted by an outside vocational education instructor. The classes are held for one hour, three times a week, for 12 weeks, on Company time. The employees to attend are selected on the basis of interest, personality, and other qualifications. The subjects they study include micrometer reading, blueprint reading, scales, shop mathematics, practical safety, lubrications, design, and quality-control.

PAID HOLIDAYS AND VACATIONS

Pheoll gives its employees who have worked at least a month six paid holidays per year. These are: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. An employee must work at least four hours on the day before and after the holiday in order to receive pay for
the time not worked. He receives his straight time basic hourly rate for the holiday. A factory employee receives one week's paid vacation after he has been with the firm one year. This increases to two weeks after three years and three weeks after 15 years. (The trend in the Chicago area is toward three weeks after 10 years and Pheoll will likely follow.) The vacation pay is computed on the basis of a 40 hour week at the employee's basic wage rate.

INSURANCE BENEFITS

Pheoll's employees are covered by a group insurance plan that provides life insurance, accidental death and sickness weekly benefits, and hospital and surgical expenses. In order to join the plan, an employee must sign an enrollment card and have six months' service.

The Company pays approximately two-thirds of the cost of the program; the worker pays the balance. If the employee wishes his family to participate in the hospital and surgical part of the program he must pay $1.00 extra each month.

RETIREMENT PLAN

The Pheoll Retirement Annuity Plan is a joint venture with the company paying approximately two-thirds the cost and the worker paying the balance. The plan is voluntary and anyone who has two years of service and is over 30 years of age is eligible to join. Premiums and monthly retirement payments are dependent upon the participant's annual earnings.
The worker's contribution to the plan is considered to be savings and he has a vested interest in the funds. If he dies or terminates his employment before retirement his contribution, with interest compounded, is returned. A worker with 15 years of continuous service who leaves Pheoll receives the Company's contribution also.

If an employee retires (with Pheoll's consent) between the time he is 55 and 65 the monthly retirement payments are reduced. If, after a worker is 65, he is able to work, and the work is available, he can collect both his regular earnings and his retirement pay, for the annuity is considered to be returned savings, not earnings. Payments start on the day after an employee is 65 and continue until his death.

NON-MATERIAL INCENTIVES

One of the most important phases of Pheoll's human relations program is the utilization of the non-material inducements. These incentives include a personal employer-employee relationship, an employee publication, service awards, recreation programs, plant tours and personal interviews.

PERSONAL EMPLOYER-EMPLOYEE RELATIONSHIP

The Chairman of the Board and President states in his letter to new employees, "I do hope that with your help I will have a chance to see you and visit with you as often as possible." This is no idle statement for he spends much of his time with employees.

11 "Welcome to Pheoll," by John Slezak, Chairman of the Board and President.
his time visiting with non-supervisory employees and the consensus is that the results have been quite satisfactory, even from an economic point of view.

The management practices an "open door" policy with the employees. Any employee may request, through his supervisor, an interview with any executive of the Company and, if possible, that interview will be granted. Although these interviews usually deal with personal problems, they may be requested for any reason.

EMPLOYEE PUBLICATION

The Pheoll Review, a monthly magazine, is published under Company sponsorship at no cost to the employees. The Employee Services Supervisor is in charge of all activities of the magazine except the actual publishing, which is done by an outside publishing firm. News is supplied through department representatives of the Pheoll Employee's Recreation Club. Material is accepted from any employee even though he may not be a regular news representative.

Pictures are used quite extensively to create interest. Other features included in the magazine are news items of general interest, service anniversaries, hobby page, promotions, reports of recreation activities, departmental personal items, style news, cooking recipes, short biographical sketches, and editorials.

12 The Pheoll Review was judged by an outside evaluating concern to be superior to most other house organs and to compare favorably with Look and Life.
In order that the employee's family will receive the benefit of reading the publication, it is mailed to the home. The Company believes the magazine creates an *esprit de corps* by the dissemination of information and news which promote a mutual understanding of and participation in the company's aims.

**SERVICE AWARDS**

Pheoll recognizes the loyalty of its employees by awarding gold pins in commemoration of their service records in units of five years. On the date of each five year anniversary one of these pins, with a distinct form that symbolizes the term of service, is given the employee by an executive of the company. Also, a picture of the employee is published in the *Pheoll Review*.

There is a Quarter Century Club with membership restricted to employees with 25 years of service. At the annual meeting the new members are presented a gold watch in addition to the service pin.13

**RECREATION PROGRAM**

An active recreation program is maintained by the Pheoll Employees Recreation Club. Membership is entirely voluntary and requires only the payment of nominal annual dues and status as an employee. The Company encourages the program by —

13 There are 80 members in this club. The average length of service at Pheoll is five years.
supplying facilities, by sharing in the operating expenses of the various organizations, and by helping to make the best use of the facilities existing in the community.

There are several major annual events sponsored by this Club of which the dance, picnic, and the Christmas party for children are the most important. This group also sponsors several continuing programs including golf, bowling, softball, ping pong, and an orchestra. All the social and recreational activities are highlighted in the Pheoll Review.

PLANT TOURS

Pheoll maintains a regular weekly program of conducting employees on a guided tour of the plant. The purpose of this tour is to emphasize upon the employees how their jobs are integrated with the other activities of the organization. On "tour days" five employees, selected from those who have volunteered, are taken to the executives' offices where they are briefed on the executives' "theories and philosophies" and are given the opportunity (and encouraged) to ask any questions they desire. Afterwards, the group follows the flow of work through the factory from the Receiving Department to the Shipping Department.

PERSONAL INTERVIEWS

The personal interview is used at Pheoll more than any other non-material incentive. The management feels that by establishing the conviction among employees that sympathy and unprejudiced consideration will be given to any employee who
wishes to discuss Company matters or his own welfare with the executives the employees will be more productive.

These interviews may be initiated by the employee or the Company. The Company has a policy of interviewing employees at least twice a year, or when there is any change in the employee's status, such as changes in insurance coverage, pension program, or promotions.

At the time this study was made the Company was undertaking a personnel inventory to bring the employment records up to date. These interviews last from one to one and one-half hours and during this time the employee is encouraged to discuss freely any problem he has.

In conjunction with this inventory, the Company was using a morale survey form designed by Science Research Associates, Chicago. This survey was designed to determine the employee's attitude toward his job, his pay, his boss, and other employment factors. By the end of August, 1952, the results from 45 supervisors had been tabulated.\textsuperscript{14} These foremen had been tested in two groups, with 20 in the first group and 25 in the second. The categories surveyed and the totals for the first two groups of employees are shown in Table VI. The results show that the employees are very

\textsuperscript{14} It is realized that the answers of the supervisors would not necessarily coincide with those of the production employees with which this study is concerned. However, all of these supervisors had risen "through the ranks" and all those interviewed by the writer of this study thought in terms of the men working under them, therefore, it is felt that their answers are indicative of the thinking of the other employees.
TABLE VI
RESULTS OF EMPLOYEE MORALE SURVEY, SHOWING ATTITUDES
OF FORTY-FIVE SUPERVISORS TOWARD THE COMPANY,
MANAGEMENT, AND WORKING CONDITIONS

<table>
<thead>
<tr>
<th>Category</th>
<th>Answers in percentages&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st Group</td>
</tr>
<tr>
<td>1. Job Demands</td>
<td>43&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>2. Working conditions</td>
<td>70</td>
</tr>
<tr>
<td>3. Pay</td>
<td>93</td>
</tr>
<tr>
<td>4. Employee benefits</td>
<td>96</td>
</tr>
<tr>
<td>5. Friendliness and cooperation of fellow employees</td>
<td>84</td>
</tr>
<tr>
<td>6. Supervisor-employee interpersonal relations</td>
<td>92</td>
</tr>
<tr>
<td>7. Confidence in management</td>
<td>98</td>
</tr>
<tr>
<td>8. Technical competence of supervision</td>
<td>94</td>
</tr>
<tr>
<td>9. Effectiveness of administration</td>
<td>69</td>
</tr>
<tr>
<td>10. Adequacy of communication</td>
<td>94</td>
</tr>
<tr>
<td>11. Security of job and work relations</td>
<td>96</td>
</tr>
<tr>
<td>12. Status and recognition</td>
<td>97</td>
</tr>
<tr>
<td>13. Identification with the company</td>
<td>97</td>
</tr>
<tr>
<td>14. Opportunity for grown and advancement</td>
<td>98</td>
</tr>
<tr>
<td>15. Total inventory as a whole</td>
<td>97</td>
</tr>
<tr>
<td>16. Reactions to survey</td>
<td>82</td>
</tr>
</tbody>
</table>

<sup>a</sup> The higher the percentage the more favorable the reaction toward the company.

<sup>b</sup> In this case the lower percentages are favorable reactions.

Source: Report of Survey Results on the Science Research Associates Employee Inventory.
favorably inclined toward management and the conditions of employment, for, with the exception of category 1, job demands, the higher the answer in per cent the more favorably the employee is inclined toward the Company.

SUMMARY AND CONCLUSIONS

Although Phooll is not operating at peak efficiency, it is felt that if attempts were made to increase efficiency per se the results would be the opposite of those desired, for the Company's incentive program is founded upon a sense of esprit de corps that might be jeopardized if the workers were pushed too hard. The workers are given the opportunity to produce and then encouraged, through the conscious application of the various incentives, to increase their efficiency and productivity to the fullest extent practical.

The employees are treated as individuals, and yet are made to feel like part of a team. A strong sense of belonging to the "shop society" and to a Company that is destined to grow is engendered in the employees by using the non-material incentives. There is a determined effort by the workers to go forward at all times and push Phooll at every opportunity. The vast majority of the comments of those interviewed were highly laudatory.\(^{15}\)

\(^{15}\) Of the 50-60 employees interviewed only one showed any dissatisfaction with the job or the Company. The only adverse comment was that in one small area the work and responsibility had increased more rapidly since World War II than the number of personnel available to do the work. One employee lived so far from the plant that she required two hours to drive to and from work but she would not work elsewhere for she "... liked working for Phooll." The most common expression heard while talking to the employees was, "I feel like I belong to the Phooll family."
Management tries to make the employees feel that the Company can not get along without them, i.e., there is no difference between management and labor - both are essential to production and the firm's continued existence. Ideas and suggestions are sought and accepted.

At Pheoll the most effective utilization of the employees' abilities are obtained by getting them, as individuals, to cooperate and to help in solving the company's problems. This approach has been effective because it appeals to the sense of belonging; of being part of a team. The workers are given an opportunity to be heard, to express themselves, and to be proud of their work.

The consensus was that the non-material incentives are more effective than the material incentives as stimulants to production. However, unless the Company paid prevailing wage rates, gave merit wage increases, and made some effort to stabilize employment, the response to the non-material stimuli would not be so great. Proper selection and placement, introduction to the job, and training also tend to increase worker effectiveness.

The feeling concerning incentive factors such as insurance and retirement benefits, purchase discounts, and paid holidays and vacations was that within themselves they do not act as stimuli to production, but are necessary to attract workers in a tight labor market when other companies use them.
CHAPTER V

CASE STUDY, MISSISSIPPI PRODUCTS, INCORPORATED

The results of a case study of the incentive program of Mississippi Products, Incorporated, Jackson, Mississippi are presented in this chapter. This study was undertaken with the objective of determining what incentive factors were used to stimulate the output and efficiency of the production employees and the effectiveness of these inducements in achieving that goal.

BACKGROUND

Mississippi Products is a wholly owned subsidiary of Sears, Roebuck and Company, manufacturing occasional furniture and radio, television, sewing machine, and other types of cabinets. Incorporated as the Adler Manufacturing Company, the organization was located in Louisville, Kentucky until 1946, when the existing plant proved inadequate. A survey of the potential locations was then made and because of available labor, hardwood, and other favorable factors, Jackson, Mississippi was selected.
The woodworking operations of the organization are almost completely integrated and the Company owns large stands of timber throughout Mississippi and parts of Louisiana. This timber is received as logs in the Jackson plant and there is converted into veneer, core pieces, binders, and a variety of furniture parts. These parts are assembled into the finished cabinets and other lines of furniture, and these are shipped to Sears, Roebuck and Company retail stores throughout the country.

At the beginning of February, 1953, there were 1,534 factory employees and 337 office and administrative personnel, for a total payroll of 1,871. The factory force was composed of 681 white, male workers; 125 white, female employees; and 727 colored employees (there was no classification as to sex). Of the total number of factory employees, 880 were on an incentive wage plan. Of the 651 factory employees who were not on a system of payment by results, 283 were direct production workers (primarily in the Finishing Department, where it was impractical to have an incentive wage plan at that time) and 371 were indirect employees.

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3 The Company buys some of its hardwood veneers, such as mahogany and prima vera, as well as all its non-wood materials from outside sources.

4 The radio and radio-television cabinets, and cabinets built for other companies such as Radio Corporation of America, Belvedere Sewing Machine Company, Philco, and Necchi Sewing Machine Company are shipped to other factories where they are assembled into finished products.
MATERIAL INCENTIVES

The material incentives used by the Company include the following: incentive wages, profit sharing, merit wage increases, merit promotions, discounts on purchases, and suggestion system.

INCENTIVE WAGES

At the beginning of February, 1953, all the direct departments, except the Finishing Department, were operating under a system of wage incentives. The indirect workers, including maintenance workers, sample and form builders, porters, repairmen, yard laborers, and cafeteria employees were paid on the hourly basis.

The incentive plan used previously in Louisville, Kentucky was a piece rate plan. Although it was more easily understood by the workers, it did not give them the guaranteed earnings that other plans do. Also, the plan did not act as a sufficient stimulus to production and was ill-suited to the group participation necessary in so many of the Company's activities. The Standards Department substituted the standard hour plan (based on individual time studies) for the old plan when the Company moved to its present location. Although all the direct production departments, except the Finishing Department, were operating on incentive, only the incentive wage plan in the Dimension Mill was selected for this study.\(^5\)

\(^5\) The reason for this selection was that this department had been operating on the present plan for less time than the other departments, consequently there was much information available concerning this department that was not available for the others.
Incentive Wages in the Dimension Mill

The first incentive wage plan was installed in the Dimension Mill on February 1, 1951. It was a standard hour plan with a standard hour factor determined for every operation in the department. These time factors were based on the homogeneous production mix (variety of goods produced and species of wood used) prevalent at that time. The reason for the homogeneity was that relatively few types of articles were being produced and these called for only a limited number of species of lumber and sizes of parts. A very large part of the production was sewing machine cabinets.

Because of a business recession that hit this industry during the Spring and Summer of 1951, the Company found it necessary to lay off approximately 50 per cent of its payroll. Because of "decreasing performance efficiency" the Dimension Mill went off incentives on February 2, 1952. In a meeting of the Good Relations Committee, it was decided that it was more advantageous to the workers to return to a day work basis of wage payment, for even though the workers were guaranteed their basic hourly rate on the incentive plan the day rates were approximately three to four per cent higher than the incentive base rates.

Another factor causing management to take this step was the changed nature of the production mix. During the 1951 slack in sales the Company's salesmen, seeking business in addition to that of Sears, Roebuck and Company, received orders from several other companies. This diversification
of products led to the manufacture of a great variety of styles and models which caused more diversified productive operations and species of wood to be used; smaller production runs and frequent machine set-ups resulted. With all the changes it was practically impossible for the workers in the department to make standard under the old incentive plan.

The Standards Department continued to make studies for a new incentive wage plan and a more efficient layout of the department. On November 5, 1952, a new layout that increased average efficiency from 75 to 90 per cent was introduced in the saw line of the Dimension Mill.

On January 26, 1953, the new incentive wage plan was introduced in the Dimension Mill. The procedure followed was the same as that followed when any operation in the plant goes on incentive. Careful motion and methods studies of all the operations had been done since the department had returned to day work in 1952. On the basis of these studies the industrial engineers set standards for each of the operations, using standard time data rather than individual time studies. These standards and wage rates were approved by the department's supervisors. The operators tried the job in the manner prescribed by the engineer for a short period and then computed their earnings on the basis of the proposed standards and rates.

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6 These standard time data were based on the system called M.T.M. (Methods, Time Measurement) and had previously been checked by comparing a standard set by its use and one set by an individual time study conducted by the Company's industrial engineers.
If they were able to earn a bonus they accepted the plan; if they were unable to operate at more than 100 per cent efficiency and earn a bonus they refused to exert themselves by trying to make bonus. (A worker is not directly penalized for this, for he earns his basic hourly wage rate for all hours worked. If he thinks the standard is "too tight," or the rate is too low, he can request, through his supervisor, a re-study of the job. If this is done a different engineer usually makes the second study.)

The employees are able to ascertain their earnings within 24 hours, for a daily summary is compiled from the operation cards that go along with each job and the time cards the employees use when they start and finish a job. These summaries are posted in the departments so the workers are informed of their performance efficiency and earnings.

Effects of Using Wage Incentives

It was possible to obtain many interesting facts about the effects of the new method of wage payment from the many records kept by the Company. These facts are discussed as the effects on productivity, quality, earnings, grievances, and turnover.

Effects on Productivity. The direct labor efficiency percentages (found by dividing the hours actually worked into the standard hours produced) for the Dimension Mill from the week ending September 27, 1952, through the week ending April 25, 1953, are shown in Table VII.\textsuperscript{7}

\textsuperscript{7} These were obtained from the original records in the Standards Department and from letters from Randle L. Brown, dated March 2, 1953, and April 30, 1953.
### WEEKLY DIRECT LABOR EFFICIENCY PERCENTAGES, DIMENSION MILL, MISSISSIPPI PRODUCTS, INCORPORATED, SEPTEMBER 22, 1952-APRIL 25, 1953

<table>
<thead>
<tr>
<th>Week ending</th>
<th>Direct labor efficiency percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Saw line</td>
</tr>
<tr>
<td></td>
<td>Core line</td>
</tr>
<tr>
<td>September</td>
<td>27</td>
</tr>
<tr>
<td>October</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>11</td>
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<tr>
<td></td>
<td>18</td>
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<tr>
<td></td>
<td>25</td>
</tr>
<tr>
<td>November</td>
<td>1</td>
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<td></td>
<td>8</td>
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<td></td>
<td>15</td>
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<td></td>
<td>22</td>
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<td></td>
<td>29</td>
</tr>
<tr>
<td>December</td>
<td>6</td>
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<tr>
<td></td>
<td>13</td>
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<tr>
<td></td>
<td>20</td>
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<tr>
<td></td>
<td>27</td>
</tr>
<tr>
<td>January</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>17</td>
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<tr>
<td></td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>31</td>
</tr>
<tr>
<td>February</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>14</td>
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<tr>
<td></td>
<td>21</td>
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<tr>
<td></td>
<td>28</td>
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<tr>
<td>March</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>21</td>
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<tr>
<td></td>
<td>28</td>
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<tr>
<td>April</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

Source: Daily Departmental Efficiency Summary sheets in the Standards Department of Mississippi Products, Incorporated, and letters from Randle L. Brown, Assistant Chief Accountant, Budgets, dated March 2, 1953, and April 30, 1953.
It can be seen that the efficiency percentages on both the saw line and core line increased after the new method of wage payment was put into operation on January 26, 1953. The efficiency percentage of the department averaged approximately 75 per cent between February 2, 1952, and November 6, 1952, when the new layout was installed. From then until January 26, 1953, the department averaged approximately 90 per cent efficiency. During the six months immediately preceding the installation of the second incentive plan on January 26, 1953, the department averaged 85 per cent efficiency. During the first 13 weeks of operation under this new wage system the departmental efficiency increased to an average of 118 per cent. This was a 39 per cent increase over the previous departmental average of 85 per cent. During this same period the saw line had an average efficiency of 116 per cent and the core line averaged 119 per cent.

**Effects on quality.** Mississippi Products has a "yield bonus" that acts as a stimulus for the workers to maintain quality. Under the standard cost system used, each department has a standard yield that it is expected to achieve from a given quantity of each specie and size lumber. For any yield over standard, the workers receive a certain per cent and the Company a certain per cent. If the workers fall below standard, they are penalized by the percentage that they fail to meet standard. The reason for this yield bonus (and penalty) is that a bonus could be earned through careless cutting of the lumber. To prevent this, the penalty is inflicted if standard is not met.
The Accounting Department computes the yield bonus on a weekly basis, using a 20 day moving average. In computing employee earnings, this bonus is added to, or subtracted from, the worker's daily efficiency rating. The bonus for the dimension mill has averaged around two per cent since the incentive was installed, which compares favorably with what it was before.

**Effects on Earnings.** The Company maintains extensive daily departmental records of productivity and earnings as well as a weekly summary of operating statistics for the plant as a whole. The data below (which, except for the week ending February 1, were compiled for the plant before the Dimension Mill went on incentive) show the effects of incentive on earnings:

<table>
<thead>
<tr>
<th>Data for week ending</th>
<th>2/1/53</th>
<th>1/4/53</th>
<th>12/7/52</th>
<th>11/2/52</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees/on incentive</td>
<td>880</td>
<td>819</td>
<td>813</td>
<td>799</td>
</tr>
<tr>
<td>Number of employees making bonus</td>
<td>720</td>
<td>666</td>
<td>709</td>
<td>655</td>
</tr>
<tr>
<td>Per cent making bonus</td>
<td>88%</td>
<td>81%</td>
<td>87%</td>
<td>87%</td>
</tr>
<tr>
<td>Average base rates</td>
<td>$0.98</td>
<td>$0.98</td>
<td>$0.97</td>
<td></td>
</tr>
<tr>
<td>Average rate with bonus</td>
<td>1.19</td>
<td>1.20</td>
<td>1.19</td>
<td></td>
</tr>
<tr>
<td>Average amount of bonus</td>
<td>0.21</td>
<td>0.23</td>
<td>0.22</td>
<td></td>
</tr>
<tr>
<td>Average per cent of bonus</td>
<td>23%</td>
<td>21%</td>
<td>24%</td>
<td>23%</td>
</tr>
</tbody>
</table>

It can be seen that during these representative periods around 85 per cent of the employees on incentive were able to earn bonus. The average amount of the bonus was around $0.22 per hour, or an average of 23 per cent. Currently the employees in the Dimension Mill are earning bonuses averaging around 20 per cent.
Effects on Grievances. Mississippi Products does not bargain with a union but uses the Good Relations Committee as a device for settling grievances and handling any personnel problems that cannot be handled by the regular line and staff organization. The committee does not keep a record of formal grievances, but one member of the committee said that incentive wages have a "negligible" effect on the number of grievances.

One potential source of grievances is the fact that all the departments except the Finishing Room are on incentive and workers in that department want to be covered by the plan so they can receive the higher earnings also.

Another source of difficulty appears in some departments where workers are earning as much as 50 per cent bonus while others are earning much less. This sometimes leads to grievances in the Good Relations Committee. In summary, the incentive wage plan tends to reduce certain grievances but is the basis for new ones, particularly between those on incentive and those not on incentive.

Effects on Labor Turnover. The labor turnover rate for Mississippi Products is usually lower than the comparable rate for the household furniture industry of the United States. For instance, the average turnover for the Company for 1950 through 1952 was only 3.6 per cent while household furniture industry
averaged 4.2 per cent.\textsuperscript{10} Although the turnover for the Company was less than for the industry as a whole, it must be pointed out that this low turnover could not be attributed entirely to the incentive wage plan, but reflects the entire employment program.

PROFIT SHARING

The employees of Mississippi Products are eligible to participate in the savings and profit-sharing fund of Sears, Roebuck and Company. The purposes of this fund are: (1) to permit eligible employees to share in the profits of the Company; (2) to encourage the habit of saving; and (3) to furnish the employee a means of providing an income for himself at the close of his active business career.

Participation in the fund is voluntary and is open to every regular employee who has completed one year of continuous service. A participant must deposit five per cent of his compensation into the fund, but in no case can this exceed $500 per annum. (This limitation is to prevent the higher salaried employees from sharing too largely in the fund.)

Each fiscal year the employers (including Mississippi Products) pay into the fund a sum which equals a certain per cent of the "consolidated net income" of Sears, Roebuck and

\textsuperscript{10} The turnover rates were computed by subtracting the number of layoffs from the total number of separations and dividing this by the average number of workers on the payroll. This figure was then expressed as a percentage.

The Company took a simple average of the monthly turnover rates to find their yearly averages. These averages were then averaged to find the three year average. In order to conform to this, the national averages were computed on the same basis, using the figures from the "Labor Turnover Report," as published monthly, in mimeographed form, by the United States Department of Labor, Bureau of Labor Statistics.
Company for that year. These percentages vary from five per cent when the income is under $40,000,000 to ten per cent when the figure exceeds $250,000,000.\footnote{11}

The employers' contribution is credited to the depositors account as follows: depositors with five years continuous service receive a pro rata share equal to their respective deposits during the preceding calendar year; those with from five to 10 years service receive a pro rata share that is twice their deposits; employees with 10 or more years service receive a pro rata share based on three times their deposits; and depositors who are over 50 years of age and have 15 or more years of service receive a share prorated on the basis of four times their deposits.

To encourage thrift and provide a source of income after retirement, there are several rigid restrictions upon withdrawals from the fund. An employee ceases being a member of the fund when his employment terminates or when he ceases making regular contributions. A depositor who once withdraws can not re-enter the fund unless there are extenuating circumstances.

In addition to the Company's annual contribution to the fund, the dividends declared on Sears, Roebuck and Company's common stock held by the fund are prorated to the depositors'

\footnote{11} "Consolidated Net Income" for any fiscal year is the consolidated net income of Sears, Roebuck and Company and its domestic subsidiaries before deduction of any dividends, federal income taxes, or contributions to any profit-sharing or pension plan.
accounts. During 1952, the dividends on the 5,875,978 shares of Sears, Roebuck and Company stock (24 per cent of the outstanding stock) amounted to $15,822,280.12

Indicative of the benefits derived from this profit-sharing plan is the fact that for every dollar deposited by an employee in Group A in 1951, the Company deposited $1.02; Group B members received $2.04, Group C members received $3.06, and Group D members received $4.08.

The employees of Mississippi Products are very interested in the profit-sharing arrangement. This interest was evidenced not only in affirmative answers to questions as to whether the plan was satisfactory to the employees, but also in the fact that 100 per cent of the 897 employees eligible had joined the fund by the end of 1952.13 Another indication of this interest is the fact that every issue of The Cabineteer carries the latest market quotation of Sears, Roebuck and Company stock on the front page.

MERIT WAGE INCREASES

Another incentive factor used by Mississippi Products is merit wage increases. The Company has an intensive job evaluation program and sets rates for jobs on the basis of these technical studies. There are eight labor grades; each grade has three stages; and each grade and stage carries a different

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13 Ibid.
wage rate. An employee is hired at the lowest stage of the labor grade he qualifies for. The policy is to then move an employee from the lower to a higher stage, or from a lower to a higher grade, on the basis of his merit and ability.

**MERIT PROMOTIONS**

Promotions at Mississippi Products are based upon merit and ability, rather than seniority. The policy of the Company is to hire all employees at the lowest practical rate and job and to fill the higher positions by promoting from within. An employee can be promoted either into a higher position in his own department or into a higher position in another department. When a job becomes available, it is posted on the bulletin board and any employee can apply. The person best qualified is selected for the job. According to one official of the firm, "Ninety-nine per cent of the promotions are from within."

**DISCOUNTS ON PURCHASES**

Another factor that acts as a stimulus to production is the Company's practice of granting discounts on purchases. The employees are granted a 10 per cent discount on any purchase in the local Sears, Roebuck and Company retail store. In addition, the local store sends a representative into the factory at least three times a week to take mail orders from the employees and the same discount is given on these orders.
SUGGESTION SYSTEM

The firm uses suggestion awards as a method of inducing the employees to make suggestions for increasing production. Boxes and blanks for this purpose are conveniently located throughout the plant. An employee writes his suggestion on a numbered blank, drops it in a box, and retains the numbered stub. If the suggestion is accepted, the worker receives a cash award worth one-half the first year’s savings from the suggestion. The accepted suggestions are posted by number on the bulletin board and the employee with the correspondingly numbered stub claims his check from the Personal Department. A "great number" of suggestions have been made and many of them have been accepted.

SEMI-MATERIAL INCENTIVES

The semi-material incentives used by Mississippi Products include the following: proper selection and placement, introduction to the job, training program, and paid holidays and vacations.

PROPER SELECTION AND PLACEMENT

The Company does not have an extensive testing program to aid in selecting employees, but relies heavily upon records of their experience and training. When a new employee is hired, an attempt is made by the employment personnel to place him where his talents and abilities are used to the greatest extent.
INTRODUCTION TO JOB

All new employees are given a thorough orientation and indoctrination in order to familiarize them with the plant, the organization, and their future work associates. During this introduction the employees meet with the Employee Relations Supervisor who explains to them their rights and privileges as employees, and the responsibilities expected of them. A conducted tour of the entire plant follows. The purpose of this tour is to show them the importance of each job to the entire operations and the location of the various departments. (Any employee who cares to go on one of these tours may request to do so regardless of how long he has been with the Company.)

TRAINING PROGRAM

A well-developed on-the-job training program is in operation at the plant. Although it is not a formal arrangement it has many of the features of one. For instance, there are full and part-time trainers who train the new employees in the fundamentals of their new job. In addition, there is the "buddy" system whereby one worker assumes the responsibility for helping train the new employee. This works very adequately in the departments that use the group incentive wage plan for the "buddy" knows that by training the new employee adequately he will indirectly increase his own benefits. However, the supervision of the training program is the direct responsibility of the individual supervisor.
PAID HOLIDAYS AND VACATIONS

The employees are granted five paid holidays per year, which are New Year's Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The employee must work the day before and after the holiday in order to receive pay for the time he does not work. In case an employee must work on one of these holidays he is paid straight time for the holiday plus time and one-half for the time he actually works.

Operating under the assumption that workers are more productive after a break in their routine, the concern gives its employees paid vacations. After one year's service, an employee receives a one week vacation with pay; after two years, two weeks; with from three to 15 years service, three weeks are given; and after 25 years an employee receives four weeks paid vacation. The vacation pay is computed on the basis of a 40 hour week and is paid at the employee's current rate of pay.

NON-MATERIAL INCENTIVES

The Company uses the following non-material inducements; an attempt to create a sense of belonging, an employee publication, an employee representation system, service awards, and a recreation program.

A SENSE OF BELONGING

The Management of Mississippi Products attempts to create a sense of belonging in the minds of the employees. The executives frequently refer to the "team" and emphasize the importance of belonging to a progressive company.
The Company has one guiding principle in dealing with the employees, i.e., to make them feel that management has an interest in them and is not exploiting them. To generate this feeling, management tries to have as great personal relationship with the workers as is practical. In addition, there is an effort to furnish the employees with information pertaining to the operations of the Company; this includes both good and bad news. For instance, in October 1952, when the parent Company increased its contribution to the profit-sharing fund, and in December, 1952, when an order for Sears, Roebuck and Company's total requirement for sewing machine cabinets for the first half of 1953 was received, the news was prominently reported in The Cabineteer. Conversely, when there is bad news the workers are informed. For instance, when the impending decrease in sales became evident in early 1951, the employees were informed as early as possible that layoffs would occur, so that they could plan accordingly. When an order is lost, or a shipment is rejected, the workers are informed of the fact with an explanation of why it happened.

In addition to the line supervisors, management uses four channels of communication to disseminate information to the employees. These channels are: a public address system, which is used for information that is urgent, or of great interest; bulletin boards, for less important material; an employee newspaper; and an employee representation system.
EMPLOYEE PUBLICATION

One of the channels used to disseminate information to the workers is the Company newspaper, The Cabineteer, which is published bi-weekly by the Personnel Relations Department. It is mailed to the employees, rather than being given to them on the job, so the families of the workers will have an opportunity to read it also. The paper is published for the benefit of production employees, in that it has articles of interest to them rather than management. The editor publishes pictures of the workers as often as practical and includes articles about them as well as articles of interest to them.

EMPLOYEE REPRESENTATION SYSTEM

The second instrument used by Mississippi Products, Incorporated to keep its employees informed and give them a sense of belonging is the Good Relations Committee, which is composed of both management, production, and service personnel. There is an equal number of employees and management, from suggestions made by the workers. There are no intermediary foremen or supervisors on the committee. The reason for this is that workers do not feel free to talk when their immediate superior is present.

The committee is an attempt by management to complement the regular line and staff organization and is not a substitute for regular supervision. An attempt is made to bring management

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14 In reality there are two such committees, one for the white employees and one for the colored employees, and they meet on alternate weeks.
and the workers together to solve their mutual problems in a cooperative manner. The employee's sense of belonging is enhanced in this manner.

SERVICE AWARDS

The company utilizes service awards as a stimulus to production. These awards are given for five, 10, 15, 20, 25, 30, 35, 40, and 45 years of service to the company. When an employee becomes eligible for an award his name and picture (if available) are run in The Cabineteer, and he is given a Sears, Roebuck and Company service pin. As the years of service increase, the pin increases in intrinsic value. At the end of 1952, there were 348 employees with five or more years of service.

RECREATION PROGRAM

Recreation and group activities are utilized extensively in the company's employee program. There is a men's softball team that participates in the recreation league of the city of Jackson, and there are male and female basketball teams that participate in the local YMCA league.

SUMMARY AND CONCLUSIONS

While it is impossible to state categorically to what extent the individual incentive factors utilized by Mississippi Products, Incorporated have increased worker productivity, some general conclusions can be drawn.
The Company has an excellent material incentive program. The incentive wage plan is highly successful as an inducement to increased output. In one department, an efficiency increase of 38 per cent was attributable to this wage plan.

The profit-sharing plan is also highly satisfactory, as proved by the fact that all the eligible employees have joined the plan. Intense interest was shown anytime it was mentioned and its merits were immediately proffered. The plan increases productivity, for the workers know their efficiency determines the Company's profits and they receive a part of these profits.

The material incentives are superimposed upon a good foundation of semi-material and non-material incentives. Probably the most effective semi-material incentive used is the establishing of definite work standards and proper placement. This makes it possible for the workers to be more effective for the former challenges them and the latter helps by placing them where they can perform at their best.

The non-material incentives are used with a great degree of effectiveness by the Company management. Especially emphasized is the incentive of creating a sense of belonging. Each employee is made to feel that he is Mississippi Products; that he belongs to a team that is progressing. Pride and loyalty, as well as the desire to belong to the team, is engendered by various methods.

A group spirit is created by means of the public address system. The president, or anyone else, can make a personal appeal to the entire work force by this means. This device
tends to reduce privacy and improve the group spirit by letting everyone hear when someone is called to or from his work area or to the phone. Adding to the group spirit and the feeling of belonging (in a negative manner) is the total absence of nameplates on desks, names painted on doors, and ostentatious offices.

The specific value of these non-material incentives as stimulants to increased productivity per employee is indeterminate, but their value appears to be in their ability to prevent poor employee attitudes which adversely affect production, cause increased costs, and lower profits. These inducements create an environment in which the more tangible material incentives operate to increase production.

The negative incentives, such as the fear of being fired, demoted or transferred to a less desirable job, are sometimes consciously applied by management when all other inducements fail. However, they are used infrequently.
CHAPTER VI
CASE STUDY, TENNESSEE COAL AND IRON DIVISION,
UNITED STATES STEEL CORPORATION

This chapter is a study of the incentive program of the Tennessee Coal and Iron Division, United States Steel Corporation.\(^1\) It contains a description of the factors used to increase productivity, an analysis of their relative effectiveness as stimulants to production, and a summary and conclusion concerning their inducement value.

BACKGROUND

TCI is composed of a series of plants manufacturing a wide variety of finished and semi-finished steel products. These plants are located at Ensley, Fairfield, and Bessemer. All of these cities are in the Birmingham district, which is distinguished by the close proximity of deposits of iron ore, coal, and limestone.

The Company originated in 1852 as the Sewanee Mining Company. After many consolidations and reorganizations it became a subsidiary of the United States Steel Corporation in 1907. On January 1, 1953, TCI became a division of that organization.

TCI is one of the few American steel concerns engaged

\(^1\) The majority of the information in this chapter was obtained during a visit to the General Offices and plants of the Tennessee Coal and Iron Division, United States Steel Corporation, located at Fairfield, Alabama on March 23, 24, and 25, 1953. Hereafter the Company will be referred to as TCI.
in a fully integrated steel manufacturing process. This procedure includes all phases of operations, from the mining of raw materials to the sale of finished products. These products include the following: sheet-metal roofing, nails, wire, structural beams and braces, tar, fertilizer ingredients, tin plate for the manufacture of all types of cans, rails, bars, and various special shapes of steel products.

The Operating Department of this Company is divided into two main units, namely the Mining Division and the Manufacturing Division. The Manufacturing Division consists of four works; namely, (1) Ensley Steel and Bessemer Rolling Mill, (2) Fairfield Steel and Wire Works, (3) Fairfield Sheet and Tin Mills, and (4) Rail Transportation Works. With 29,000 employees, TCI's annual pay roll costs amount to approximately $135,000,000. Its trade territory covers 11 Southern states.

The employees occupying production, maintenance, and hourly rated non-confidential clerical jobs in the Company's steel manufacturing and by-product coke plants have designated (and the National Labor Relations Board has certified) the United Steelworkers of America, C.I.O., as their exclusive collective bargaining representative. The current agreement between the Company and the Union was signed August 15, 1952, and will be effective until midnight of June 30, 1954 (with a reopening provision for May 1, 1953, to negotiate with


3 It is estimated that over 100,000 people in this area owe their livelihood directly to TCI. Welcome to TCI, p. 21.
respect to a general and uniform change in wage rates.) Under this contract the modified union shop is coupled with the maintenance of membership clause to furnish the Union with one of the tighter forms of union security.

MATERIAL INCENTIVES

This chapter discusses the two unrelated types of material incentive programs now in operation in this Company, namely, the incentive wage plan, and the suggestion system.

INCENTIVE WAGE PLANS

Prior to April 22, 1947, the Company had a heterogeneous incentive wage program that included the following plans: base, piece work, tonnage, premium, task and bonus, stand-by, man hours, equipment performance, point or unit, and several others. At that time, incentive policies were standardized through the adoption of a Labor Measurement type of incentive plan. This plan, which is in essence a standard hour with 100 per cent premium plan, now covers 17 per cent of the manufacturing wage earners, while 30 per cent of them are still operating under the old plans. The other 53 per cent of the employees are working on day rates. Incentive applications are in effect in parts of all the manufacturing works, but not the mines, railroads, or General Offices.

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4There are four variations of this plan. These variations deal primarily with the method of determining and crediting to the employee a time allowance for that time during which the employee can do no work but must "stand-by," or be idle while the machine, or other employees, perform their required function.
Guiding Principles

The United States Steel Corporation has evolved a set of principles that govern the application of incentive wages in its organization. These principles are summarized below:

The work required on all incentive jobs is measured by standard hours expressed as "standard time values." These measurements are determined through individual time studies and are based on the principles that the values are established to cover a specific set of conditions; shall remain unchanged as long as all of the conditions under which they were established are unchanged; and are replaced by new values that reflect only the change of conditions, as compared to the previously existing values.

These standard time values are multiplied by the units of production, or other appropriate units of measurement, accomplished during a shift in order to determine the "earned standard hours." The total earned standard hours divided by the total number of actual hours spent on the job and multiplied by one hundred gives the "index of measured performance," with an index of one hundred per cent reflecting normal performance.

The standard hourly wage scale rate for a job becomes the hourly base rate when an incentive is applied. A worker is paid his base rate for all hours of work on the job, up to standard and for all time on unmeasured work. In addition,

5 This statement of these principles is paraphrased from "Principles Governing the Application of Incentives," which is included in each application brochure.
a worker is paid one per cent of his base pay for each one per cent of performance above standard.

Areas of Application

Increased production and efficiency is achieved through increased employee performance, greater equipment utilization, or any combination of the two. TCI attempts to apply standard time values and incentives to jobs where workers are engaged in the direct making, shaping, and handling of products where it is possible to lower costs through increased production. Within this general area of applicability, the specific jobs to which applications are made are selected on the basis of the following criteria; the work is subject to reasonably accurate measurement; the units of production are suitable for accounting record, report, and verification; the administration of the plan is subject to audit; administrative cost of applying and maintaining an application is economically justifiable in relation to the direct benefits to be realized; work available to the employee is unlimited; or the attainment of capacity operation of a significant machine or process requires the employee to perform at a pace above normal.

The same criteria hold true for indirect work of a service or assigned maintenance nature where the work is directly required to service the direct producing jobs; where

6 The word "application" is used to mean both the process of planning and applying an incentive plan and a plan in operation. In this study the word is used to denote a plan in operation in a specific area, unless the context indicates otherwise. An application varies in magnitude from one person to over 100 people.
the work is performed directly on the equipment of such jobs; or where the work is of a routine and recurring nature and is determined by the amount of operating time of the direct unit maintained or serviced.

Preparing for an Application

According to the Union contract, the Company may establish, at its discretion, incentive applications to cover new jobs: jobs not presently covered by incentives; or jobs covered by an existing plan which has become submerged, i.e., where the straight-time average hourly earnings of covered employees are equal to, or less than, the average of the standard hourly wage rates for such employees for a three-month period. The Company shall establish new incentives to replace existing plans when they require revision because of new or changed conditions resulting from mechanical improvements, improved methods or products, changes in equipment, manufacturing processes or methods, materials processed, or quality or manufacturing standards.

Although the employees have no right under the agreement to demand an incentive application unless they were covered by one which was discontinued due to changes in conditions resulting from mechanical improvements made by the Company, they can ask for one and management may furnish it.

After the initiative has been taken by local management or the employees, the next step is to review the standard practices connected with performing the operation to be covered. The written presentation of these practices are called
manufacturing specifications and are prepared for all operations, whether on incentive or not. The specifications are presented in seven parts: materials, process, inspection, crew, methods, and drafting. An incentive application is not made until the manufacturing specifications are in effect or have been revised.

The next step is a preliminary analysis, conducted by the industrial engineers, which preplans all the work of establishing necessary production records, taking time studies, and developing standard time values.

Very thorough time studies are then made, usually by several engineers. These time studies are normalized, recapped, and summarized by the men who take the studies. These engineers, in cooperation with a senior engineer, then develop incentive standards and the incentive brochure.

At TCI, one of the problems involved in preparing for an installation is the selection of the units of production upon which to base the standard time values. These units

7 Under the materials heading are listed the materials and supplies required, products produced, and forms used in scheduling and performing the work. The process section includes metallurgical process data relating to burden calculations, furnace charges, melting and refining practices, temperatures, finishes, treatment, and tests. Inspection deals with mill and final inspection requirements, tolerances, definitions of defects, test specimens, and inspection procedures. The equipment section specifies the layout of the work area and the location, type, make, over-all dimensions, limitations, and essential engineering data relative to each major piece of equipment. The number of employees by jobs and turns for various operating conditions form the basis for the crew; also included are job titles, functional cost centers, and responsibility numbers. The next section specifies the method of operating each major piece of equipment, flow charts of materials and finished products, and diagrams and layout of equipment. The drafting section is used only for specifications on the rolling mill and includes the reduction practices for rolling billets and slabs into other products.
should be subject to accounting record, report, and verification; be determined from day-to-day accounts of the business, thereby minimizing the cost of administration; be familiar to the employees involved and identifiable to them as the items which reflect the work they perform.

Another problem that must be solved before the plan can be installed is the determination of the performance calculation period. The most desirable unit of time, where such unit is practical, is the single shift. (This is the smallest unit of time that is used for such calculations of incentive earnings.) If the single shift is not practical, the smallest practical number of shifts, such as a calendar day, payroll week, or pay period is used.

The third problem that must be solved is the selection of the type of incentive plan to be used. The plan selected determines the basis upon which allowances for stand-by time and unavoidable delay time are determined. In general, these allowances are calculated upon the basis of an assumption that the average group of qualified employees can perform at approximately 35 per cent above the level of normal performance.

Another problem to be solved by TCI engineers is the scope of the coverage of an application. Groups of direct employees, who work as a crew, and coordinate their activities in operating a producing unit that fabricates or shapes a product, are usually covered in an application separate from the indirect labor which handles the product to or from the producing unit.
The final step in the preparation for an installation is preparing a standard application brochure form of presentation of the plan. The purposes of this standard form are to furnish the necessary information in a convenient manner for review and approval of management and to provide the basis for advanced explanations and negotiations with the Union representatives. The application brochure presents the conditions under which the standard time values are to be applied and the scope of their coverage, as well as furnishing the authority and basis from which the Accounting Department calculates performances and incentive earnings. Installing and Maintaining the Application

When the preparation of the application brochure is completed it is submitted to management for approval. If approval is given, the brochure is submitted to the Union representatives for discussion. This discussion takes place initially between the works management and the grievance committeeman representing the employees to be affected. If the Union agrees to the plan it is put into operation. However, in cases of discontinued plans, plans for operations not previously covered, or plans for old operations where sufficient changes in conditions exist to warrant replacing the old plan, the Company may take unilateral action. In all other cases, the Union must agree before the plan can be put into effect. In the first case, the Union may file a grievance at any time after 30 days following installation alleging that the new incentive application does not provide equitable incentive compensation. As far as incentive applications are concerned, that is the only ground upon which the workers can file a
grievance. In case the grievance is submitted to the arbitration procedure as set up under the Union agreement, the arbitration board must decide only upon the question of whether an equitable incentive opportunity does exist.

The Accounting Department is responsible for reporting on production and calculating employee performance and incentive pay. The Company posts in each department, on the following day, the data concerning production under the incentive installation. This includes the index of performance and incentive earnings of the workers.

In order to attain maximum performance, capacity operation and minimum cost, there is a regular current analysis of the results realized under each incentive application. Each analysis consists of: index of measured performance; actual labor cost per earned standard hour; actual labor cost involved in failures, if any, to attain standard labor cost; and the results realized as compared to a base reference period performance and cost.

Effects of Using Incentive Wages

Although the incentive performance figures for the individual applications are not available for publication, the departmental and plant totals indicate the extent to which this method of wage payment has increased production. In general, production has been increased approximately 23 per cent over the performance before incentives were installed. In 90 per cent of the applications performance was increased, while in 10 per cent of the cases production remained constant or decreased.
Plant performance efficiencies for representative base periods for each of the incentive installations averaged 102 per cent.

During the three months preceding February 14, 1953, the incentive applications averaged 125 per cent efficiency.

Incentive workers' earnings have increased approximately 20 per cent over what they were before going on incentive. The earned bonuses have varied from about zero to 50 per cent. The workers can not lose on the incentive because the basic hourly wage rates are guaranteed, whether the worker produces at, or below, 100 per cent efficiency.

It was the feeling of those interviewed that labor turnover had not been affected by incentive wages. The factors causing turnover are so numerous and interdependent that it was felt that the workers would not consider whether an incentive plan was in effect or not if they were ready to quit.

Grievances were increased "slightly" because of the use of incentive wages. Some grievances were caused by indirect employees feeling that they should be classified as direct for incentive purposes and by some workers who felt that rates were "too tight."

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These figures are for only that part of the plant covered by incentives. For each application there is a "reference period index of performance." From this reference period, the effective use of labor may be judged. The length of this base period varies with the installations but a usual time period is one month. This month is usually the one preceding the installation of the incentive.
SUGGESTION SYSTEM

Operating on the assumption that to achieve progress the Company must continually develop new ideas, TCI has a continuing project to encourage the submission of constructive ideas by the employees. The Employees' Suggestion Plan provides a convenient means for the submission of ideas by all employees and also provides an inducement, in the form of cash awards, to those who, through the use of their initiative and imagination, submit meritorious ideas.

When a suggestion is accepted, the employee receives a cash award of from $5.00 to over $200, which is based upon the importance of the suggestion. The names of the award winners are posted in each works or mine, and awards are paid promptly by check. If for any reason the suggestion committee names an award for a suggestion which proves more valuable than at first thought, an additional award is granted at a later date. When a suggestion is made that had previously been submitted by someone else, it is classified as "anticipated" and the employee is informed of that fact.

SEMI-MATERIAL INCENTIVES

TCI uses the following semi-material incentives: proper selection and placement; introduction to the job; a training program; paid holidays and vacations, insurance coverage, and a pension plan.

PROPER SELECTION AND PLACEMENT

The Company provides modern facilities for processing applicants for employment. In addition to completing a formal
written application, each prospective employee is personally interviewed and given a general classification test. Those best qualified are referred to operating supervisors for final selection.

INTRODUCTION TO THE JOB

Although the Company has no formal program for introducing the workers to their new environment, there is an informal one. The usual procedure, when an applicant is selected for employment, is for the Employment Office to explain to him the benefits that are available to him as an employee and any other pertinent information. After this he is required to pass a physical examination. The hiring supervisor explains safety practices and the hazards connected with the job and department and introduces the employee to those with whom he will be associated when he reports for work.

TRAINING PROGRAM

The on-the-job type training is used for the production workers at TCI. This training is given primarily by the other employees on the job and is supervised by the trainee's immediate supervisor. There is also a management development program for the employees in the higher levels.

PAID HOLIDAYS AND VACATIONS

Because of the nature of some of its operations all operating departments are not able to close down for holidays and many of the production employees are required to work. To compensate for this, overtime, at the rate of double the regular rate of
pay, is paid the employee for all hours worked during the following six holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. (If the holiday falls on a Sunday, the holiday provisions are observed on the following Monday.) Any employee who does not work on a holiday, receives eight hours pay at his average straight-time rate of earnings. When the holiday falls during an employee's vacation he is paid for the unworked holiday in addition to his vacation pay.

Eligible employees receive one week's vacation with pay for from one to five years of continuous service. They receive two weeks vacation when they have between five and 15 years of service. After 15 years of continuous service the employee receives three weeks vacation. (A week's vacation consists of seven consecutive days.)

The vacation pay for an employee is paid at his average hourly rate of earnings for the first two of the preceding three pay periods that he worked. The number of hours he is paid during his vacation is the average hours per week worked by him in the preceding three pay periods, but the number of hours may not be less than forty hours per week, or the scheduled work week of the plant, whichever is larger, nor more than 48 hours per week, or the scheduled work week of the plant, whichever is larger.

INSURANCE COVERAGE

The Company and the United Steelworkers of America, CIO, have an agreement concerning the provision of life insurance,
accident and sickness insurance, hospitalization and surgical benefits for employees and dependents. Employees make monthly contributions depending upon their earnings. In addition to the employees' contribution, the Company contributes two and one-half cents per hour for every hour worked by the participating employees.

PENSION PROGRAM

The TCI pension program is part of the United States Steel Corporation's plan, which is based upon the relief fund adopted by Andrew Carnegie in 1901. This is the forerunner of the first actual pension fund which was installed by the company in 1911. Since that time the plan has been administered by the United States Steel and Carnegie Pension Fund, with the employees making no contributions to the fund from which pensions are paid. In 1940 the plan was amended to provide for supplemental pension benefits to certain employees who elected to participate in a contributory plan, in which both the Company and participating employees contribute to the fund.

Until 1949 the Union had no voice in the Company's pension program. However, in November of that year, the Company entered into an agreement with the Union to provide a minimum pension of $100.00 per month, including social security benefits, to employees who retire at 65 years of age with at least 25 years of continuous service. The amount of the pension is based upon the average monthly earnings of the employee during the last 10 years of service prior to retirement. An employee may retire, under certain conditions, after 15 years of
continuous service, in which case his pension is calculated on a proportional basis. Under the agreement, the Company bears the entire cost of the plan.

NON-MATERIAL INCENTIVES

Although no specific information concerning the use of non-material incentives was available for publication, it can be stated that the Company does have a smoothly functioning plant visitation program for employees' families, and the workers receive the United States Steel Corporation magazine.

SUMMARY AND CONCLUSIONS

The Company has in effect a well developed and administered Labor Measurement type of incentive plan. This arrangement has been applied to jobs engaged in the direct making, shaping, and handling of products in steel mills of the company and in the maintenance of equipment. There are also several types of plans that were in operation prior to 1947 and almost 30 per cent of the manufacturing wage earners are still operating under them. The new type plan, which is equivalent to a standard hour type with 100 per cent premium, is the only type that has been installed since 1947. It has 17 per cent of the manufacturing wage earners operating under it.

In order to have the incentive program operate effectively it was necessary to have a stable foundation. This foundation consisted of establishing the best method of performing the operation, setting up standard practices and standard time values, and the uniform application and maintenance of the incentive plan that was put into effect.
The standard time values, which form the basis of the plan, are established to cover a specific set of conditions; to remain unchanged as long as all of the conditions under which they were established prevails; to become void when any conditions under which they were established are changed; and are replaced by new standard time values that reflect only the change in conditions.

The program has proved effective, for it has increased production in approximately 90 per cent of the installations. The increases in productivity of all the installations have averaged 23 per cent. Earnings of the workers have been increased about 20 per cent. Grievances have increased slightly as a result of the plans, while turnover has not been appreciably affected.

The consensus is that the Company's semi-material and non-material incentive programs have not been as effective in stimulating increased productivity as has the method of wage payment.
CHAPTER VII
CASE STUDY, JONES & LAUGHLIN STEEL CORPORATION

This chapter contains the results of a study of the Equipment Utilization Incentive Plan used by Jones & Laughlin Steel Corporation as a stimulant to its production employees to increase their productivity and efficiency. A description of the plan, an analysis of its value as a stimulant, and a summary and conclusion concerning its incentive value are presented.

BACKGROUND

Jones & Laughlin is the fourth largest steel producer in the United States and the second largest in the Pittsburgh area. Its operations are largely confined to the Pittsburgh district, although it has subsidiaries and branches in several other parts of the country. The Company's operations encompass the following activities: the manufacture and sale of a diversified line of rolled steel products; the production and sale of coke and its by-products; the mining and transportation of coal; the mining of ore and quarrying of limestone; and the operation of connecting intra-plant railroads.

There are approximately 43,000 employees working for the

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1 The majority of the information in this chapter was obtained by written communications with M. H. Jacob, Director of Personnel Relations, and Albert E. Martz, Industrial Engineer, for Jones & Laughlin Steel Corporation. The Company is referred to in this study as Jones & Laughlin.
Company and the majority of them are represented by the United Steelworkers of America, C.I.O.\(^4\)

**THE EQUIPMENT UTILIZATION INCENTIVE PLAN**

The system of payment by results used by Jones & Laughlin to compensate its production employees is the Equipment Utilization Incentive Plan. This system was approved by the Company and Union in September, 1951, and went into effect on December 2, 1951.\(^5\) Of Jones & Laughlin's 43,000 employees 10,000 are operating under an incentive plan.\(^6\) It is estimated that 17 per cent of the total number of workers are operating under this plan, and that 60 per cent of these are classified as direct production workers.\(^7\)

The object of the new plan is to increase production and reduce costs by achieving "practical production capacity" of equipment.\(^8\) The degree of equipment utilization is used as a basis for determining earnings under the plan.


\(^5\) A letter from M.H. Jacob, Director of Personnel Relations, dated November 27, 1951, p.1.

\(^6\) There are two other incentive wage plans in operation, i.e., the Task and Bonus and Straight Piece Rate plans.

\(^7\) A letter from Albert E. Martz, Industrial Engineer, dated January 23, 1953, p.2.

\(^8\) "Practical production capacity," or "full equipment utilization," is the equivalent of 100 per cent of equipment performance; is the production that is attained when the full complement of producing equipment is operating according to standard operating procedures. It does not mean obtaining the theoretical production that would be possible if the equipment ran continuously and without interruptions, delays, etc. Agreement between Jones & Laughlin Steel Corporation and the United Steelworkers of America, CIO, August 12, 1952, p. 93.
METHOD OF INSTALLATION

The method used in putting the plan into operation was to compute the practical production capacity for the controlling piece of equipment and/or the manual controlling portion of the cycle for the operation or process to be covered by the installation. This study was performed by the industrial engineers and the concerned operating department supervisors by means of individual time studies. These capacities, which became standards, were approved by the Chief Industrial Engineer, the Operating Department, and the Personnel Relations Department. The Union had no voice in setting these standards, but the proposal was submitted to it for its approval during the process.

FEATURES OF THE PLAN

Essentially, the plan is a piece rate arrangement based on the standard hourly wage rate, whereby a worker receives a premium when equipment performance is greater than 74 percent of practical capacity. (This figure is called the "makeout point.") When production is at, or below, this point the worker receives 100 percent of his base rate.

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9 In order to arrive at the proper delay and personal allowances, the engineers usually used the studies made on as many as 20-30 eight-hour shifts. Letter from Albert E. Martz, January 23, 1953, p. 1.

10 Usually the piece rate plan is thought of as so many dollars or cents per piece, but the expression is also used to refer to so many hours per piece. At Jones & Laughlin the incentive standards are expressed, whenever possible, in terms of standard hours, i.e., earned hours to be paid for at the basic hourly wage rate.
The earnings curves are such that workers, whose influence on productivity is in the form of direct contribution to each unit produced, earn 100 per cent of their standard hourly wage rate when production is 74 per cent of capacity; 135 per cent at 100 per cent capacity; and 169 per cent at 125 per cent capacity. (See Table VIII for further information.) There are no limitations on earnings possibilities other than the abilities of the employees and the rate of the work flow.

The plan also provides incentive opportunities to indirect workers where (in the judgment of management) such employees can make a significant contribution to the attainment of full equipment utilization. It is recognized, however, that these individuals such as assigned maintenance men) do not directly participate in each unit of production and do not continuously contribute directly toward getting full productivity as do the direct workers. Therefore, a lower incentive opportunity applies to them and they earn 50 per cent of the bonus percentage earned by the related direct production workers. Their earnings are 100 per cent at 74 per cent of capacity; 117.5 per cent at 100 per cent capacity; and 134 per cent at 125 per cent capacity.

All direct employees working on a producing unit under the same incentive plan receive the same percentage of their standard hourly rate; this percentage is determined by the degree of equipment utilization. All indirect workers receive the same percentage also.

Wherever practical, incentive installations for indirect workers are expressed in terms of the production units used for direct workers.
# TABLE VIII

## THE RELATIONSHIP BETWEEN THE PERCENTAGE OF PRACTICAL MACHINE CAPACITY AND DIRECT AND INDIRECT WORKERS' WAGE RATE

<table>
<thead>
<tr>
<th>Per cent equipment utilization</th>
<th>Direct worker's pay as per cent of standard hourly wage rate (1)/74%</th>
<th>Indirect worker's pay as per cent of standard hourly wage rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>74</td>
<td>100</td>
<td>100.0</td>
</tr>
<tr>
<td>75</td>
<td>101</td>
<td>100.5</td>
</tr>
<tr>
<td>80</td>
<td>108</td>
<td>104.0</td>
</tr>
<tr>
<td>85</td>
<td>115</td>
<td>107.5</td>
</tr>
<tr>
<td>90</td>
<td>122</td>
<td>111.0</td>
</tr>
<tr>
<td>95</td>
<td>128</td>
<td>114.0</td>
</tr>
<tr>
<td>100</td>
<td>135</td>
<td>117.5</td>
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<tr>
<td>105</td>
<td>142</td>
<td>121.0</td>
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<tr>
<td>110</td>
<td>148</td>
<td>124.0</td>
</tr>
<tr>
<td>115</td>
<td>155</td>
<td>127.5</td>
</tr>
<tr>
<td>120</td>
<td>162</td>
<td>131.0</td>
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<tr>
<td>125</td>
<td>169</td>
<td>134.5</td>
</tr>
<tr>
<td>130</td>
<td>176</td>
<td>138.0</td>
</tr>
<tr>
<td>135</td>
<td>182</td>
<td>141.0</td>
</tr>
<tr>
<td>140</td>
<td>189</td>
<td>144.5</td>
</tr>
</tbody>
</table>

Source: Computed from data obtained in letters from Jones & Laughlin personnel and the Agreement between Jones & Laughlin Steel Corporation and the United Steel-workers of America, C.I.O., August 12, 1952, p. 34.
In setting standards the industrial engineers use pace-rating and apply proper allowances for rest and personal needs for the portion of an operating cycle that may be man controlled rather than machine controlled. Certain "down time," "delay time," and "stand-by time" are excluded in computing the standards when they are considered to be beyond the worker's control. The use of pace-rating is intended to protect the employees against the standards being based on exceptionally fast worker and to protect the Company against standards being based on a slow worker.

When an existing incentive plan is replaced by the Equipment Utilization Incentive Plan, the straight-time average hourly earnings of the workers affected are not allowed to fall below comparable earnings under the replaced plan during the preceding six pay periods, providing the equipment is utilized at the same level.

INSTALLATION PROCEDURE

A new incentive installation may be made, at the Company's discretion, to cover new jobs; jobs not already covered by incentives; and jobs covered by incentives where the employees' straight-time average hourly earnings, during a current three month period, are equal to or less than their standard hourly wage rates. When a new installation is made, management, through its industrial engineers, develops the plan by means of

12 The term "proper allowances" means that appropriate allowances are made for the conditions of each job and that each case will be weighed on its own merits.
of individual time studies and industrial engineering procedures. The proposal is submitted to the Union grievance committeeman representing the affected employees, for the purpose of explaining the new system and arriving at an agreement concerning its installation. If agreement is not reached, the matter is reviewed in detail by a member of the grievance committee and management. If agreement still is not reached, management may install the plan unilaterally and the employees may file a grievance any time between 30 and 60 days following the installation. An employee on a job that has been classified for indirect participation under an incentive installation may file a grievance at any time within 60 days following installation alleging that his job should have been classified as a direct production job.

EFFECTS OF USING THE PLAN

When the new plan was first introduced the worker reaction was "exceptionally good." As a result of certain newspaper publicity, some of the workers misunderstood the plan and expected an immediate increase of 35 per cent in their wages. This did not present a difficult problem since management immediately began to educate the foremen on the principles underlying the plan and they were able to answer the worker's individual questions.

The grievance "...shall include a statement of the points of differences and shall be confined to the allegation that the new incentive does not provide incentive earnings opportunity, when working on incentive." Agreement between Jones & Laughlin Steel Corporation and the United Steelworkers of America, C.I.O., August 12, 1952, p. 34.

Letter from Albert E. Martz, January 23, 1953, p. 3.
At the time this study was made the employees were still reacting favorably to the plan. There have been cases where the incumbents have filed grievances alleging that the standards were "too tight," or that their jobs should have been classified as direct rather than indirect. The grievances, while they have questioned the development and administration of the plan, have not questioned the theory underlying it.

Effects On Productivity

It has been found that in most instances the production rate increased substantially following the installation of an Equipment Utilization Incentive system. There have been cases, however, in which the production rate for a unit has not significantly changed. Where this fact has been true, it has been found that the unit was previously on an incentive system that had operated effectively. In some instances the affected employee purposely refused to increase performance because they were attempting to prove some point, such as the standards being "too tight." Table IX shows the results obtained from six typical installations. It can be seen that production increases resulting from installation of the incentive plans have varied from about three per cent to 50 per cent. The usual amount of improvement is between 25 and 30 per cent.

Effects on Labor Turnover

Labor turnover is less in non-incentive departments at Jones & Laughlin than in incentive departments. The employment supervisors were asked for their opinion concerning the relationship between incentive wages and turnover,
TABLE IX

CHANGES IN PRODUCTION RATE SUBSEQUENT TO INSTALLING EQUIPMENT
UTILIZATION INCENTIVE PLAN AT JONES & LAUGHLIN

<table>
<thead>
<tr>
<th>Unit</th>
<th>Prior to installation</th>
<th>Subsequent to installation</th>
<th>Per cent increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>23 tons/hour</td>
<td>31 tons/hour</td>
<td>35</td>
</tr>
<tr>
<td>B</td>
<td>26 tons/hour</td>
<td>34 tons/hour</td>
<td>31</td>
</tr>
<tr>
<td>C</td>
<td>125 tons/man day</td>
<td>130 tons/man day</td>
<td>4</td>
</tr>
<tr>
<td>D</td>
<td>44 pieces/hour</td>
<td>55 pieces/hour</td>
<td>25</td>
</tr>
<tr>
<td>E</td>
<td>35 tons/hour</td>
<td>36 tons/hour</td>
<td>3</td>
</tr>
<tr>
<td>F</td>
<td>7.5 tons/hour</td>
<td>11.25 tons/hour</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: Letter from Albert E. Martz, Industrial Engineer, Jones & Laughlin Steel Corporation, dated December 12, 1952.
and the consensus was that incentives had little, if any, effect on workers leaving a job. Their opinions were based on the fact that most workers who quit usually had some specific reason such as poor health, could not stand the heat, did not like the work, or wanted to move elsewhere.

Jones & Laughlin does not maintain turnover figures for specific units and the information was not readily available, but one of the industrial engineers said, "On several units with which I am familiar, there was no significant difference in the personnel prior to the installation of a plan and subsequent to installation."^{15}

**Effects on Grievances**

The employees have no contractual right to file a grievance for a new incentive installation where one has not existed before. If they are covered by such an installation and a significant change is made in the equipment, manufacturing process, materials processed, or quality of product, they have the right to file a grievance within 12 weeks after the change. The workers can then request that a new incentive be developed and installed to replace the existing one.

When a change occurs, management evaluates its effect on the incentive application and if the effect is significant a new plan is installed. In some instances, management concluded that the changes were insignificant and permitted the plan to remain in effect, but the workers thought the changes were significant and filed grievances for new installations.

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^{15} Letter from Albert E. Martz, December 12, 1952, p. 3.
Most of these cases have been settled in the early stages of the grievance procedure either by adjusting the incentive standards or proving to the Union that no adjustment was warranted. Only one such case has gone through all four steps of the grievance procedure and was finally arbitrated before a Tri-Partite Board of Arbitration. In this case the corporation proved that the existing plan was equitable and the Board ruled in its favor.

On approximately 15 per cent of the incentive installations the workers have filed grievances alleging inequitable standards. Of the incentive plans which include indirect workers, approximately 50 per cent have resulted in grievances involving the classification of an employee as an indirect rather than a direct worker.

SUMMARY AND CONCLUSIONS

One of the objectives of good management is to utilize the available machines and equipment to the greatest extent possible, thereby reducing the unit overhead cost and the total unit cost. As this objective is achieved, management is able to increase the bonus going to the worker who uses the machine. For this reason, the Equipment Utilization system has the possibility of becoming one of the most important incentive wage plans.

16 Ibid, p. 5.
The effects of this system of payment by results have been as follows: productivity per worker has increased from five per cent in some cases to 50 per cent in others, with the usual improvement being between 25 and 30 per cent; turnover has been relatively unaffected; and the Company has experienced more grievances arising after installation of a plan than before, for incentive wages will ease certain complaints but serve as the basis for new ones.

The plan has a particular appeal for union workers because it allows them to increase their earnings while at the same time not having a disrupting effect, for the emphasis is placed primarily on the degree of machine utilization as well as the degree of worker endeavor for man controlled portions of the cycle time. The new system has indirectly received the sanction of the United Steelworkers of America, C.I.O. 17

CHAPTER VIII

CASE STUDY, MCCOMB MANUFACTURING COMPANY

This chapter discusses the incentive program of the McComb Manufacturing Company, McComb, Mississippi. It contains a description of the factors used to stimulate production, an analysis of their relative incentive value, and a summary and conclusion concerning the effectiveness of the program.

BACKGROUND

McComb Manufacturing Company, which manufactures nylon underclothes, was organized and incorporated in Mississippi in 1949. In June of that year the firm moved to McComb as part of Mississippi's balancing agriculture with industry plan.

During the last week of August, the Company began training 14 women to serve as sewing line supervisors when operations began. By the end of the year, 200 people were employed in the knitting, cutting, and sewing departments. The dyeing and finishing departments were added in February, 1952. At the end of March, 1953, there were 675 employees,

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1 The majority of the information in this chapter was obtained during a visit to the McComb, Mississippi plant on April 9, 10, and 11, 1953. Those from whom information was obtained were: R. H. Busby, Vice President and Plant Manager; Warren Bettcher, Head, Engineering Department; Mrs. Eula Prescott, Labor Cost Engineer; and Everett Ray Patterson, Time Study and Methods Engineer.
of whom 375 were performing direct labor under an incentive plan.

The Company purchases its yarn and "findings" from outside concerns. The operations performed after the yarn is received are creeling, warping, knitting, seaming, dyeing, finishing, spreading, cutting, bundling, stitching, inspecting, packaging, storing, and shipping.3

The management at McComb Manufacturing Company, emphasizes the importance of the line supervisor as one of the elements contributing to increased production, i.e., differences in output and efficiency in the various departments and shifts can be explained by differences in supervision. In fact, in the preface to the organization's standard operating procedures this statement appears: "No business today can succeed and progress any faster than the quality of the supervisors in the front ranks."

MATERIAL INCENTIVES

The Company uses the following material inducements as stimulants to production: an incentive wage plan, merit wage increases, merit promotions, and discounts on purchases. As in so many other companies, particularly those in this industry, the incentive wage plan is the primary material incentive used.

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2 Findings include lace, special edgings, special threads, elastic, ribbon, and related products.

3 In order to perform these operations, the Company has the following departments: Sample, Design, Warping, Knitting, Dyeing and Finishing, Cutting, Sewing and Shipping. These are the production, or line, departments. The staff departments are: Maintenance, Quality Control, Personnel, Accounting, Engineering, and Production Control and Findings.
INCENTIVE WAGE PLAN

In reality there are three separate incentive wage installations currently in operation. The principal one is the individual standard hour plan in operation in the Sewing Department. This installation covers approximately 350 employees (all women). The second most important plan is the group bonus system in operation in the Cutting Department. The third plan, which is based upon the Sewing Department efficiency, includes the indirect employees, such as floor supervisors, box and bag stamping employees, and sewing machine trainers. (These latter are permitted to participate in the program after a twelve week training program.)

This study deals primarily with the plan in effect in the Sewing Department which is a Standard Allowed Hours plan. The standards are expressed in "SAH's," i.e., the amount of time, expressed in hours, an employee is allowed in order to perform a given operation on one dozen garments. The total number of SAH's produced during the day, multiplied by the basic hourly wage rate gives the worker's total earnings for the day.

It is felt that by the use of this system of wage payment management can develop standard costs for each operation of a manufacturing cycle, for when the volume of production exceeds standard the cost per unit for direct labor remains constant. The workers benefit by having increased earnings; the Company benefits through the reduction of overhead.
Setting of Standards

Because McComb Manufacturing Company is producing a commodity that is subject to frequent style changes, standards can not be set by means of individual time studies but must be established on the basis of past experience and standard data. In order to understand the setting of standards for this type industry it is necessary to understand the procedure followed when a new garment is placed in production.

The Design Department develops new garments or new styles of old garments. When the style is accepted, the Design Department estimates the cost of "findings" and yardage material. The garment and the forms are then sent to the Engineering Department for labor cost analysis.

In performing this analysis the Engineering Department sets temporary standards for each operation until the job actually goes into production and then an individual time study is performed as a check on the estimated standards. In arriving at these temporary standards, the Labor Cost Engineer determines the logical sequence of operations followed in producing the garment. Each of these operations is in turn broken down into the following elements: pick-up, position, sewing (number of inches plus normal stops), disposal, and bundling. Each of these elements is given a time value

\[4\] If the engineers waited until the style actually went into production to set standards by means of individual time studies, the order would probably be filled before the standards could be determined. These values are determined from standard data that has been accumulated by the Engineering Department from observation of similar operations and from past individual time and motion studies.
and these are added together to give the total operating time. A 25 per cent personal fatigue and delay allowance is added, and the resulting figure is converted to standard allowed hours to perform 12 of these operations. The Cost Department, using the figures supplied by the design and engineering groups, computes the total cost of the garment.

After the style has been accepted for production, the Labor Cost Engineer does a methods analysis of the sewing operations as a basis for standardizing procedures so that all the employees can perform the work in the same manner.

When the engineers have established a standard for a given operation, it is presented to the department head concerned for consideration. If he, or any employee, does not agree with the standard an individual time study is performed as a check on the standard.

 Administering the Plan

After the standards are set and the garment is ready for production, a master operation sheet is prepared.\(^5\) This master sheet, from which bundle tickets are prepared, is issued to the Cutting Department. These bundle tickets have the operations listed in sequence on perforated stubs that can be torn off easily. When Production Control issues the order to start producing the garment, the required fabric is cut and bundled and a bundle ticket is attached.

\(^5\) This sheet contains the following information: the operation name and number, the job element names and numbers, machine to be used, SAR's per dozen, and the required number of dozen to be produced in an eight hour day in order to achieve standard.
The bundles are sent to the Sewing Department and after each operation is completed the operator detaches the stub with the operation listed and attaches it to a gummed tape. At the end of the day this tape, with the stubs attached, is sent to the Accounting Department which calculates the total SAH's produced during the day. The daily SAH's are added together to get the weekly total and this is multiplied by the basic hourly wage rate to arrive at the weekly earnings of the employee.

The next step is the posting of the individual daily performance records, which are expressed in SAH's, in the work areas. The final step is a continuing analysis by the Engineering Department and top management of the results obtained by using the plan.

Effects of Using Incentive Wages

The effects of using the incentive wage plan at McComb Manufacturing Company can be explained in the statement of one executive who said, "It develops a competitive spirit; it is a fair way to determine a fair day's pay for a fair day's work."

Effects on Productivity. The consensus of those interviewed was that incentive wages had definitely increased worker productivity. Although it was impossible to obtain comparative data concerning the effectiveness of this method of wage payment for the entire factory (because the Sewing Department had been on incentives from the beginning of its operations), there were two installations upon which extensive
records of this nature had been kept.

One group of trimmers, operating on day rates, had an average daily efficiency of 58 per cent during January, 1953. After February 6, 1953, the group went on an individual incentive wage plan and the average daily efficiency increased to 67 per cent, which was an increase of 16 per cent.  

While operating on day rates, a group of examiners had an average daily efficiency of 54 per cent during January, 1953. Their performance efficiency increased to an average of 112 per cent after the new method of wage payment was applied. This was an increase of 107 per cent.

Equally conclusive results were obtained at an earlier date with a different group of examiners. During the middle of 1951, it was noticed that this group was producing at a very low efficiency, although they were on an incentive wage plan. The weekly efficiency percentages from June 19 through July 28 averaged only 73 per cent. On July 31, 1951, the examiners were taken off incentive and were guaranteed earnings equivalent to what they would have received had they been producing at 100 per cent efficiency under the old plan. From then until December 1, the performance figure averaged 57 per cent per week, which was a decrease of 22 per cent.

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6 These figures are for the period between February 9 and March 31, 1953.

7 Ibid.
Afterwards, the examiners were placed on an improved incentive and during the first week efficiency climbed from 59 to 71 per cent. From then until May 10, 1952, it averaged 88 per cent, which was a 54 per cent increase. During the week of April 4, 1953, the efficiency of this group averaged 114 per cent.

**Effects on Earnings.** The increased earnings due to the use of incentive wage plans vary greatly between workers. Some of them were unable to earn incentive earnings and were paid their guaranteed base rate. However, from the records available, it appeared that employee earnings had increased approximately 14 per cent as a result of using this system of wage payments.

**Effects on Quality.** The problem of sacrificing quality for quantity is ever present. However, because of high standards and rigid and frequent inspections this practice has caused little difficulty at this plant. An indirect result of this problem was a decline in the production rate when a "quality campaign" was in effect in certain areas of the plant. Whenever management began to emphasize quality the workers' output would temporarily decrease.

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8 It was found that when the examiners were working at the higher rate the quality of their work was better. It was concluded by the officials who observed this phenomenon that there was a correlation between a high rate of examining and a high quality examining. This seemed to be caused by the fact that when the workers produce at a fast rate physically their minds were also functioning more rapidly and effectively.
Effects on Turnover. Incentive wages have had little effect on the turnover of personnel at this Company. Some of the workers who lacked the necessary manual dexterity may have become discouraged and quit because they were unable to reach standard, but no such evidence was available. Because the majority of the employees are women with family responsibilities, their usual reasons for leaving, as shown by an analysis of exit interview records, have been associated with their families.

Effects on Supervision. The method of payment by results brings about two divergent pressures on supervision. One pressure is brought by the employees to spur the supervisors to plan better the work and the work area so the workers can produce more efficiently. The other pressure is caused by workers sacrificing quality for quantity, but as previously stated this can be overcome by adequate standards and inspection. (Another effect is the gradual deterioration of supervision, which is caused by the supervisors becoming lax as a result of the workers pacing themselves under the wage plan.)

MERIT WAGE INCREASES

Merit and ability are used as the basis for wage increases in those departments and job classifications that are not on a wage incentive plan. Merit and ability are determined by the employee's departmental supervisor and is largely based on his performance efficiency.
It was thought by those interviewed that this practice had tended to increase productivity of those people who were not on a direct wage incentive plan. The workers have been informed that merit and ability determine their wage increases and consequently they try to improve their output and efficiency in order to obtain the reward.

**MERIT PROMOTIONS**

The Company uses merit and ability as the basis for promotions. However, it must be emphasized that when two workers with equal merit and ability are available to fill a higher position the one with seniority receives the promotion. The consensus was that this practice contributes to increased individual productivity by letting the workers know that their efforts will be rewarded. This practice, coupled with the fact that seniority is considered where equal merit is present, gives the workers an incentive while also giving them a feeling of security.

**DISCOUNTS ON PURCHASES**

All irregular garments are put aside and accumulated until the end of the month, at which time the employees and their immediate families are permitted, and encouraged, to purchase these garments at a very "great saving." When production permits, the employees are allowed to buy the regular garments at a "slight saving."

The reaction of management was that this encourages productivity of the workers, not so much as a direct stimulus,
but because of the relationship that is encouraged between the Company and employee.

SEMI-MATERIAL INCENTIVES

The management of the Company makes a conscious effort to utilize the following semi-material incentives as stimuli to increase productivity: proper selection and placement, introduction to jobs, training program, and paid vacations.

PROPER SELECTION AND PLACEMENT

A decided effort is made to place workers where they will be the most effective. When new employees are needed they are requested by a department head who specifies the number of employees and the specific skills required. The Personnel Director informs the Mississippi Employment Bureau and it does the preliminary screening of the applicants. The Bureau administers dexterity tests and (in the case of clerical workers) aptitudes and typing tests.

The applicants with the highest grades are sent to the plant with an introduction card, their application form (which shows their grades on the tests), and a list of references. The Personnel Director interviews the applicants and sends those selected to the particular department to have the final selection made by the department head.

INTRODUCTION TO THE JOB

The management at McComb Manufacturing Company operates on the philosophy that the initial impression a worker has of the Company is a lasting impression and if she is properly
introduced to the job she will be a more contented and productive employee.

To implement this philosophy each new employee is conducted on a tour of the plant on the first day of work. The keynote of the tour is set by the Plant Manager who emphasizes the integration of the organization and the need for cooperation in keeping a plant of that nature operating and progressing.

TRAINING PROGRAM

The training program begins the first day on the job when the new employee is put under the jurisdiction of a trainer in the Sewing Department. The trainer spends most of her time instructing the new employee in the correct method of operating the machine; the correct sequence of operations; and the most efficient method of handling the cloth. The employee is also instructed in labor saving work aids and tools. In giving these instructions the trainer emphasizes each key point in the sequence of operations. Also emphasized is good housekeeping, which is very essential in this industry. The training program is a continuous process that emphasizes high quality production with low unit cost. Complete records are kept on the actual production of the trainee until standard is reached, even though the

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9 Although only the training program for the Sewing Department is presented in this study, the same principles and procedures hold true in the other departments. This department was selected because the employees in it were on an incentive wage plan.
training program officially lasts only eight weeks. This record is used (if necessary) as the basis of termination if the trainee is unsuccessful in completing the training program.

It was felt that the training program had proved effective in increasing the productivity of the employees by starting them off on the correct methods of operation.

PAID VACATIONS

The Company has a policy of granting one week's paid vacation to those employees with six months or more employment. The vacation is taken by the employees during inventory week, which is usually in May.

It was felt that vacation with pay increases productivity because it gives the employees an opportunity to relax from the job without suffering a financial loss. Although it does not increase the workers' productivity directly, it does indirectly because they are more rested when they return to work.

NON-MATERIAL INCENTIVE

The following non-material incentive factors are used by this organization as stimuli to production: a sense of belonging, an employee publication, service awards, and a social and recreation program.

SENSE OF BELONGING

Management attempts to generate in the employees a genuine sense of belonging and of being an integral part of the group. This is done not by policy or operating procedures
but by actions that show that management has a genuine interest in the other employees. This indoctrination begins with the Plant Manager's emphasis upon cooperation, teamwork, and the social aspect of the organization. Top management tries to impress upon the workers that the way they conduct themselves on the job will determine whether the Company will stay in business and grow or whether it will fail, i.e., the workers are partially responsible for the success or failure of the organization.

Implementing this program of friendliness is the fact that the Plant Manager and other officials participate in the social and recreational activities and try to show the employees that they are interested in them. The fact that the employees speak in terms of "we," "our Company," and "us," rather than in terms of "the Company" and "the workers," is evidence that this program has been successful. This loyalty and devotion to the organization has increased productivity because the workers feel that it is to their mutual advantage to do so.

EMPLOYEE PUBLICATION

Although the Company does not have an employee publication of its own, it does have a section in the daily newspaper every third Wednesday called The Big Stitch. Included, are reports of the activities of personnel and articles of general interest to the employees. Each department has its own reporter, but all employees are encouraged to contribute articles whether or not they are regular reporters.
SERVICE AWARDS

The Company gives a service pin to those employees with three or more years of continuous service. The awarding of this pin is publicized and it is felt that this practice increases productivity by creating a good relationship between the employee and the other members of the organization, for workers have pride in long and meritorious service.

RECREATION PROGRAM

The plant has a social committee that plans and supervises all the social and recreational activities. The chairman is appointed by the Plant Manager, while the other members are selected by the employees. There are two big social events each year for the employees and their families; these are a picnic and a Christmas party. These social activities are very well attended and there is considerable employee participation.

The recreation activities center around the soft ball and basketball teams for men and women. Participation is limited as far as the recreation program is concerned, primarily because so many of the employees live in the rural area and do not have the time to participate.

It was felt that these programs tend to increase productivity by generating a feeling of esprit de corps among and between the workers.
Although McComb Manufacturing Company is a young organization, it has a well-developed program for stimulating production and its young and enterprising management is imbued with the incentive philosophy. Line supervision is recognized as an integral element in the motivation of employees and its assistance is sought in implementing this incentive program.

The incentive wage plan, which is the primary material inducement used to stimulate production employees, has definitely increased production. In one instance it caused a performance increase of 16 per cent; in another, 107 per cent; and in another, the removal of incentive wages caused a 22 per cent decrease and their reapplication caused a 54 per cent increase. Earnings were increased approximately 14 per cent while quality, grievances, and turnover were relatively unaffected. There has been a slight pressure for more supervision.

Wage increases and promotions based upon merit have had a beneficial effect upon performance of the employees receiving them, but the practice of granting discounts on purchases has had a negligible effect.

The semi-material incentives, including well developed selection and placement, introduction, training programs, and an adequate system of paid vacations have indirectly increased performance by insuring a high degree of job satisfaction and employee loyalty.
The non-material incentives have been extensively used by management and have been effective in generating a high morale, group spirit, and a sense of belonging. This *esprit de corps* largely reflects top management's emphasis upon cooperation and teamwork and is itself reflected in the increasing over-all performance efficiency of the plant.
CHAPTER IX
CASE STUDY, KEAN'S LAUNDRY AND DRY CLEANERS

This chapter is a study of the incentive program in effect at Kean's Laundry and Dry Cleaners, Baton Rouge, Louisiana. The study consists of a description of the incentive factors used by management to stimulate the production employees to increase their individual and collective productivity, and an analysis of the effectiveness of these incentives.

BACKGROUND

Kean's originated in 1900 when two brothers began washing collars for Louisiana State University students. The partnership has grown steadily and is now the largest business of its type in the Baton Rouge area. At the beginning of May, 1953, the Company employed approximately 400 people; 300 of these work in the plant and 100 are in managerial, clerical, and other related positions. This study pertains primarily to the 300 plant employees. Thirty of these workers are non-bonus employees, non-bonus key-operators, and utility operators; the other 270 perform operations that

1 Most of the information in this chapter was obtained during interviews with John S. Kean, Partner, and Louis T. Blush, Superintendent Assisting Management. In this study the Company is called Kean's.

2 Of these, 228 are female, colored; 58 are female, white; and 15 are male, colored.
have production standards established and are called bonus operators, for they are covered by an incentive wage plan.  

In 1947 management was confronted with the problem of extremely low (and decreasing) worker productivity. The situation was attributed to two factors: first, the acute labor shortage of the war period had resulted in very little employment selectivity; second, the plant operated under the day work method of wage payment, whereby there was little direct relationship between individual performance proficiency and earnings.

Management attempted to counteract the tendency toward low output and quality by applying the negative incentives of implied threat of transfer or discharge to the more flagrant offenders and giving praise and encouragement to the more efficient employees - but there were no accurate measurements of efficiency to be used.

During the latter half of 1947, when the plant's production efficiency averaged approximately 60 per cent, an intensive program of improving employee performance was begun. Before discussing this program, it is advisable to explore some basic economic facts pertinent to the operations of this service-type industry.

Non-bonus employees are on jobs requiring minimum skill and training. These people are usually upgraded to better positions. Non-bonus key operators perform operations upon which production standards can not be established with any degree of accuracy. They receive a higher base rate than bonus employees. Utility operators, who comprise about five per cent of each work group, include floor ladies, assistants to superintendents, trainers, and replacements for absentees. They receive the highest base rate of any plant employees except management personnel.
First, the industry is highly competitive. Not only is there competition between firms in the industry; the greatest competition is with the customers themselves. As a result of this dual competition, prices are relatively fixed and labor costs are standardized at around 55 to 60 per cent of the sales dollar. Second, the productive operations are predominantly manual and the rate of production is individually controlled. Under this type of operations, it is easy to base wages directly to the worker's output. However, regardless of the wage system used, if the proportion of the sales dollar going to employees can be distributed among fewer workers, the material position of each should improve. The achievement of this goal requires economical operations, which in this type business can be accomplished primarily through increasing individual output and efficiency.

MATERIAL INCENTIVES

The employment factors with potential material inducement value used by the Company include the following: incentive wages, an annual attendance bonus, stabilized employment, and discounts on purchases.

INCENTIVE WAGES

When efficiency reached its low point in late 1947, Kean's retained a management consultant firm to help install an

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These figures obtained during an interview with John S. Kean and Louis T. Blush on May 7, 1953. The figure at the local concern has remained relatively stationary for several years. When more efficient equipment is purchased part of the savings go to increase employees' base rates.
Incentive wage plan. The plan installed was a standard hour plan that paid one per cent premium for each per cent production above standard. The arrangement also guaranteed employee base rates for production at or below standard.

In installing this system of payment by results, the consultants performed a job analysis, developed the best method of performance, standardized the method of operation, derived production standards, wrote job descriptions, and recommended training periods for each operation that could be standardized with any degree of accuracy. The derived standards are considered as operating minimums and consistent failure of an employee to meet them is considered just cause for dismissal or transfer.

The results of using this wage payment plan have been gratifying. The monthly direct labor efficiency currently varies from about 105 per cent during the month of March (which is a period of high employment and training of new employees) to around 120 per cent during the months of more stabilized employment. The average annual efficiency is now approximately 116 per cent, which is an increase of 93 per cent over the 60 per cent efficiency of 1947. Other benefits that have been received include: reduced turnover, which means the employees remain on the job longer and become more satisfied workers; better supervision, for more time can be devoted to production problems and less spent on

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5 These figures were obtained from John S. Kean and Louis T. Blush, on May 7, 1953.
personnel problems; and increased employee earnings.

**BONUS**

For every week a female production employee has a perfect attendance record, $0.50 is placed in a fund for distribution to her as a Christmas bonus. The main purpose of this bonus is to emphasize the importance of attendance and the maintenance of production schedules, for the rate of production is dependent upon the customers' demand, not the Company's desires.

The incentive value of this practice is in the monetary reward which encourages attendance. Increased employee attendance means that fewer utility operators are necessary and the average over-all productivity increases.

**STABILIZED EMPLOYMENT**

Although the Company does not guarantee a stipulated amount of work per year, it does have a policy of stabilizing employment and minimizing layoffs. Because so many of the employees are women, this problem tends to resolve itself through attrition. Also, the seasonal variations of the

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6 For instance, when the plan went into effect there was a need for doubled rest room facilities. Now with over one-third more employees, the same facilities are adequate. Management's conclusion was that the employees (who are not permitted to smoke on the job) were using the rest rooms for smoking lounges.

7 The importance of attendance is highlighted each Wednesday when names are drawn for four prizes. To be eligible to receive the prizes the employee must have a perfect attendance record for one week.
laundry and dry cleaning activities complement each other and tend to flatten out the sales curve. However, the Company occasionally is faced with the problem of excessive work crews in relation to the volume of business. When this contingency occurs, reducing the number of employees is used as a last resort. (This has seldom been necessary.) When layoffs do become necessary, the more productive employees are retained.

The stimulating value of this employment factor, which is the partial removal of the fear of unemployment, evidences itself through the prevention of a decline in productivity.

DISCOUNTS ON PURCHASES

Kean's employees receive a 50 per cent discount on all their personal laundry and dry cleaning done by the Company. The organization has a prescribed uniform that the employees are encouraged to wear; if it is worn it is serviced at no charge to the workers.

It is felt that this service has had little effect upon productivity because the relationship between discounts and output is so remote. It does increase the material well being of the employee by stretching his income.

SEMI-MATERIAL INCENTIVES

The Company has the following semi-material employment factors in operation: selection and placement, training, paid holidays and vacations, insurance provisions, and a retirement plan.
SELECTION AND PLACEMENT

New employees are selected by the production superintendent on the basis of their education, physical ability, attitudes, and background. The usual procedure is for the prospective employee to be recommended by one of the Company's employees.

All new production employees are placed on non-bonus jobs at starting rates for the first four weeks. Advancements in base rates occur at the end of four weeks, six months, and one year; advancements to bonus jobs, or higher positions, are based upon performance, personality, and similar characteristics.

The effects of selection and placement upon productivity have been tangible. Kean's has been able to select those people who are best qualified for the work to be done, and this has led to job satisfaction and more stable employees.

TRAINING

Each production supervisor is directly responsible for training employees in his department, but he delegates the authority for the actual training to the utility operators. The recommended training periods vary from one day for bundle girls to six months for utility operators, but the usual time is from six to 12 weeks.

Proper training has increased the workers' productivity because it has taught them the most efficient method of operation.
PAID HOLIDAYS AND VACATIONS

Two other employment factors with potential motivating effect are the policies of granting paid holidays and vacations. Independence Day, Labor Day, Thanksgiving, and Christmas are the holidays celebrated by the employees. As for the vacations, one week is given after one year's service.

The effect of these incentives is to stimulate the employees by breaking the monotony associated with routine and giving them a chance to rest and relax without loss of pay. Ordinarily, the workers return rested and more satisfied with their jobs.

INSURANCE PROVISIONS

The production employees have a $500 life insurance policy bought for them, at Company expense, after six months' service. There is also a provision for the purchase of hospital and medical insurance, with the Company defraying two-thirds of the cost.

The motivating effect of this incentive factor, which is slight, results from an increased sense of security on the part of the employees.

RETIREMENT PLAN

Kean's maintains a policy of retiring employees with sufficient service who are no longer able to work. The plan is informal in the sense that it is not funded but is paid out of current operations; it is flexible in the sense of not having arbitrarily set age or service requirements - each case is decided upon its own merits.
The effects of the plan upon the plant employees' productivity has been negligible because most of them are women with present or potential family responsibilities, and are not career employees, but consider the job as temporary and do not intend to remain with the Company until retirement age. Therefore, security is not sought in the form of retirement pay. (The opposite results have been noticed among the men and some of the women employees. In their case, this policy has stabilized employment and created job satisfaction.)

NON-MATERIAL INCENTIVES

Kean's executives operate upon the assumption that four elements are necessary to achieve the highest worker effectiveness; namely, pride and satisfaction with the job; satisfaction with and respect for the supervisor, established performance standards; and the necessary motivation to attain these standards. Production standards were determined; an incentive wage plan was installed to furnish individual motivation; and the other employment factors were furnished in an attempt to achieve job satisfaction. However, these specific factors are not sufficient for job satisfaction; the non-material incentives must be present also.

Management tries to develop a sense of pride in its employees by selecting the best workers for the jobs and by training them to perform their jobs in a commendable manner. Also, the working conditions are kept as satisfactory as possible and modern facilities are provided in order that
the workers can perform at their peak.

Personal recognition is another inducement used by management. This recognition is provided by the close working relationship between top management and production employees, that is, "mutual respect and recognition - the best employment practices." Management circulates among the employees, gives personal attention, calls them by name, and helps them with their problems. This practice leaves channels of communication open so any worker can take his problem directly to any executive. The policy of management is to recognize and praise work that is well done.

SUMMARY AND CONCLUSIONS

Kean's incentive program has succeeded in increasing plant employee productivity and efficiency, as is evidenced by the 93 per cent rise in over-all plant efficiency since 1947. The employees have benefitted through increased earnings and better employment conditions; the customers have gained by receiving quicker and more standard service; the Company has profited by reduced unit overhead and labor cost.

An evaluation of the incentive value of the material factors as stimulants to plant employee productivity and effectiveness indicates that: the incentive wage system has proved highly successful; the annual bonus has a negligible effect on individual productiveness, but does have an appreciable effect upon group efficiency by encouraging

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 Obtained in an interview with John S. Kean on March 28, 1953.
more regular attendance; the policy of stabilizing employment has had a slight effect; the retirement plan has a minor effect upon both individual and group production; and discounts on employee purchases has only an indirect effect.

Of the semi-material incentives used, proper selection and placement have increased productivity through putting the right person on the right job; training has had a substantial effect; paid holidays and vacations have been beneficial in breaking the monotony of routine and giving the employees a chance to rest and relax; and insurance provisions have had only slight effect upon output.

Without the inducement value that is present in the non-material incentives the other factors would not be as effective as they are, for only when an employee has pride and satisfaction in his job and is given personal recognition by management does he become the most productive employee.
CHAPTER X
THE USE OF INCENTIVES BY LOUISIANA INDUSTRIAL CONCERNS

This chapter presents the results of a questionnaire survey of the incentive practices of Louisiana industrial concerns. On March 21, 1953, question forms were sent to 344 companies with 100 or more employees and 82 firms with between 50 and 100 employees. By May 26, 1953, 125 completed forms had been received and these provide the material for this chapter.

The questionnaire was organized into three sections, each of which had a special purpose. The first section was designed to determine the extent to which selected employment factors are used as stimulants to productivity, (See Table X for a tabulation of the results.); in the second section the respondents were asked to indicate their opinion as to the relative inducement value of these factors (See Table XI for a tabulation of the results.); and in the third part an attempt was made to ascertain what other methods are used in motivating employees.

MATERIAL INCENTIVES

The following material inducements were investigated: incentive wages, profit sharing, bonus plans, merit wage increases, merit promotions, guaranteed annual employment, 1

1 See Appendix A for a copy of the cover letter and Appendix B for a copy of the questionnaire. The mailing list was selected from the Industrial Directory, State of Louisiana, 1951. It must be emphasized that this mailing list included
TABLE X

NUMBER AND PER CENT OF LOUISIANA INDUSTRIAL CONCERNS USING SELECTED INCENTIVE FACTORS AS STIMULANTS TO INCREASED PRODUCTIVITY

<table>
<thead>
<tr>
<th>Incentive factor</th>
<th>Now using</th>
<th>Tried-rejected</th>
<th>Not using</th>
<th>Plan to use</th>
<th>No answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>num-</td>
<td>per cent</td>
<td>num-</td>
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<td>70</td>
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<td>0</td>
<td>63</td>
</tr>
<tr>
<td>Plant visitation by employees' families</td>
<td>33</td>
<td>26</td>
<td>0</td>
<td>0</td>
<td>52</td>
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</tbody>
</table>

Percentages are based upon 125 returned questionnaires.

Source: Questionnaires received from 125 Louisiana industrial concerns.
### Table XI

**Relative Value of Selected Incentive Factors as Stimulants to Productivity**

As determined by the personal judgment of 125 Personnel Managers

<table>
<thead>
<tr>
<th>Incentive Factor</th>
<th>Number Answering</th>
<th>High</th>
<th>Low</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incentive Wage Plan</td>
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<td>21</td>
<td>18</td>
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<td>Profit-sharing Plan</td>
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<td>32</td>
<td>27</td>
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<tr>
<td>Bonus (Christmas, production, annual, etc.)</td>
<td>87</td>
<td>39</td>
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<td>Merit Wage Increase</td>
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<td>69</td>
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<tr>
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<td>21</td>
<td>17</td>
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<tr>
<td>Low cost housing</td>
<td>79</td>
<td>21</td>
<td>26</td>
<td>32</td>
</tr>
<tr>
<td>Discounts on Purchases</td>
<td>64</td>
<td>16</td>
<td>20</td>
<td>28</td>
</tr>
<tr>
<td>Suggestion System, with financial reward</td>
<td>64</td>
<td>16</td>
<td>26</td>
<td>22</td>
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<tr>
<td>Merit Promotions</td>
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<td>Holidays with Pay</td>
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<td>Vacations with pay</td>
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<td>Hospitalization Insurance</td>
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<td>Service Awards</td>
<td>72</td>
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<tr>
<td>Plant Visitation by Employees' families</td>
<td>68</td>
<td>18</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>

*a Percentages are based upon the number answering each factor.

**Source:** Questionnaires received from 125 Louisiana industrial concerns.
low cost housing, discounts on purchases, and suggestion systems with financial reward.

INCENTIVE WAGES

Some type of incentive wage plan is used by 24 per cent of the companies returning usable questionnaires. Sixteen of these companies use the straight piece rate plan; 13, the standard hour with 100 per cent bonus; nine, the standard hour with less than 100 per cent bonus; four, the point, or unit, plan; and four, some other type. Three companies which have tried using incentive wage arrangements have discontinued their use; three companies are planning to use them in the near future.

The companies using this type stimulant are primarily in industries where the workers largely control the flow of work, e.g., the textile, garment, tent and awning, lumber, and woodworking industries. Those companies in the process type industries where the flow of production is controlled by machines, mechanical equipment, or the type of production

a selected group of companies and that only 29 per cent of this group completed the form. Therefore, the results of this study are not to be considered as a definitive statement of the incentive practices in the state or of the beliefs of personnel managers concerning the relative incentive value of the factors investigated.

2 These percentages are based upon the total number of returned questionnaires (125).

3 The other types are: "bonus above quota," "foremen's bonus," "commission," and "task for eight hours—worker can leave when through." The number of plans used - 46 - exceeds the number of companies using the plans - 30 - because several firms use more than one plan.
do not make extensive use of this method of wage payment. The sugar, chemical, petroleum, and metal working industries are of this nature.

The majority of the executives answering the questionnaire believe the payment of wages by results increases productivity. Fifty-one per cent say that incentive wages have high; 26 per cent, low; and 23 per cent, no incentive value. The most prevalent comments can be summarized in the following statements: (1) incentive wages result in high productivity, reasonable profits, and high earnings for employees; (2) this method of wage payment acts as an inducement only if increases in output can be attributed to an individual worker (or group of workers), if the workmen can control the rate of production, and if the standards and wage rates equitably reward the one who causes the increased productivity.

Nine respondents indicate that they do not use this device, but would like to if the union would consent. It is also significant that 10 respondents emphasize the importance of the supervisor in the successful use of incentive wages, while two say that these arrangements serve as substitutes for good supervision.

PROFIT SHARING

Only 12 per cent of the companies now use or are planning to use profit-sharing plans. However, others comment that

\[1\] In one instance, a 100 per cent increase in productivity was attributed to the use of this method of wage payment.
although they have no formal profit-sharing agreement, their annual bonus is related to profits in some manner. The majority of those having formal arrangements are small organizations.

In the opinion of almost half the respondents, profit sharing has a high inducement value, for employees feel they are working for themselves. Forty-seven per cent of those answering believe that profit sharing has high; 40 per cent, low; and 13 per cent, no value as a stimulant to production.

Several comments indicate that so many factors affect profits it is impossible to determine, with fairness, what proportion to allocate to the production employees. The concensus of those answering was that sharing of profits will act as a stimulant to workers to increase production and efficiency only when there is a realization of the close relationship between the rate of production, costs, wages, and profits.

**BONUS PLANS**

Fifty-four per cent of the firms (67) grant some type of bonus to their employees; three organizations have tried and rejected these arrangements. The bonuses vary from "some token gift" to "10 per cent of base annual earnings."

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5 Approximately 25 per cent of the comments indicated that the bonus is given to non-production employees only. About the same percentage distribute bonuses, but "not as a matter of policy."
Christmas bonuses tied to company profits and employee's earnings, are the most prevalent type used. The second most general practice is to give a fixed sum at Christmas.

Forty-five per cent of those answering think this factor has high incentive value; 3 1/2 per cent, low value; and 21 per cent, no value. Most of the large number of comments are unfavorable and can be summarized as follows: if there is no direct relationship between the rate of production and the amount of the bonus, there is little inducement to increase output; if variable bonuses are not based upon output they create jealousy and resentment; if a fixed amount is given there is no spur to increase individual output; if a bonus is once given it becomes "routine" and considered a "right." Discontinuance of the practice, or any reduction in the amount of the bonus, will cause antagonism toward the company. The favorable comments reveal the fact that bonuses have an indirect incentive value by holding good people.

MERIT WAGE INCREASES

Merit, based upon ability, productiveness, attendance, training, and experience forms the basis for granting wage increases to employees in 55 per cent of the answering companies (69). Sixteen respondents say that this policy is not practical under a union contract. The usual arrangement

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6 Nine other companies base wage increases on merit and length of service.
is for wage increases to be based upon a fixed progression with the workers subject to merit rating in some form.

Seventy-eight per cent of the respondents think this policy is conducive to high productivity; 16 per cent believe it has low incentive value; and six per cent feel that it has no value. The comments can be summarized as: worker output is increased when employees know they will be rewarded for their efforts by having their wages increased. A countervailing group of comments pointed out that this practice can lead to discrimination on the part of the management.

MERIT PROMOTIONS

An overwhelming majority of the answering companies use merit also as the primary basis for promotions. Although only 67 per cent of those participating in the survey (84) said they used merit as the determining factor, an additional seven per cent indicated in their comments that, "If merit is equal, seniority prevails."

An even greater majority of the respondents feel that this policy stimulates productivity, for 82 per cent say it has a high incentive value; 16 per cent, low value; and only four per cent say no value. The comments can be summarized in the statement that this policy promotes productivity by rewarding initiative and efficiency.
GUARANTEED ANNUAL EMPLOYMENT

Eighteen per cent of the organizations (22) have guaranteed annual employment as an incentive factor. Most of the variations of this security measure are based upon combinations of vacations, pay during sickness, and attempts to minimize the effects of seasonal variation by diversification. Also, most of the plans are informal and voluntary rather than contractual.

Fifty-three per cent of those answering believe that this arrangement has no incentive value; 31 per cent, low value; and 16 per cent, high value. Two conflicting viewpoints dominate the comments. The first and most prevalent view is that this provision destroys initiative and incentive. The second view is that this policy improves morale and reduces turnover, with a consequent increase in worker productiveness.

LOW COST HOUSING

Twenty-five per cent of the firms (31) provide low cost housing for their employees; two per cent (two) have used this arrangement but are not using it now. This plan is more prevalent in the rural areas where groups of workers are concentrated and private rental units are not available. However, in some instances the companies furnishing low rent housing are located in cities.

In the opinion of those commenting, this provision has little effect upon productivity but is often necessary to
attract a sufficient supply of employees. Of the 79 respondents, 40 per cent think low cost housing has no incentive value; 33 per cent, low value; and 27 per cent, a high value.

DISCOUNTS ON PURCHASES

Employees are given discounts on their purchases by 32 per cent of the surveyed companies (40). There are two variations of these discounts, namely, a reduction in price on company products, and a deduction from the retail price of non-company products. In reality this practice increases an individual's scale of living by maximizing his material position. (It also enables the company to pay lower wages.)

This procedure is not considered directly conducive to increasing output, but may have an indirect effect by creating a pleasant employee-employer relationship. Forty-four per cent of those answering believe this policy has no incentive value; 31 per cent, low value; and 25 per cent, a high value.

SUGGESTION SYSTEM, WITH FINANCIAL REWARD

Fourteen per cent of the participating organizations (17) offer financial rewards for constructive suggestions; eight per cent (nine) have discontinued the practice; and two per cent (three) are planning to use it. The reasons given for discontinuing the programs are lack of employee participation and the cost involved.

The respondents feel that this policy has little incentive value. Forty-one per cent of the respondents think this arrangement has a low incentive value; 34 per cent, no value;
and 25 per cent, a high value. To be effective as a stimulant, the financial reward must be sufficient to induce the employees to concentrate and exert their initiative. Also, there must be a constant follow-up to all suggestions.

SEMI-MATERIAL INCENTIVES

The following semi-material incentive factors were included in the survey: paid holidays, paid vacations, insurance programs, and retirement plans.

PAID HOLIDAY

Seventy-two per cent of the companies (90) provide paid holidays for their employees.

The personnel managers feel that the policy of giving such holidays acts as a stimulant to productivity, for it gives the workers a break in their routine.

Forty-eight per cent of those answering believe this policy has high incentive value and 26 per cent each say it has low value, or no value. This incentive value is indirect and manifests itself through increased morale and low labor turnover.

PAID VACATIONS

Approximately the same situation prevails concerning paid vacations, for 89 per cent of the companies (111) grant such vacations. Forty-nine per cent of those answering believe this factor has high incentive value; 27 per cent, no value; and 24 per cent, low value. As with paid holidays, paid vacations have an indirect influence on output through improving morale and reducing labor turnover.
Insurance coverage, both group life and hospital and surgical, is provided by approximately 70 per cent of the participating business organizations. Eighty-eight companies provide hospitalization coverage and 90 per cent provide group life. About one-half of the plans are contributory and the others are non-contributory.

To the extent that these provisions furnish the employees with security, they are effective as stimulants to productivity. About two-fifths of those answering believe that this type of security measure has a high incentive value; one-third, no incentive value; and one-fourth, low value. Over one-half of the comments indicate that this measure is considered as a "right" by the workers and has no stimulating effect.

RETIREMENT PLANS

Of the participating companies, 38 per cent (48) indicate that they use retirement plans as stimulants to increase productivity and two per cent (two) are planning to use them. The typical plan is voluntary, contributory, and based upon employee earnings.

Fifty per cent of those answering presume that this provision has high inducement value; 28 per cent, has low value; and 22 per cent, no value. The consensus is that there is little direct relationship between individual productivity and a retirement plan, and what stimulating value is present
is indirect, intangible, and evidenced through improved morale (especially of the older workers.)

NON-MATERIAL INCENTIVES

Because of the difficulty associated with phrasing written questions concerning the non-material incentives, only the following were included in the questionnaire survey: employee publications, service awards, and plant visitation by employees' families.

EMPLOYEE PUBLICATIONS

Fifteen per cent of the companies are using, have used, or are planning to use an employee newspaper as an employment factor. Twenty-one per cent are using, have used, or are planning to use employee magazines as a stimulant to productivity.

These publications have only an indirect effect upon productivity. About one-half of the respondents believe that they have low incentive value; about one third, no value; and about one-fifth, high value. However, it must be stressed that these publications aid good employee relations through improving morale.

SERVICE AWARDS

Twenty-five per cent of the companies (31) give awards to the employees for faithful service; two per cent (two) are planning to use these awards.
The value of these awards as incitements to increased productivity is relatively limited; two-fifths of the answers think that the awards have a low incentive value; one-third, no value; and the others assume that the stimulating effect is high.

PLANT VISITATION BY EMPLOYEES' FAMILIES

Twenty-six per cent of the companies (33) have plant visitation programs for their employees' families; two per cent are planning to use this factor. These visitation programs vary from the formalized, periodic, group visits to informal visits by individual families.

Forty-four per cent of the personnel managers feel that these visits have a low value as goads to productivity; thirty per cent, no value; and 26 per cent, a high value. The inducement value is found in the stimulation of interest that occurs when the employee can display his work area to his family. It also encourages "good housekeeping."

OTHER METHODS OF INCREASING PRODUCTIVITY

A third group of questions was designed to determine what other methods are used to stimulate productivity. Although there were no specific answers to be checked in these questions, the comments received are summarized in the following discussion.

One of the questions was, "Have you had any trouble with slow-downs, or restriction of output to make the job last, for fear of unemployment?" Out of 41 companies answering
this question, 21 indicate they have suffered trouble of this nature; six say they have encountered this restriction to a minor degree; and 14 state they have experienced no restriction of output. Those encountering restriction say that there is a close correlation between business conditions and curtailment of output. The consensus of those who have experienced no restriction is that good supervision and attempts at stabilizing employment are the factors contributing to the high level of output.

The next question asked what methods are used to counteract the employees' tendency toward restricting output. The most frequently mentioned element, with 42 references, is proper supervision. Supervision itself is specifically mentioned 33 times, while the other comments refer to planning, training, rotating workers from "hard" to "easy" jobs, and checking production records. The second most frequently mentioned element is the setting of production standards. Eighteen respondents state that this method of stimulating employees has been successfully used. Human relations, which includes personal contact, group meetings, friendly attitude, emphasizing the importance of efficient operations, and appealing to the workers for their cooperation in reducing cost ranks third with 17 references. In fourth place, with 16 mentions, is the negative whip of discipline, which includes discharges, layoffs, transfers, and demotions. The conventional rewards, including incentive
wages, bonuses for work in excess of standard, high wages, promotions, and profit sharing, are mentioned 13 times. Eight of those answering this question say they have negotiated with the union to eliminate or prevent the restriction of output.

The next two questions dealt specifically with unions and productivity. The companies were asked if they pay premium wages to workers whose output is above average where there is an established union scale for that job classification. Nineteen of the 32 companies indicate they do not; 13 say they do. The related question asked what devices were used to prevent a uniform wage for a job classification from setting the level of efficiency at the rate of the slower employees. The order and frequency of mention of the elements used are: supervision, 27; production standards and machine speed, 25; discharge and transfer, 17; merit promotions, 13; merit wage increases, bonuses, incentive wages, and selectivity in employment, 11 each; variable rates and flexible classification, two each; and high wages, interesting work, and job security, one each.

**SUMMARY AND CONCLUSIONS**

There is not necessarily a close correlation between the extent to which these selected incentives are used and their relative value as stimuli to production. This paradox can be explained by the fact that many of these elements
have become integral conditions of employment through pressure from the workers and a company must conform to accepted practice in order to maintain its labor force.

The ranking of these incentives, according to the percentage of Louisiana industrial concerns now using them is as follows: (1) paid vacations; (2) paid holidays; (3) group life insurance; (4) hospitalization insurance; (5) merit promotions; (6) merit wage increases; (7) bonuses; (8) retirement plans; (9) discounts on purchases (10) plant visitation by families; (11) service awards; (12) low cost housing; (13) incentive wage plans; (14) employee magazines; (15) guaranteed annual employment; (16) suggestion system with financial awards; (17) employee newspaper; and (18) profit sharing.

The relative incentive value of these elements, as shown by the proportion of respondents who think they have a high or low value in stimulating increased productivity, is as follows: (1) merit promotions; (2) merit wage increases; (3) profit sharing; (4) incentive wages; (5) retirement plans; (6) bonuses; (7) paid vacations; (8) paid holidays; (9) group life insurance; (10) hospitalization insurance; (11) plant visitation by employees' families; (12) service

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7 The method of arriving at this ranking was to multiply by two the percentage of companies answering "high" and by one the percentage of companies answering "low" in Table XI. The resulting figures were added together and ranked in descending order. The reason for this method of ranking is that both "high" and "low" answers should be included in any such ranking of relative values, but they should not be equal in value.
awards; (13) employee magazines; (14) suggestion systems; (15) low cost housing; (16) employee newspaper; (17) discounts on purchases; and (18) guaranteed annual employment.

In addition to the specific factors studied, the importance of proper supervision, human relations, and proper job standards as elements in motivating employees is emphasized repeatedly in the comments. Also, the negative incentive of discipline is used to prevent restriction of output, and therefore can be interpreted as an important motivating factor.

It can be concluded from this study that the incentives that have the greatest appeal for Louisiana industrial employees are those directed at their initiative and desire for individual gain. The second most important group of inducements are those appealing to the workers' desire for personal security. The incentives that break the monotony of the job by giving the employees time off from their jobs are in third place, while those appealing to pride and the "desire to belong" are in forth place. A fifth group of incentives, including suggestion systems, low cost housing, discounts on purchases, and guaranteed annual employment have relatively minor incentive value.
CHAPTER XI
SUMMARY AND CONCLUSION

The primary objective of a business organization is to sell a product at a profit.\(^1\) To accomplish this goal, the cost of production must be minimized by reducing unit material, direct labor, and overhead costs. The cost of labor, which accounts for a large proportion of these production costs, offers the greatest potential source of savings. There are many methods of decreasing labor cost, but probably the most effective is the application of any of a variety of incentives to encourage employees to increase their individual and collective output. Although infinite improvement in output and efficiency is not possible, the consensus of those in the field of management is that considerable savings can be achieved by inducing the workers to use their abilities more effectively through finding improved methods of performing their jobs and through reducing wasted efforts and materials.

The principle underlying the use of incentives is that behind human activities there are fundamental motives that are derived from the desire for something, the lack of which leaves an unfilled want in a person's life. These motives determine the choice between alternative goals, but the goal is not attained without the application of a stimulus which incites the person to perform the activity that is necessary for its attainment.

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\(^1\) This statement is not meant to infer that this is the only objective of business groups; it does not minimize the social responsibility of business managers; it does imply that unless the organization makes a profit, it can not long remain in existence.
There is a variety of incentives that can be used by management as motivating factors. The nature of these vary from the negative suasions of fear and punishment, with their driving ability, at the one extreme, to the positive rewards and recompenses, with their inducing quality at the other extreme. The specific stimulants have varied from forced labor and punishment, to subtle appeals to pride, recognition, and the desire for positions of prominence.

To determine the relative value of incentives as stimulants to production employees to increase output and efficiency, a group of them was selected, classified, and analyzed. In the analysis, the literature was reviewed, several case studies were made, and a questionnaire survey of the incentive practices of Louisiana's larger industrial concerns was conducted.

The results of this study are based upon opinions obtained from the case studies, the questionnaires, and the literature in the field. Because of the subjective nature of these opinions and the fact that the motivating effect of a given stimulant varies between individuals and at different times, the following conclusions are to be considered as indicative of, but not a definitive statement of, the relative value of the selected incentives.

MATERIAL INCENTIVES

The material factors that were chosen for this study are incentive wages, profit sharing, bonuses, merit wage
increases, merit promotions, guaranteed annual employment, low cost housing, and discounts on purchases.

This group of inducements is based upon man's primary needs and can be used to appeal to the desire to possess tangible goods and the need for satisfying man's biological requirements. Up to the subsistence level the material factors furnish the most effective method of motivating people. However, as a person's supply of goods and services becomes more plentiful, their stimulating effect diminishes. To those individuals in the higher economic brackets the value of these monetary inducements tends to be in terms of their prestige value rather than their purchasing power.

**Incentive wages.** The employment element with the highest motivating power is an incentive wage plan. Under this method of wage payment the employee is compensated in direct proportion to his productivity when the increment of output is the result of his added effort, skill, or initiative.

There are several discernible effects of paying employees by results. Well developed and properly administered plans usually decrease total unit cost by increasing output per man-hour approximately 40 to 50 per cent on operations that are not machine controlled. Employee earnings are ordinarily

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2 It must be recognized that with straight piece work the unit labor cost remains constant regardless of the volume of production, with the standard hour with 100 per cent premium and related plans, unit labor cost remains constant when production is above standard, which is usually 100 per cent of a given base. However, an incentive system usually is installed when direct labor efficiency of the organization is
increased by about 20 to 25 per cent under most plans. The effect of these arrangements upon grievances has been to settle some complaints, while creating new ones, with the total number being increased. This system has reduced turnover of personnel to a minor degree.

Management must consider the reactions of its employees and their representatives to the installation of this method of wage payment. The unions are not as opposed to incentive wages *per se*, but are opposed to their potentially disruptive effect, for this wage plan emphasizes the individual rather than the group and gives management a basis for appraising the work of one worker in relation to that of another. The unions are also opposed to plans that are administered solely by management, for they would like to have a voice in determining what plan is to be used and in installing and administering it.

For incentive wage plans to be most effective as a stimulus to production, they must be based upon management's less than 100 per cent, therefore, unit labor cost decreases as an employee increases his output efficiency from what it was when the incentive was installed up to standard; with production above that, unit labor cost remains constant.

Even if unit labor cost is constant, savings in total unit cost could result from spreading overhead costs over more production units. But in those industries where large amounts of overhead costs in proportion to direct labor costs exist, the worker's productivity tends to be controlled by the machine or process flow rather than by the individual employee. These truisms tend to limit the effectiveness of incentives.
sincere interest in the workers as individuals and not merely a means to further production. Also, the workers must be able to control (to some degree) the rate at which the goods are produced.

**Merit promotions.** The second most effective material stimulant is the basing of promotions upon merit and ability rather than upon length of service. When advancements in position are based upon the employee's training, experience, skill, attendance records, ability to get along with his fellow workers, and performance efficiency there is an inducement for him to continue increasing his rate and quality of production. When promotions are based upon seniority, or some factor not related to productivity, the worker does only enough to maintain his employment. This policy induces increased productivity by rewarding initiative and efficiency with additional prestige, authority, and financial return; it is a symbol of progressing or "getting some place." The best arrangement is to base promotions primarily upon merit, but let length of service govern where merit is equal.

**Merit wage increases.** Closely related to this factor, in nature and relative inducement value, is using merit (based upon the same criteria) as the primary basis for granting wage increases. The tendency is for most employees to value the recognition that is associated with this policy as highly as the monetary return. When wage increases are given periodically and uniformly, there is little stimulating effect.
Profit sharing. The sharing of profits has a high incentive value, for it gives the employee a proprietary interest in his job. This practice primarily stimulates the worker to increase his productiveness by appealing to his desire for material gain, but it is also effective in generating cooperation. If the employee has an adequate understanding of the close relationship between production, costs, wages and profits, and can partially affect profits by increasing his performance efficiency, this factor will operate as a strong spur to increased output.

Bonuses. There are several types of bonus arrangements and the motivating value varies with the type used. One variation is to base the amount of the bonus upon the rate of production. Its incentive value is higher than the other bonuses, is about equal to profit sharing, but is lower than incentive wages. A second variation, which distributes gifts in variable amounts based upon some criterion other than production, creates resentment and jealousy. While it may increase the efficiency of the favored group, it decreases the performance of the other group. A third variation, which has a uniform amount given to all employees, has relatively little effect upon output. The value of this bonus is found in the creation of a cooperative spirit among the workers.

Suggestion systems with financial reward. The incentive value of these arrangements is found in their ability to incite the workers to exert their initiative and concentrate upon finding more efficient methods of performing the work. This
device is both material, in the sense of offering the worker a monetary reward, and non-material, in that it encourages him to exercise his creative instinct.

**Stabilized employment.** It is paradoxical that although employees desire security and stabilized employment gives it to them, this factor has a relatively low effect upon worker productivity. The relationship between output and the reward is so distant that this factor is not an effective stimulant. However, because it partially removes from the workers' minds the fear and uncertainty associated with unemployment, it has a favorable effect on performance efficiency by maintaining production on an even level.

**Discounts on purchases.** The policy of granting employees discounts on their purchases has a limited effect upon worker productiveness. The stimulating effect is found in the ability of the employees to increase their scale of living by obtaining more goods and services for less expenditure of money, which is equivalent to a comparable increase in earnings. The employee-employer relationship is also improved by this device.

**Low cost housing.** Low cost housing has very little effect upon worker productivity, but is often necessary to recruit employees into an area where adequate facilities do not exist. The inducement value resides in its ability to create good morale and job satisfaction. (It must be indicated that the managers are assuming the position of a landlord, and the employer-employee relationship may be adversely affected if the landlord-tenant relationship proves unsatisfactory.)
SEMI-MATERIAL INCENTIVES

The incentives in this classification that were studied are proper selection and placement, training, paid holidays, paid vacations, insurance provisions, and retirement plans. This group of incentives is classified as semi-material because any monetary reward offered to the employee is deferred and is usually received in an indirect manner. These stimulating factors operate by creating interest and contentment in the job.

Proper selection and placement. The proper selection and placement of personnel are the most effective incentives in this group. One of management's most difficult problems is the matching of personal qualifications of prospective employees with the requirements of the job. The personal qualifications that should be considered include education, training, experience, physical characteristics, personality, and inclination. These qualities, which can partially be determined through checking past records, testing, and interviewing, should be matched with those required by the job, as determined by job analysis. If the person selected is then placed in a group with which he is compatible, increased productivity will result.

Part of the placement procedure is an adequate introduction of the employee to his new job situation and a continuous follow up on his activities. These are needed because the new worker is entering a situation where he is disturbing an existing set of relationships and creating a
new one. Everything that management can do to make this transition easier and more pleasant will make the individual a more productive worker.

**Training.** The second most effective semi-material incentive, which is closely related to the above factors, is the policy of training new and old employees. Regardless of how hard an individual tries, he can not be the most productive unless he is trained to use the best methods of operation. The training given should both supplement and complement the employee's previous education and training.

**Paid holidays and vacations.** The third most effective incentive in this group is a combination of paid holidays and paid vacations. This combination of employment elements indirectly stimulates productivity by improving morale. When an employee is given a break in his routine and has a change to rest and relax away from his job, without the worry of financial loss, he becomes more productive.

**Retirement plans.** The next important incentive, i.e., provision for worker retirement, appeals to the individual's desire for security. The stimulating effect of this factor is indirect and intangible. It motivates the worker through better job satisfaction and improved morale, which is occasioned by the partial elimination of worry over future security. Turnover of personnel is also reduced. There is a counterbalancing tendency toward the retention of inefficient employees who have acquired a vested interest in the retirement fund. If this tendency is not judiciously handled, it may reduce over-all plant performance.
Insurance provisions. The least effective of the semi-material employment policies is the provision of insurance coverage for certain contingencies. The most prevalent of these coverages are hospital and medical care and the loss of income through the employee's death. As this incentive appeals to the desire for security, it has a stimulating effect, but this effect is partially vitiated by the employees' feeling that these provisions are rightfully theirs, regardless of their individual output.

NON-MATERIAL INCENTIVES

An adequate financial position, as provided by the material incentives, and job satisfaction, as furnished by the semi-material incentives, are not entirely capable of achieving maximum production. One of the explanations of failures in employee relations programs is that managers have failed to understand and employ properly the incentives appealing to the desires other than the purely material. These inducements are intangible factors that deal with the relationship between the worker and his associates. They incite workers to greater production by strengthening human dignity and developing pride in themselves and their work. As the material incentives appeal to man's physical needs, these appeal to his social and psychological needs.

The incentives of this nature that were analyzed are: personal recognition, development of group spirit, and stimulating creative workmanship.
Personal recognition. There are many ways personal recognition can be given, but they can be summarized in the term individual dignity. If each employee can be made to feel important through being needed and wanted, if he can have pride in himself and his job, he will usually attempt to be more efficient. One of the greatest human desires is to please someone by being of service to him. Management can capitalize upon this motive by emphasizing the service nature of work.

Some specific methods of giving personal recognition are: placing employee's name and picture in the company publication when he does anything; providing personal parking areas and lockers; furnishing employee name plates in work areas or on machines; having personal informal talks with workers; encouraging plant visitation by employees' families; and conferring awards for long and meritorious service.

Group spirit. Equally important as the recognition of the individual, is the integration of the individual into the formal and informal organizations found in all business concerns. Most individuals are bipolar in nature; they desire to be treated as individuals, while at the same time being impelled to join and cooperate in group activities. Management should use this incentive by encouraging the development of a sense of oneness and a common purpose for the organization. This can be accomplished by having group meetings, social and recreational activities, company publications, service
awards, and any other device with a unifying effect. As the *esprit de corps* of an organization increases, so does its productivity.

**Creative workmanship.** Any employment factor that appeals to the sense of creative workmanship has incentive value. An employee will have more enthusiasm and initiative when he feels that the work he is performing has usefulness and purpose.

Management can encourage this desire for creativeness by diversifying employee activities, but will lose some of the benefits of specialization. Other methods of stimulating this desire are: rotating employees on different jobs, conducting plant tours to see the relationship between plant activities, allowing the employees more discretion in the method of operation, holding contests, featuring employees in advertising, and utilizing suggestion systems.

**CONCLUSIONS REGARDING THE VALUE OF INCENTIVES**

For a business organization to succeed, management must obtain the cooperation of the individual members of that organization. This cooperation can best be obtained by applying incentives to the motivations of men, whether those motives are based upon a person's biological needs or his social desires. To the extent that material, semi-material, and non-material incentives function to arouse the desired response of increased effectiveness from employees, the problems of management in planning, directing, and controlling the business are made less difficult.
The important consideration in using any motivating factor is creating the proper attitudes within the individuals who will be affected by its use. Psychological factors, such as the condition of the employer-employee relationship, the value placed upon the incentive by the employee, and the motive to which it is directed, and the relationship between the employee and his associates count heavily in the effectiveness of any incentive program.

The stimulant chosen by management must appeal to the motive which is most prominent in the particular group of persons involved. If the inducement appeals to a number of different motives, the results are likely to be more effective than if it appeals to only one motive, such as enhancing a person's material position. In a given instance, the selected stimulant may prove inadequate to achieve the desired results. Management can either try to change the employee's estimate of its value, or use another inducement.

Regardless of the specific factors included in the overall incentive program, to be most effective they should be integrated with the other employment elements; they should be superimposed upon a wage base that is comparable to that of surrounding firms; they should be based upon adequate work standards; they should be understood, approved, and administered by the one most responsible for increasing production - the line supervisor; and they should be an integral part of the philosophy of top management.
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SELECTED BIBLIOGRAPHY

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APPENDIX
Dear Sir:

You are probably aware of the considerable interest currently being shown in incentives as a tool of management for increasing productivity and reducing costs. This interest has been demonstrated by the adoption of a variety of such plans throughout industry. Sufficient knowledge should now be available for a codification of the facts concerning the plans and an analysis of their relative strength and weakness in the various industries. I am now conducting such a study as a partial basis for a doctoral dissertation.

The attached questionnaire is sent you to obtain the benefit of your experience and judgment and to give added scope and validity to the study. Will you please complete and return the questionnaire in the enclosed envelope.

Any comments you care to make will add to the value of the study.

It is not necessary for you to give your firm name unless you desire the results of the study (gratis). However, even if you do identify your company, its identity will be kept confidential.

Sincerely yours,

Leon C. Megginson
Assistant Professor of Management

Enclosure
**INCENTIVE WAGE PLAN**

<table>
<thead>
<tr>
<th>INCENTIVE FACTOR</th>
<th>YES</th>
<th>NO</th>
<th>TRIED &amp; REJECTED</th>
<th>PLAN TO USE</th>
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<th>LOW</th>
<th>NONE</th>
<th>COMMENTS</th>
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<td>PLANT VISITATION BY EMPLOYEES' FAMILIES</td>
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</tbody>
</table>

Please check ( ) correct space and make comments below.

**TYPE OF INCENTIVE WAGE PLAN USED BY YOUR COMPANY**

- STRAIGHT PIECE RATE
- STANDARD HOUR WITH 100% BONUS
- STANDARD HOUR WITH LESS THAN 100% BONUS
- POINT
- OTHER (SPECIFY)
ADDITIONAL QUESTIONS

1. If you deal with a union and there is an established union scale do you give premium wages to workers whose output is above average, quantitatively or qualitatively? (Explain)

2. We live in an age of “job classification” with a union scale for each classification. What devices, if any, have you used to keep a dead level wage from ending up with a dead level of efficiency, geared to the slow workers?

3. Have you had any trouble with slow-downs, or restricting output to make the job last, for fear of unemployment? (Explain)

4. What means have you used, if any, to counteract workers’ tendency toward feather bedding, or restriction of output?

General Comments
APPENDIX C

COMPANIES CHANGING THEIR INCENTIVE WAGE PLANS
DURING THE PRECEDING TWO YEARS

<table>
<thead>
<tr>
<th>Per cent of companies changing</th>
<th>1946a</th>
<th>1948b</th>
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<tbody>
<tr>
<td>Per cent of companies changing away from the following plans:</td>
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<tr>
<td>Straight daywork</td>
<td>55</td>
<td>50</td>
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<tr>
<td>Piecework</td>
<td>30</td>
<td>11.1</td>
</tr>
<tr>
<td>Standard hour - less than 100% premium</td>
<td>10</td>
<td>5.6</td>
</tr>
<tr>
<td>Standard hour - 100% premium</td>
<td>5</td>
<td>5.6</td>
</tr>
<tr>
<td>Over-all bonus plans</td>
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</tr>
<tr>
<td>Measured day work</td>
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<tr>
<td>Point or unit</td>
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</tr>
<tr>
<td>Per cent of companies changing to the following plans:</td>
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<td>Piecework</td>
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<td>Standard hour - 100% premium</td>
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<td>Over-all bonus plans</td>
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<td>22.2</td>
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<tr>
<td>Undecided</td>
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</table>

a Based upon a total of 65 plants.
b Based upon a total of 96 plants.
c Changes during the preceding two years.

Source: Factory Management and Maintenance, CVI (1948), 89.
### Method of Determining Labor Standards as Basis for Incentive Wage Plans

<table>
<thead>
<tr>
<th>Method</th>
<th>Per cent of Plants</th>
<th>Group I</th>
<th>Group II</th>
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<tbody>
<tr>
<td>Estimated</td>
<td>6.9</td>
<td>9.1</td>
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<tr>
<td>Past performance records</td>
<td>15.5</td>
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<tr>
<td>Standard time data</td>
<td>24.1</td>
<td>9.1</td>
<td></td>
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<tr>
<td>Individual time studies</td>
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<td>59.1</td>
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Companies recently changed method of determining standards:

<table>
<thead>
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<tbody>
<tr>
<td>Estimated</td>
<td>29</td>
<td>25</td>
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<tr>
<td>Past performance records</td>
<td>12.5</td>
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<tr>
<td>Individual time studies</td>
<td>46</td>
<td>25</td>
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Changes to:

<table>
<thead>
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<th>Changed to:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Estimated</td>
<td>4.2</td>
<td>0</td>
</tr>
<tr>
<td>Past performance records</td>
<td>8.3</td>
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<td>Standard time data</td>
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</tr>
<tr>
<td>Individual time studies</td>
<td>33.3</td>
<td>50</td>
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a Because many companies were unable to approximate the quantities or percentages, the analysis is based on the way in which each plant determines the greater portion of its standards.

b Group I: Metal parts; assemblies and machines; assemblies made from metal and other materials, such as pens, pencils, and musical instruments.

Group II: Steel; sheet metal and tubing; paper products; rubber, plastics, and leather, chemicals; non-ferrous metals.

Source: Factory Management and Maintenance, CVI (1948), 90.
APPENDIX E

PER CENT OF COMPANIES MAKING CHANGES IN TIMS STUDY TECHNIQUES

<table>
<thead>
<tr>
<th></th>
<th>Per cent of plants</th>
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<th>1948</th>
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<tbody>
<tr>
<td>Group I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From more precise to less precise methods</td>
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<td>From less precise to more precise methods</td>
<td>45</td>
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<tr>
<td>No change</td>
<td>50</td>
<td>62</td>
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</tr>
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<td>Group II</td>
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<td></td>
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<tr>
<td>From more precise to less precise methods</td>
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<td></td>
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<tr>
<td>From less precise to more precise methods</td>
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<tr>
<td>No change</td>
<td>71.4</td>
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</table>

*a The 1946 figures are both Group I and Group II plants, since no comparable classification was made in the earlier survey.

Source: Factory Management and Maintenance, CVI (1948), 90.
## APPENDIX F

**PERCENTAGE OF COMPANIES WITH UNIONS HAVING UNION PARTICIPATION IN THE TIME STUDY OR RATE SETTING PROCEDURE**

<table>
<thead>
<tr>
<th>Group I:</th>
<th>Per cent of plants</th>
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<tr>
<td>Up to 400 employees</td>
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<td>10</td>
<td>17</td>
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<tr>
<td>401 to 850 employees</td>
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<td>20</td>
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<tr>
<td>851 to 1850 employees</td>
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<td>14</td>
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<tr>
<td>Over 1850 employees</td>
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</tr>
<tr>
<td>All Group I plants</td>
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<td>33</td>
<td>32</td>
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</table>

**Group II**

| All Group II plants                     |                    | 33    |      |

* The 1946 figures are for both Group I and Group II plants, since no comparable clarification was made in the earlier survey.

**Source:** Factory Management and Maintenance, CVI (1948), 88.
APPENDIX G

PERCENTAGE OF COMPANIES WITH UNIONS HAVING UNION PARTICIPATION IN THE JOB EVALUATION PROCEDURE

<table>
<thead>
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<th></th>
<th>Per cent of plants</th>
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<tr>
<td>Up to 400 employees</td>
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<td>401 to 850 employees</td>
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<td>851 to 1850 employees</td>
<td></td>
<td>65</td>
<td>70</td>
</tr>
<tr>
<td>Over 1850 employees</td>
<td></td>
<td>75</td>
<td>58</td>
</tr>
<tr>
<td>All Group I plants</td>
<td></td>
<td>58</td>
<td>50</td>
</tr>
<tr>
<td>Group II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is Company expecting more union participation in the near future in setting time studies and/or job evaluation?</td>
<td></td>
<td>40</td>
<td>21</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>57</td>
<td>73</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>No opinion</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( ^a \) Includes both Groups I and II.

Source: Factory Management and Maintenance, CVI (1948), 89.
## APPENDIX H

### RELATIONSHIP BETWEEN AVERAGE HOURLY EARNINGS OF WORKERS ON INCENTIVE PLANS AND TIME BASIS, FOR SELECTED JOBS IN SELECTED INDUSTRIES

<table>
<thead>
<tr>
<th>Industry</th>
<th>City - date</th>
<th>Selected jobs</th>
<th>Average hourly earnings</th>
<th>Incentive earnings as per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Automobile Repair Shops</strong></td>
<td>Atlanta, Ga., Feb., 1951</td>
<td>Electricians</td>
<td>$1.84</td>
<td>102.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mechanics, Class A</td>
<td>1.36</td>
<td>128.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mechanics, Class B</td>
<td>1.08</td>
<td>113.8</td>
</tr>
<tr>
<td><strong>Children's Seamless Hosiery</strong></td>
<td>Winston-Salem-High-Point, N.C. Sept., 1951</td>
<td>Menders, Hand, finish (women)</td>
<td>.79</td>
<td>105.0</td>
</tr>
<tr>
<td><strong>Ferrous Foundries</strong></td>
<td>Houston, Texas, June, 1951</td>
<td>Shakeout men</td>
<td>1.05</td>
<td>148.5</td>
</tr>
<tr>
<td><strong>Full-Fashioned Hosiery</strong></td>
<td>Charlotte, N.C., Sept, 1951</td>
<td>Folders and boxers, (women)</td>
<td>.99</td>
<td>126.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Menders, hand (women)</td>
<td>1.05</td>
<td>138.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Finish</td>
<td>1.07</td>
<td>132.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grey</td>
<td>1.07</td>
<td>132.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pairers (women)</td>
<td>1.00</td>
<td>115.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Preboarders (women)</td>
<td>1.12</td>
<td>132.1</td>
</tr>
<tr>
<td><strong>Machinery Industries</strong></td>
<td>Chattanooga, Tenn., Dec., 1951</td>
<td>Assemblers, Class B</td>
<td>1.40</td>
<td>140.0</td>
</tr>
<tr>
<td><strong>Mississippi</strong></td>
<td>March, 1951</td>
<td>Lumber stackers, air drying or storage</td>
<td>.75</td>
<td>134.6</td>
</tr>
<tr>
<td>Industry</td>
<td>Selected jobs</td>
<td>Average hourly earnings</td>
<td>Incentive earnings as per cent</td>
<td>Time</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------</td>
<td>-------------------------</td>
<td>--------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Women's and Misses' Dresses</td>
<td>Inspectors, final (all women)</td>
<td>$0.81</td>
<td>$0.93</td>
<td>114.8</td>
</tr>
<tr>
<td></td>
<td>Pressers, hand (all women)</td>
<td>$0.89</td>
<td>1.07</td>
<td>120.2</td>
</tr>
<tr>
<td>Wood Furniture</td>
<td>Assemblers, chairs</td>
<td>$0.95</td>
<td>1.17</td>
<td>123.1</td>
</tr>
<tr>
<td></td>
<td>Rubbers, hand</td>
<td>$0.96</td>
<td>0.97</td>
<td>101.0</td>
</tr>
<tr>
<td></td>
<td>Sanders, hand</td>
<td>$0.97</td>
<td>1.01</td>
<td>104.1</td>
</tr>
<tr>
<td></td>
<td>Sprayers</td>
<td>1.09</td>
<td>1.12</td>
<td>102.7</td>
</tr>
</tbody>
</table>

APPENDIX I

TOTAL FINANCIAL EARNINGS OF AN AVERAGE PRODUCTIVE EMPLOYEE ON INCENTIVES, EXPRESSED AS A PERCENTAGE OF STRAIGHT TIME BASE PAY

<table>
<thead>
<tr>
<th>Plan</th>
<th>Range, in per cent</th>
<th>Average, in per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piecework</td>
<td>118 to 165</td>
<td>136</td>
</tr>
<tr>
<td>Point or unit</td>
<td>120 to 145</td>
<td>129</td>
</tr>
<tr>
<td>Standard hour - less than 100%</td>
<td>121 to 130</td>
<td>120</td>
</tr>
<tr>
<td>Over-all bonus plan</td>
<td>106 to 145</td>
<td>120</td>
</tr>
<tr>
<td>Standard hour - 100% premium</td>
<td>102 to 142</td>
<td>118</td>
</tr>
</tbody>
</table>

* Average for all plans was 124 per cent of straight time base pay.

Source: Factory Management and Maintenance, CVI (1948), 90.
VITA
VITA

Leon Cassity Megginson, son of William Augusta and Emma Cassity Megginson, was born on the twenty-sixth day of July, 1921, in Thomasville, Alabama.

He attended public schools in Fulton and Mobile, Alabama, and graduated from high school in Mobile in May, 1938. From September, 1938, until February, 1940, he attended Howard College in Birmingham, Alabama. After three years' business experience, he entered the armed forces and served as a pilot in the United States Army Air Corps in the United States and in Europe. He entered Mississippi College, Clinton, Mississippi, in January, 1946, and received the Bachelor of Science Degree from there in August, 1947. In September, 1947, he accepted a graduate assistantship in the College of Commerce, Louisiana State University. At the same time, he entered the Graduate School, and in June, 1949, received the Master of Business Administration Degree.

In January, 1949, he accepted an appointment as an Instructor in Business Administration at Louisiana State University, and served in that capacity until June, 1950. From then until June, 1951, he devoted himself to full-time graduate study. Since June, 1951, he has been an Assistant Professor of Business Administration at Louisiana State University. He is at present a candidate for the degree of Doctor of Philosophy.
Candidate: Leon Cassity Megginson

Major Field: Business Administration

Title of Thesis: An Analysis of Selected Incentives as Stimuli to Increased Productivity for Production Employees

Approved:

[Signature]
Major Professor and Chairman

[Signature]
Dean of the Graduate School

EXAMINING COMMITTEE:

[Signature]

Lloyd F. Morris

[Signature]

June I. Bryan

Date of Examination:

June 9, 1953