

employment. In the automobile industry, where only 10 per cent of the cost is for labor and 90 per cent is for material and overhead, it would be most logical for them to vary their labor sharply in order to avoid material and inventory accumulations. With us, on the other hand, labor and technical

skill play so important a part in our costs that it is our more appropriate aim to keep the labor stabilized and to vary the inventory. Thus in all aspects of administration, with due deliberation we can aim for that best equilibrium that assures greatest profits.

Is There an Optimum Size of Organization?²

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THE ANSWER to this question is to my mind largely one of time. What would have been true ten years ago certainly is not true today and it will be less true ten years from now. The stage of development that has been reached in the various matters discussed by the previous speaker, determines to a large extent the point in size at which an organization becomes most effective.

Dr. Person asked me to make an outline of this talk for those who were to discuss it. As it is a rather complex subject to deal with in a concrete way I am going to read my outline; so that you may have some idea of my direction, and will then discuss certain features which seem to need elaboration.

1. There is no optimum size for organizations in general.
2. Theoretically, there is no optimum size for each particular organization.

3. Practically, there is an optimum size for each particular organization dependent upon:

a. The extent to which the personal equation (as distinguished from a repetitive function) enters into the service or product of the organization.

In other words, an organization rendering a personal service must be much smaller to be effective than one whose product is produced through repetitive or continuous process methods.

b. The extent to which authority is decentralized and there is an incentive for co-operation between the managers of the units exercising authority.

As an organization increases in size the multiplicity of detail automatically brings about decentralization of activity. Unless authority is decentralized proportionately with activity and there is an incentive for its effective use, decisions are so far removed from the point of action as to be ineffective and to materially slow down the whole procedure.

c. The extent to which the accounting procedure is standardized on a basis which will enable effective com-

parison as between units in terms which will be stimulating to the managers of such units.

Accounting is the measuring rod of management. Without it the whole thing becomes purposeless from an economic standpoint. If you have two organizations comparable in every way, one, however, with comparable accounting; that is, with full knowledge of relative performance in terms of responsibilities, and the other with ordinary accounting, where results are not comparable in terms of responsibilities, this one difference may well determine the point of optimum size.

Probably the most critical time in the life of most organizations is that in which they become too large for the domination of one man and before they become adjustable to multiple control. The major necessary adjustments to make multiple control workable are as follows:

1. The replacing of the world-old idea of authority by birth, ownership or rank with the concept of authority by fitness and function. This involves the concept that Smith may have authority over Jones in certain matters and Jones over Smith in others.

2. The development of the idea of leadership as a substitute for authority on the part of the chief executive.

3. Visualization of the undertaking in terms of responsibilities and the assignment of authority on that basis.

4. Setting up accounts in conformity with authority in place of concepts of expense.

5. Introduction of a flexible budget and some form of reward, which should be in proportion to results accomplished, for persons exercising authority.

The world-old idea of authority by birth, ownership or rank must, according to our modern concept of management, be replaced by authority by fitness and function. In war and in the days when might was right, authority was necessarily all inclusive. The head or dominant person in an army, factory or home was boss over everything. The person under him was equally boss over everything, but subject to him, and so on down the line. To

the extent to which this old idea has been supplemented by the concept of authority on the basis of fitness and function depends very largely the answer to the question as to the point at which any particular organization is most effective. I am using "fitness" and "function" in the broadest sense of these words. What I mean is that type of fitness and function which gives Smith a natural advantage over Brown in the exercise of authority in certain matters and Brown over Smith in certain others, according to their respective information and the part of the work of the organization for which they are responsible.

Closely related to this is the question of the substitution of leadership for authority on the part of the chief executive. The effectiveness of authority is directly related to its place in the scheme of things affected. As an organization increases in size, authority must necessarily be decentralized and it is necessary to have someone to co-ordinate the policies upon which the decisions of the various departments are based. This calls for a faculty of leadership as distinguished from execution. The extent to which the chief executive is able to bring about co-ordination without the exercise of authority, which always complicates a situation, bears directly upon the size at which an organization will be most effective.

A third thing that bears very directly upon the question under discussion is a clear vision of ways and means; that is, seeing a big problem in terms of a lot of small ones. As long as a problem is seen only as a whole it is not understood. Take for example an engineer designing a complicated machine. Imagine the mess that would result if he tried to design it or make a working drawing of it as a whole. Instead he divides the machine into a number of easily distinguishable functional groups. He first develops a plan for each group and then a plan for their working together as a whole. It is only in this way that complex problems can be effectively solved. Though the techniques of the mechanical engineer and the manager are different in proportion to the materials with which they deal, their mode of thinking and procedure must be essentially the same.

There is always the need for a means of stimulating interest on the part of those having responsibility and authority. Money rewards alone will not accomplish the desired result, but they are the

best understood and therefore more easily effective. I have come to agree very largely with Robert Wolf in the effectiveness of non-financial incentives, but I have not lost any of my faith in financial incentives. The satisfaction a fellow may get out of a properly handled financial reward may be even more effective than the reward itself.

The determination of a basis of reward brings us back to the question of accounting. I am not going into the subject of the flexible budget today, except to point out its difference from the old type of budget and to suggest that a flexible budget properly made constitutes a measuring rod upon which financial rewards may be based. By a flexible budget I mean a list of the items which affect the cost of a department or undertaking, priced in terms of some suitable unit, such as per day, per hour, per ton, per pound, per mile, per yard, etc. The budget itself is not made up until after the fact, that is at the end of the week, month or quarter, as the case may be. The various items are then computed on the basis of their quantitative participation, at the predetermined unit rates. They are added and compared with the actual cost of the department. Comparison can be made in as small or large units as desired.

This is a fascinating subject and I should like to go on talking about it for the rest of the day, but I think probably more will be gained by my stopping at this point and throwing the matter open for discussion from the floor.

Discussion

Richard A. Feiss.² I do not quite agree with the idea that the chief executive should no longer be the "boss." I do not see how you can get away from the fact that it is necessary to have one person responsible for the successful organization and management of an enterprise. And if you have at the top a good organizer and manager, there is practically no limit to which an organization can be expanded, provided you mean by expansion the distribution of the load by functional responsibility rather than by personalities. In this way you get decentralization for action and centralization for control.

The controllable factors in industry do not seem to me quite so vague as Mr. Coonley has made them

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