

sented by the question whether the result will be worth what it costs. If not, then it will be wasteful, idle capacity or no idle capacity. But what is its cost, in view of the dilemma of the allocation of overhead? Since cost may veto production, we need to be very sure that our measure of cost is correct for this purpose; otherwise it may become an obstacle to efficiency, in the guise of a safeguard to economy.

We may note three levels at which this problem arises. The first is the level of business policy for a private enterprise, centering in the question of what will, and what will not, increase net earnings. This of course presupposes that the business man, in order to settle his questions intelligently, has some reliable knowledge about his costs. This opens up the problem at another and subsidiary level; namely, what is the technique of cost keeping and cost interpretation which is suitable to give the manager the information he needs for the solution of his questions of business policy? Finally, we shall find that there is a shifting of costs between business units; and this raises serious doubts whether, if each concern follows the policy which is most profitable for itself alone, the result will be the most efficient policy for the community which is made up of all the concerns taken together. If we could integrate this whole series of producers for the purpose of studying its costs, we should find that the behavior of the integrated costs is different from the average or typical behavior of the constituent enterprises; the proportion of constant costs being much increased by the integrated method of reckoning. Thus there is real need to raise the question of overhead in relation to the question of the efficiency of the business community as a whole or perhaps more broadly still, of the whole society.

I shall discuss the issues for the most part at the level of business policy. However, the discussion on this plane will have certain clear implications as to the narrower questions of accounting technique, and as to the broader issues of community efficiency, and these may also be briefly noted.

Questions of Business Policy

The issues may be exhibited in an extreme form by a type question; namely, does it ever pay to produce at a loss in order to avoid a larger loss which would arise from not producing? Granting

the premises, the answer is clearly "yes." Suppose a plant can turn out 100,000 alarm clocks a year at a cost of one dollar each. A severe depression causes the management to consider the advisability of a temporary shutdown. It appears that depreciation, unavoidable maintenance and the holding together of a necessary nucleus of the force will involve expenses at a rate equivalent to \$20,000 per year, even if no goods are turned out.² By spending \$10,000 more, they can turn out 20,000 clocks, which might find a market at ninety cents each. This is less than "cost of production," even if a standard burden rate is used and the unabsorbed burden charged as a cost of idleness rather than as a cost of production. The total budget is: income, \$18,000; expenses, \$30,000; deficit, \$12,000. But if the 20,000 clocks were not produced, the deficit would be \$20,000 instead of \$12,000; and it is better to produce at a "loss" than to stand idle.

Such cases do occur fairly frequently, though the conditions will always take a deal of scrutinizing before one is safe in concluding that such a policy will really avoid the greater loss. One must take into account the possibilities of disorganizing the market, precipitating cutthroat competition or bringing on other unforeseen long-run consequences of an unprofitable sort. But when a genuine case is found, it means that if these particular goods are not produced, the concern cannot thereby save the amount of the costs which its accounting system charges against them. Many of these costs will go on in spite of curtailed or suspended production; and it is better to produce and cover part of these constant costs than not to produce and fail to cover any of them.

Such production is profitable in one sense; not the usual business sense perhaps, but a perfectly valid one, nevertheless. It covers the costs for which it is economically responsible, as distinct from the costs which an accounting system might charge it with. It is economically responsible for the extra costs it occasions beyond what the costs would have been if this particular bit of business had not been taken on. The crucial thing here is not the absolute cost, but the difference between the cost of producing one million units of goods

²Throughout the remainder of this example, it is understood that the figures refer to output, income and cost at a rate equivalent to so much per year, though the period actually involved will probably be shorter.

and the cost of producing eleven hundred thousand. For the sake of having some name for this quantity I have called it "differential cost." It is often (not always) of crucial importance in determining the lowest price at which it is better to take business rather than not to take it. Whenever the overhead is not being fully utilized—which is most of the time—differential cost is less than average costs; often a great deal less.

One simple but far reaching fact about differential cost is that it varies, not merely with the present conditions in the plant, but according to the nature of the alternatives which may be under consideration. The extra cost per unit of producing ninety per cent of full capacity rather than eighty per cent will be one thing: the extra cost per unit of working at fifty per cent capacity rather than shutting down temporarily will be a different thing. The extra cost of the first ten per cent beyond normal capacity will be different again; and larger than either of the others. And the differential cost of producing rather than going out of business permanently and disposing of the realizable assets—this will be different from any of the others. It will be larger than any other differential cost except the swollen cost of driving a plant beyond its normal capacity. In other words, it takes a certain income per unit to justify a concern in continuing to operate in the long run. It takes less income to justify it in continuing production over a depression which is temporary, or in turning out a little added output to utilize a little spare capacity. Whenever business men make these kinds of judgments, they are impliedly dealing with differential costs, though they may not formulate the idea to themselves.

The central thesis around which the resulting problems group themselves is this: any bit of business which it is practicable to treat separately is worth taking if it covers anything more than its differential costs, even though the whole business cannot be carried on at such a level of prices and must, in the aggregate, earn more. In the past, the outstanding economic facts which have been treated in the books as illustrations of the working of this principle have been cutthroat competition, railroad discriminations and the dumping of goods in foreign markets. But these are only a few of its applications, and in the future probably the most far reaching of them will be the development

of constructive policies for the stabilization of industry and business, utilizing unused capacities in a thousand ways and setting "idle overhead" to work.

First let us look for a moment at cutthroat competition. In the early days of railroads, steamships and other enterprises with large constant expenses, competitors were often trapped into a position in which they had a choice of evils: to cut prices until they failed to cover their overhead, or to lose business and fail to cover their overhead for that reason.

Here the principle of overhead costs worked destructively; so destructively that business was bound to find some remedy which would save it from itself. Pooling and trusts were remedies, but they went too far in the other direction, and the public voiced its opposition in no uncertain terms. The public has an interest in prices based on cost; prices which will cover the overhead, including a "fair return" on the investment for a "representative firm." If prices lose touch with this standard in an upward direction, that is exploitation. And if they lose touch with it in a downward direction, that is demoralization, and bound to produce a reaction. In accordance with this fact, one of the most general methods of safeguarding trades consists simply of the development of cost accounting systems which will charge the goods with enough overhead to act as a brake on tendencies to cutthroat price reductions.

But if, in accord with this idea, business makes it a rule to refuse to take any business which does not contribute its full quota of overhead costs, then it may lose chances to secure additional business which would be worth taking, and which would not involve it in cutthroat competition. The remedy may not be as bad as the disease, but it is too indiscriminating in its action, and business cannot develop its full capabilities until it substitutes a more elastic and progressive policy.

One way of utilizing the principle of overhead costs without slipping into the morass of cutthroat competition is found in the practice of discrimination. The keynote of this policy is to cut prices for additional business and additional business only, utilizing all the ingenious devices of classification to this end, preventing or trying to prevent existing customers from benefiting by the reductions, and the company from losing any of the profits it has