ELEMENTS OF COST

Fixed Cost	$120,000.00 per month
Variable Cost	.80 per dollar of sales
Contribution to Fixed Cost and Profit	.20 per dollar of sales
	$1.00

DEFINITIONS

Fixed Cost: - That part of cost which exists irrespective of fluctuations in volume of business within a range of the smallest volume of business which there is reasonable probability of doing up to the practical capacity of the plant.

As: rent, depreciation; salary of executives, and a minimum number of accountants and clerks; payroll for shop superintendents, foremen, watchmen, etc.; property and corporation taxes; interest on funded debt; etc.

It should represent only such items and parts of items as are regarded as essential to the conduct of the business at the established minimum volume and are independent of fluctuation because of increase or decrease in volume of business.

Variable Cost: - That part of cost which should vary in proportion to the volume of business.

As: materials; direct wages; supplies; upkeep; salary of minor executives, accountants and clerks; payroll of assistant shop superintendents, foremen, etc.; income taxes; interest on floating debt; stock dividends; etc.

It should represent only such items and parts of items as are not essential to the functioning of the business on the basis of the established minimum.

Under conditions of a falling volume these items should constitute a schedule for curtailments.

Contribution to Fixed Cost and Profit:- The difference between the Variable Cost and sales value at list.

A

Exhibit A

THE BEST BUSINESS

Per Cent of Profit on a Given Volume of Business is not a Safe Guide for the Appraisal of an Industry

The four following businesses all have the same profit of $3,000,000 on $30,000,000 of business, yet have different potentialities in the event of increase or decrease of business.

Four Different Businesses	A	B	C	D
Per Cent Contribution to Fixed Cost and Profit	20	30	40	50
ALL EARN $3,000,000 ON $30,000,000 BUSINESS				
Variable Cost	24,000*	21,000	18,000	15,000
Fixed Cost	3,000	6,000	9,000	12,000
Profit & Loss	3,000P	3,000P	3,000P	3,000P
Sales	30,000	30,000	30,000	30,000
DIFFERENT BREAKING POINT IN EACH CASE				
Variable Cost	12,000	14,000	13,500	12,000
Fixed Cost	3,000	6,000	9,000	12,000
Profit & Loss	0	0	0	0
Sales	15,000	20,000	22,500	24,000
IF BUSINESS FALLS TO $25,000,000				
Variable Cost	20,000	17,500	15,000	12,500
Fixed Cost	3,000	6,000	9,000	12,000
Profit & Loss	2,000P	1,500P	1,000P	500P
Sales	25,000	25,000	25,000	25,000
IF BUSINESS INCREASES TO $35,000,000				
Variable Cost	28,000	24,500	21,000	17,500
Fixed Cost	3,000	6,000	9,000	12,000
Profit & Loss	4,000P	4,500P	5,000P	5,500P
Sales	35,000	35,000	35,000	35,000

*000 omitted throughout

THE BEST BUSINESS is the business with the lowest Variable Cost consistent with a breaking point below the smallest volume of business which there is reasonable probability of doing.

B

Exhibit B

To know that the cost of something is $5 or $5,000 per day or per month is not sufficient. We must know costs in terms of *per dollar of revenue,* just as the motorist knows his mileage in terms of *per hour.*

The idea back of this form of expression of cost was presented in Mr. Taylor's use of the term "Limit Cost," and also in some of the later work of Mr. Gantt, but neither of them made a clear exposition of it or gave us a formula for its use.

The purpose of to-night's talk is to apply this concept of cost to the problem of the chief executive, and to show how through it and the formula which I shall give you, he may maintain a controlling knowledge of his enterprise comparable to that obtained by the motorist through his speedometer.

Before doing this, I must say a word about costs in general and the properties of certain elements of costs.

I. ELEMENTS OF COST

There are two conflicting elements of cost, the confusion of which is at the bottom of a large part of our business troubles:

Variable Cost—That part of cost which varies in proportion to the volume of business done.

Fixed Cost—That part of cost which exists irrespective of the volume of business done.

If we divide our costs into these two elements and think of and deal with them separately, we avoid many dangers which result from confusing them.

The term "Fixed Charges" is ordinarily used to indicate interest on bonded or other indebtedness having the right of foreclosure in the event of not being paid. It is very seldom figured as an operating expense for the reason that it has no relation to the extent or nature of the operations. The theory is that all other expenses are more or less affected by the extent or nature of the operations.

The fact is that there are a number of expenses which are just as fixed in every sense of the word as interest on mortgage indebtedness, and by overlooking any one of these we create the very confusion that we seek to avoid in segregating interest on mortgage indebtedness. If we are consistent in dividing all of our costs into the foregoing elements, we find our whole problem of administrative accounting wonderfully simplified.

If the variable cost varies in amount with the volume of business but is always the same per cent of the business done, while the Fixed Cost stays fixed regardless of the volume of business, then the difference between the per cent of Variable Cost and one hundred per cent (as representing the business done) may be called the Contribution to Fixed Cost and Profit.

In other words, if the Variable Cost is 75 per cent or $.75 out of each dollar of business, there must be $.25 out of each dollar of business applicable to Fixed Cost until it is offset, and thereafter to Profit; and if the Fixed Cost should be $10,000 a week, it will take a business of four times this amount, or $40,000 in each week, to break even; and we shall make or lose $.25 on each dollar of business more or less than $40,000 in each week.

To make sure that we have a common understanding at this point, which is essential to to-night's talk, I ask you to set aside your own and the dictionary meaning of three phrases I shall use, and to accept the meanings given on the exhibit I now show you.

Exhibit A—Subdivision of Cost for Purposes of Standards and Operating Reports

Please read every word on this exhibit carefully.

To make sure that you understand exactly how these elements affect total costs and profit and loss, I shall ask five questions and figure out the answers to these on the blackboard.

Q.—Assuming the Fixed Cost and Variable Cost to be as indicated at the top of Exhibit A, how much business would it be necessary to do to break even?

A.—If the Variable Cost is $.80 of every dollar of sales, obviously there is only $.20 of each dollar of sales applicable to Fixed Cost. Therefore, to find the breaking point, or point at which there will be neither profit or loss, we divide $.20 into $120,000 which gives us the answer of $600,000 per month as the breaking point.

$$.20)\overline{\$120{,}000}$$
$$\$600{,}000$$

Q.—Assuming the same conditions, if certain economies are affected which reduced the Fixed Cost $40,000, how much business will it be necessary to do to break even?

A.—This means that the difference between the Variable Cost and each dollar of sales remains the same as before, $.20, but the Fixed Cost is reduced from $120,000 to $80,000; so we go through the same process, using however the smaller Fixed Cost. The answer is $400,000 per month.

$$.20)\overline{\$80{,}000}$$
$$\$400{,}000$$