ECONOMICS OF ENTERPRISE

From textbook expositions of conventional theory one gains an impression that a productive enterprise is a sort of sloe-machine into which entrepreneurs drop input units and out of which they hope to draw units of output. The quantity of the output withdrawn by them is supposedly determined by the particular combination of fixed and varied factors put into the machine. Thus, expansion of operations is merely a matter of employing additional variable input units.

Such a view of the operation of an enterprise is extremely unrealistic, for it neglects to consider a factor of great concern to businessmen, i.e., the possibility of a more intensive use of existing working capital. Conventional theory also devotes little or no attention to the budgetary aspect of business management and seldom, if ever, finds it necessary to refer to a balance sheet. This preoccupation with the expense and revenue aspect of business operations is unfortunate for, as many businessmen have learned from experience, it is not impossible to bankrupt an enterprise even while earning a fair amount of profits. No theory can hope to impress practical businessmen unless it is based upon a more realistic concept of what an enterprise is and how it operates.

DEFINITION OF A BUSINESS ENTERPRISE

It is possible to define a business enterprise in several different ways. As explained above, conventional theory defines it as a combination of fixed and variable factors. For the treatment of certain problems it is best described as "a group of investors engaged in a joint-venture for profit." Such a definition emphasizes the contractual relationship existing between investor-participants, some of whom, by the terms of their contract, become short-term creditors, others long-term creditors, and still others preferred or residual owners. In general, the terms used to designate these various classes of investors refer to the manner in which they share risk, control, and profits.

The definition just described is most applicable to problems of raising capital. After capital has been raised and an agreement reached on the sharing of risk, control, and profits, it is necessary to manage or to use the capital in such a way as to maximize profits or to minimize losses if the desires of investors are to be realized. To continue to think of an enterprise as "a group of investors" diverts attention from the problem at hand; i.e., how to use the capital available in the most economical manner possible. In analyzing this problem it is more practical to think of a business enterprise as "an aggregation of property (called assets by accountants) dedicated to a profit-making venture." This definition emphasizes

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2 The word "enterprise" can be used in the sense of a venture involving risk, hazard, and movement among unknown or unmeasurable forces. It can also be used as a synonym for "company," "firm," or "business organization." When the term is used in this book the latter meaning is intended.

assets and their use and ignores their source. 4

If an aggregation of property is incorporated, it is
dowed by the sovereign power (i.e., the state) with four
pecific rights and a number of supplementary rights. The
our fundamental rights are: (1) a right to a name of its
own; (2) a right to become a party to a contract; (3) a
right to hold title to real estate; and (4) a right to sue and
be sued in court. Additional rights described in the cor-
porate charter constitute its supplementary rights. By the
routine act of incorporation an aggregation of property
quires the legal status of a person, separate and
distinct from that of the individuals who created it and
who contributed the property of which it is composed.

If "an aggregation of property" is not incorporated
it is commonly treated by everyone as if it were. Thus,
when A, B, and C form a company using the partnership
form of organization, they give the company a name.
Henceforth, in appearance at least, the company owns
trucks, machinery and buildings, employs workmen,
purchases materials and supplies, produces and sells
products, and enters into contracts with its suppliers and
customers that result in its owing debts or holding
collectible claims. All of these things are done in the
company name quite as if the company had an existence
separate and distinct from that of its owners.

From a strictly legal point of view, the "company"
does none of these things. Property held by it is legally
the joint property of its owners: A, B, and C. Legally
speaking, its employees work for A, B, and C as indi-
viduals. Only in appearance does the company become a

4This definition does not contradict the earlier one. Obviously
the "aggregation of assets" is derived in the first instance from
investors, some of whom hold stock certificates representing a
residual claim to assets and income of the venture while others hold
creditor documents representing a more limited maturing claim of
higher priority.
party to a contract for the law holds A, B, and C individually liable. The receivables and payables of the company are legally the joint-receivables and joint-payables of the partners. Notwithstanding this legal point of view, the assets of a partnership are managed in very much the same manner as the assets of a corporation.

CLASSIFICATION OF ASSETS

In the beginning the assets of an enterprise usually consist of a fund of cash. Even when, as occasionally happens, an investor contributes property other than cash, no harm results from reasoning as if the original contribution was cash. The initial fund of cash will be used in either of two ways: a part of it will be expended to acquire assets such as land, buildings, and equipment, and the remainder will be devoted to financing current operations. Land, buildings, equipment, and other items—the function of which is to facilitate operations—are called fixed assets. Cash, accounts receivable, inventories of raw material and finished goods, and other assets easily converted into cash are called current assets. The latter are sometimes referred to as working capital or circulating capital.

OPERATION OF AN ENTERPRISE

We are ready now for the question: "How does an enterprise operate?" The answer is: "By turning its working capital." As explained, working capital in its original form is cash. The first actual step in the manufacturing process is taken when a portion of the cash is expended for labor, materials, and supplies. By means of technical processes the labor, materials, and supplies become embodied in a product. During the course of the process the unfinished product is called work-in-process. As soon as it is completed, it is called a finished good.
The next step involves delivery of finished products to customers in exchange for accounts receivable. Lastly, accounts receivable are collected and the working capital of the enterprise is again in its original form—cash. Thus it will be seen that the operation of a manufacturing enterprise consists in sending cash working capital through the four-phase cycle just described. (See Figure 8). The operation of a mercantile establishment involves three rather than four steps since such establishments purchase rather than produce their finished goods inventory. A graphic depiction of the operations of a mercantile establishment is shown in Figure 9. When sales are for cash, the cycles described above are shortened and appear graphically as in Figure 10.

The reader is also referred to the turnover chart found on page 726 of the *Financial Handbook*, Ronald Press, 1948.
Figure 9. Diagrammatic Representation of Working Capital Flow in a Retail Establishment

Figure 10. Working Capital Flow When Sales Are for Cash Only
Businessmen refer to this flow of capital from cash through the various phases of the cycle back to cash as *turnover*. Hence, it may be said that an enterprise operates by turning its working capital, a process facilitated by the fixed assets. In Figures 8, 9, and 10 turnover of working capital is viewed as a physical process, that is to say, cash as a tangible object turns into goods, another tangible object, and so on through the cycle. From an accountant's point of view, cash, inventories, accounts, even buildings, machinery, and equipment, are all dollar and cent *sums*.

**THE TURNOVER PERIOD**

One might be led to conclude from the diagrams exhibited that the turnover process is timeless. Such a deduction would be erroneous, however, for *time is required* to turn working capital. In Figure 11 a number of
turnovers of working capital for a mercantile establishment are shown. In the first case, the entire turnover is accomplished within a period of one month. In the second case, purchases are made for cash and goods are received quickly but sales require a month to be made and accounts require a month to collect. In the third case, purchases are for cash, deliveries require a month, sales a month, and collections two months. In the fourth case, purchases are made immediately but payment is delayed for thirty days. Sales require a month and sales terms allow customers a month in which to pay. Obviously, any number of variations are possible, some requiring much time, others very little time. The average length of time required to turn over a single unit of working capital will henceforth be called the turnover period.

THE SIZE OF A UNIT OF WORKING CAPITAL

The previous discussion has referred to the turnover of a unit of working capital but no attempt has been made to describe it. The concept of a unit is easily understood but difficult to define. By a "unit" of working capital is meant the minimum quantity of cash which a manufacturer, retailer, or wholesaler finds convenient, economical, and practical to expend in a given period. An example will help to make the definition clearer. Suppose that a retailer of men's shirts finds it possible to purchase a new shirt from the factory each time he sells one to a customer; a unit of working capital would be his investment in that one shirt. But if the retailer should find it necessary to

6 Included in this expenditure are other outlays than those made to purchase the merchandise alone. For example, in a retail establishment salesmen's salaries might be added to cost of goods. In a manufacturing plant wages of laborers are obviously a part of the goods produced. In fact, every expenditure connected or associated with a given turnover is included.
carry a stock of, say, 1,000 shirts and to allow his inventory to decline until he needed, say, 240 shirts to replenish his stock, a unit of working capital would be the cash needed to purchase 240 shirts. Obviously, the size of a "unit" of working capital will vary from one business to another, and within one business from time to time, but in general it will depend upon the following factors:

1. The size of stock which must be maintained.
2. The time required to obtain deliveries.
3. The quantities in which goods must be ordered.
4. The purchase price.

GROSS MARKUP

Business managers hope and expect that each turnover of a unit of working capital will end with more cash than was originally expended. The successful achievement of this goal can be shown by a half circle added at the end of a turnover (see Figure 12). Obviously, our
diagrams picture turnover from the point of view of a comptroller or treasurer, for the increase is shown as occurring in the final phase of the cycle, i.e., in the collection phase. If a turnover is viewed from the accountant’s point of view, the favorable aspect is found in the third phase, i.e., when goods are exchanged for accounts, for it is at this point that the increase in value occurs.

Certain generalizations, which will be useful later, can be stated as principles.

**PRINCIPLE 1**

Each turnover of a unit of working capital at a markup results in a gross profit.

**PRINCIPLE 2**

From an accountant’s point of view, the gross profit occurs in the selling phase of the cycle; from a treasurer’s point of view, cash is not available until the last phase of the cycle has been completed.

**PRINCIPLE 3**

The amount of gross profit can be stated in three ways, viz.:

a. As a dollar and cent sum. Thus if a dollar of working capital is turned into $1.40, the gross profit is 40 cents.

b. As a percentage of the original working capital expenditure, in which case the item is usually called “markup.” Thus the forty-cent gross profit above would amount to a markup of 40 per cent (\(0.40 / 1.00\)).

c. As a percentage of the selling price, in which case the item is usually called the “margin of profit.” Thus the forty-cent gross profit above would amount to a 28.57 per cent margin of profit (\(0.40 / 1.40\)).

**PRINCIPLE 4**

The amount of gross profit obtained from a single turnover of a unit of working capital is dependent upon the size of the working capital unit and the markup or margin of profit.
Figure 13. Successive Turnovers of a Single Unit of Working Capital

REPLENISHMENT OF WORKING CAPITAL

Merchandise sold and delivered to customers must be replaced if an enterprise is to continue to operate. This means that one turnover will be followed by another. Thus, as a cash unit of working capital is expended for merchandise, the merchandise sold, and the accounts collected, a portion of the final inflowing cash must be re-expended for more saleable goods. This fact would appear on a chart as shown in Figure 13. If the price level does not change during the course of a turnover, approximately the same quantity of cash will be needed to initiate the second turnover as was required to initiate the first.\(^7\) This means that a portion of the in-

\(^7\)The exact quantity required on the second turnover may vary slightly from that required the first time due to shifts in individual prices, purchasing policies, etc. However, in the main the statement is true.
flowing funds, equal in amount to the accountant's gross profit, will not be needed to finance the next turnover and will therefore be available for other purposes. In practice businessmen do not separate cash needed for working capital purposes from cash available for other purposes but the nature of business operations is not clear unless this separation is made.

PRINCIPLE 5

A completion of each turnover provides a business enterprise with a sum of cash which should be thought of as being two sums: one needed to finance the next turnover, and the second being available for other expenditures.

If a unit of working capital requires three months to turn, obviously it can be turned four times a year. By contrast, if it requires six months to turn, it can be turned but twice in a year.

PRINCIPLE 6

The number of times that a single unit of working capital can be turned in one year depends upon the length of the turnover period.

Corollary: The percentage markup being fixed, the amount of annual gross profit earned by each unit of working capital depends upon the number of times it is turned in a year.

For example, $1,000 turned at an average markup of 40 per cent of cost will earn $400 of gross profit at each turn. Thus, if it turns four times a year, the annual gross profit will be $1,600; if it turns six times, the annual gross profit will be $2,400.

EFFECT OF A CHANGE IN THE PRICE LEVEL

The amount of cash required to finance a turnover of one unit of working capital depends upon the quantity of
Table III

EFFECT OF CHANGES IN PRICE LEVEL
ON WORKING CAPITAL NEEDS

*Cash to Mise. to Cash*

Case 1: $2,000 to $2,000 to $2,400 $2,000 available for working capital
Case 2: $2,000 to $2,000 to $2,400 $2,250 available for working capital
Case 3: $2,000 to $2,000 to $2,400 $1,750 available for working capital

saleable goods which it is economical and convenient to handle and upon the cost of acquiring that quantity of goods. For a manufacturing establishment, the latter means the cost of labor and raw materials; for a merchandising establishment it means the wholesale price level. If the wholesale price level remains constant, the amount of cash which a retailer needs to finance a second turnover is the same as he used to finance the first turnover. As explained, under such circumstances the amount available for other purposes coincides with the amount of gross profit reported by the accountant.

But if during the first turnover the wholesale price level rises, the amount needed to finance a second turnover will be greater than that required to finance the first. This means that the amount of cash available for other purposes will be less than the reported gross profit.

Similarly, if the wholesale price level should fall during the course of a turnover, the amount needed to finance the next turnover will be less. Hence the amount available for other purposes will be greater than the reported gross profit. To illustrate, assume 1,000 articles are to be purchased periodically at a cost of $2 each and that they are sold at a markup of 20 per cent of cost. Referring to Table III, the price level during the first turnover is assumed to remain constant in Case 1; to rise 12½ per cent in Case 2; and to decline 12½ per cent
in Case 3. The gross profit in all three cases will be $400 but as will be noted the amount available for other purposes is different in each case.

PRINCIPLE 7

A rise in the price level increases the cash needed to finance a given volume of sales; conversely, a fall in the price level reduces the cash needed to finance a given volume of sales.

Corollary: Increased need for working capital, when financed from collections, decreases the cash available for other purposes, and vice versa.

An enterprise employing a single unit of working capital requiring three months to turn would have sales in only four months of the year (see "S" in Figure 14). If sales in every month of the year are desired, it would be necessary for it to employ three units of working capital turning in series. Thus Unit 1 might be started on its way in January with the expectation that it will complete its cycle and be ready for its second turn in April, its third turn in July, and its fourth turn in October. Unit 2 might be started on its way in February and be ready for later turns in May, August, and November. Unit 3 would then start its first turn in March and its second, third, and fourth turns in June, September, and December, respectively. In this way the operations of the enterprise would be made continuous. The procedure is illustrated in Figure 15.

PRINCIPLE 8

The number of units of working capital required to accomplish continuous operations will depend upon the average length of the turnover period.
Figure 14. Continuous Turnover of Single Unit of Working Capital Permits Sales Only in Certain Months

Figure 15. Continuous Monthly Sales Made Possible by Use of Three Units of Working Capital
Thus if working capital turns once a year, twelve units will be required to maintain continuous sales; if working capital turns twice a year, six units will be required; if it turns three times a year, four units will be required.

Corollary 1: If the markup is constant, and the size of each unit is unchanged, an enterprise will have the same annual total of gross profit from turning six units twice a year as from turning two units six times a year.

This is capable of simple illustration. For example, if a unit of $1,000 is turned at a 30 per cent markup six times a year, the gross profit from two units would be $3,600. The gross profit from turning six units of $1,000 twice a year at the same markup would also be $3,600.

Corollary 2: The rate of return earned on the funds invested is greater when a few units are turned fast than when more units are turned slower even though the gross profit is the same.

For example, in the paragraph above, $3,600 was earned annually on an investment of only $2,000 when two units were turned six times as compared to the same sum earned on an investment of $6,000 when six units were turned twice. As a rule investors measure the profitability of an opportunity by calculating annual earnings as a percentage of necessary investment rather than as a dollar amount. That is to say, their object often is to maximize the rate of return on investment, not to maximize dollar earnings.

USE OF FUNDS AVAILABLE FOR OTHER PURPOSES

Cash expenditures, other than those made to acquire fixed assets, are of two types: those that are essential to turnover and those that accrue with time and are independent of turnover. Thus, if turnover increases, an enterprise will expend more for labor and materials but
its expenditures for taxes, interest, replacements, and dividends on preferred and common stocks will not be changed. Because of this fact, it is desirable as explained earlier to conceive of inflowing cash as being divided into two funds: one to replenish the working capital and the second as being "available for other purposes."

Three types of expenditures are made from the latter fund. There are first those whose payment is obligatory, examples of which are rent, interest, and taxes. It will be noticed that the obligation may be either legal or contractual. Second, there are those expenditures whose payment may be postponed temporarily but not indefinitely, examples of which are repairs and replacements. Finally, there are those whose payment is discretionary with management, examples of which are acquisition of assets for expansion purposes, executive salaries, advertising appropriations, and the payment of dividends on preferred and common stocks.

SUMMARY AND CONCLUSION

If erroneous conclusions are to be avoided, theorists must stop thinking of enterprises as combinations of fixed and variable factors and begin to think of them as a businessman does, i.e., as two funds of capital, one fixed and the other circulating. In such a concept an enterprise operates by turning its circulating capital. Each turnover provides a sum of cash, a part of which is needed to finance subsequent turnovers leaving the balance available for other purposes. Some of these "other-purpose expenditures" are obligatory, some are postponable, and some are discretionary. This concept of operation is presented even more clearly in the accompanying diagram (Figure 16).
From the operational point of view expenditures to maintain turnover have priority over others since turnover is the essence of successful operation. From the legal point of view, however, taxes, rent, and interest have a higher priority. Thus a manager may find it necessary at times to sacrifice turnover in order to meet obligations that have a legal priority. If this continues for any length of time, the result will be most disastrous to operations. To illustrate, assume circulating capital of $10,000 that turns six times a year at a markup of 40 per cent. In such a case the gross amount available for other-purpose expenditures is $24,000 (six times $4,000). Assume further that it is the management's custom to expend this sum annually for the following purposes:

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>$4,000</td>
</tr>
<tr>
<td>Taxes</td>
<td>4,000</td>
</tr>
<tr>
<td>Replacements</td>
<td>4,000</td>
</tr>
<tr>
<td>Expansion</td>
<td>4,000</td>
</tr>
<tr>
<td>Dividends, preferred</td>
<td>4,000</td>
</tr>
<tr>
<td>Dividends, common</td>
<td>4,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$24,000</strong></td>
</tr>
</tbody>
</table>

Assume now that the turnover of working capital declines from six to five. This decline will reduce the funds available for other purposes from $24,000 to $20,000 and will necessitate the elimination of one of the expenditures listed above. If the turnover is then assumed to decline progressively from five to four to three to two to one, each decline will necessitate the elimination of one more expenditure. Expansion and dividend expenditures can be eliminated without too disastrous an effect. Replacements can be postponed temporarily but continuous postponement will increase the cost of operations and lessen the gross profit. The payment of interest and taxes cannot be deferred even temporarily so that when the turnover declines below two, funds needed for working capital pur-
Contribution of equity and creditor investors result in:

- Fund of Circulating Capital
-固定资本帐户

- CASH
  - expended for GOODS
  - collected as CASH
  - available for ACCOUNTS
  - to replenish

- Circulating Capital
  - Interest
  - Taxes
  - Investments
  - Expansion
  - Dividends

- Replacements
- Fixed Capital

Fund of Fixed Capital

(Shrinks in value with use and with the passing of time)

Figure 16. Diagrammatic Representation of Capital Flow
poses will have to be used for these payments. The result will be a drastic curtailment of gross profit and a rapid deterioration of the enterprise's financial condition.

Enough has been said to emphasize the great importance of turnover to an enterprise and to make clear why business managers become seriously alarmed at any tendency of turnover to decline. However, it should be pointed out that a decline in turnover per se does not necessarily alarm businessmen. Rather, they are alarmed by a decline in turnover originating from factors over which as individuals they have no control.

Obviously, a businessman turning a very small stock rapidly at high prices would be pleased with the decline in turnover that occurs when he is able later to turn a larger stock purchased at lower prices. But in this case the decline in turnover is one sought by him; it is not one forced upon him.

Conventional theory depicts expansion as an application of additional input units. While the theory of this monograph does not deny that expansion can occur in this way, it suggests that oftentimes expansion takes the form of a more intensive use of existing working capital. To illustrate the basic difference in the two concepts, consider the case of a manufacturer operating with $100,000 of fixed capital and $50,000 of circulating capital. Assume further that the product requires one month to produce and that it is normally sold on sixty days' credit. If the typical markup is 20 per cent, annual sales will be $240,000 and direct cost of operations will be $200,000.

Now assume that the demand situation alters so as to permit a three-fold increase in production. According to conventional theory such an expansion would involve "applying" three times as many variable input units; i.e., $150,000 of liquid capital. Yet in actual practice there are a number of devices for expanding operations without borrowing or investing any additional working capital.
For example, by factoring accounts receivable the manufacturer could reduce the length of the turnover period to one month and thus produce $600,000 (cost value of goods) with the same amount of working capital. 8

8Another method would be to sell for cash only. Still another method would be to ship goods on a sixty-day trade acceptance and then to discount the notes. This last would involve some liability to the manufacturer, however.