

## **x. TURNOVER STUDIES**

### **1. Introduction.**

1.1. An industrial enterprise to, obtain a fair rate of return and further improvement had to use the resources at its disposal effectively, and thereby increase the production and, sales, reduce unit costs, reduce capital, and achieve a faster turnover of total capital employed.

#### *1.2. Turnover is time*

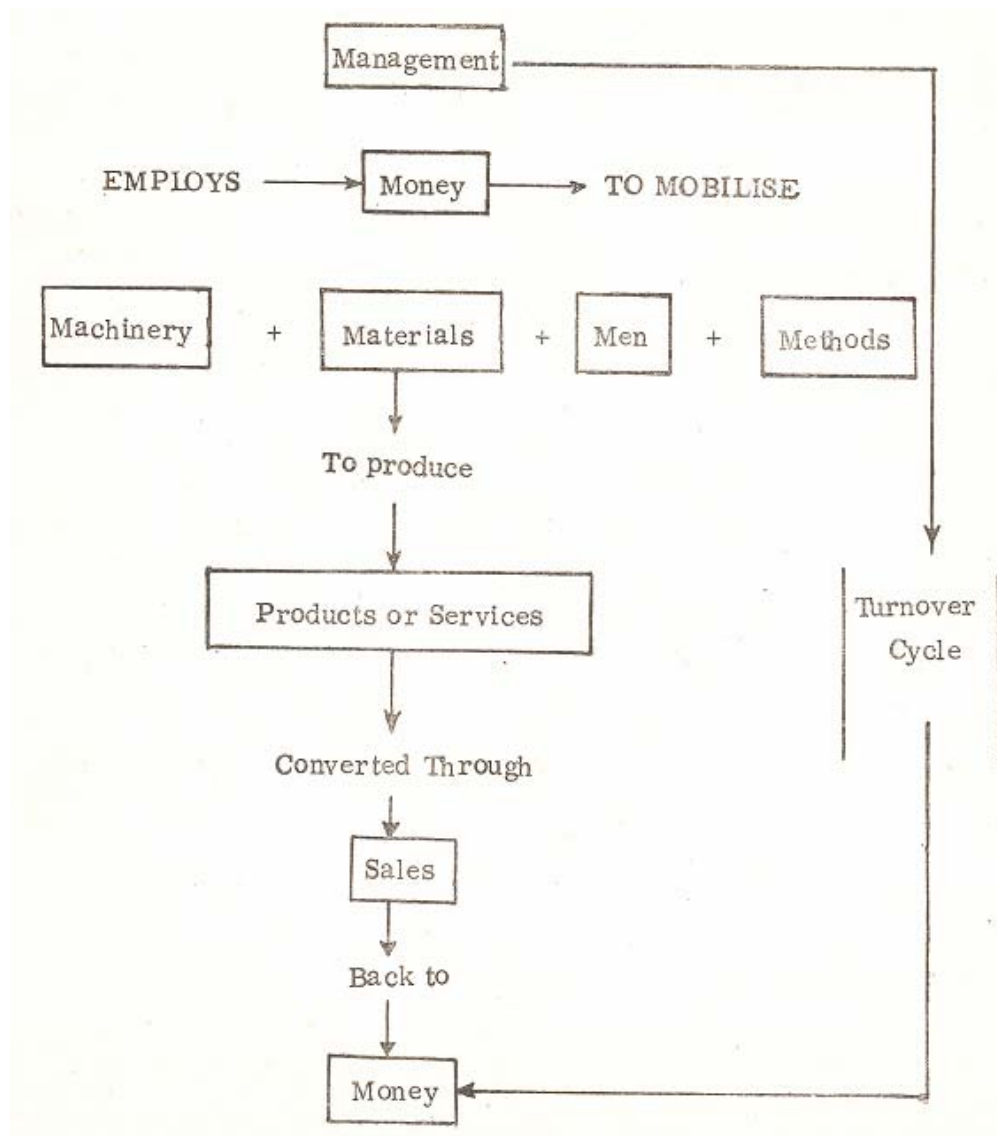
1.2.1. In the process of obtaining turnover, i.e. converting one form of money values to another form of money values (that is raw material to finished goods and finished goods back to money through sales), the management of an industrial enterprises to use effectively the five M's of business (money, material, men, machinery, and, methods)-the individual ingredients with which it must work in accomplishing its objectives. Operating an industrial enterprise is a continuous process, because parts of the units are moving every second, each segment in its own orbit at its own speed. The M's of business illustrate this continuous movement in which the several segments act, coalesce, and produce effects which appear in the operating results with varying rapidity, time, and magnitude. Rapidity, time, and magnitude of the movement may vary from segment to, segment.

1.3. The enterprise may be manufacturing capital goods or consumer goods, but, irrespective of the type of business, the problem of management is to combine the physical components (i.e. the 5 M's), in the best economical proportions, in order to produce an acceptable product which will fetch a fair R.O.,R.

1.4. In the turnover process, the physical components used in manufacturing a product, or rendering a service, are united together in jagged sequences of varying time

proportions of policy, distribution channels and methods, production schedules, product development, and availability of finance as internal and external conditions may set a limit. The time requirements to use the M's of business in converting raw material goods, and converting finished goods by sales back to cash to purchase more raw materials to repeat the process can be termed as turnover. Thus turnover and time are synonymous in the field of Industrial Management. In the projection of business decisions, the future management is concerned with evaluating the various kinds of time influences in current business values.

1.5. The M's of business are given in the form of a chart by way of illustration:



## 2. Management Policy

2.1. Managers at all levels should appreciate the influence of time as well as responsibility for and to the effective use of the five M's. In addition, they should know the structure of their company breakeven point, realise that costs, whether big or small, are their continuous concern, evaluate how much overheads can be afforded for low margin operations, and maintain a cash position which will leave the total capital employed working efficiently.

## 3. Decision -Making

### What Management is entrusted

with *Circulating Capital*

(i) Liquid assets.

### Types of time cycle

Can we meet this week's wage payment and pay bills for merchandise now due? Are there any other impending payments? Must we borrow? When?

(ii) Working assets

(a) Bills receivable

What is our collection rate? What happens if it is brought to 30 days? 40 days? and so on;

Balanced for production this week? Next month?

(b) Inventory

Purchases flowing or coming by fits and starts? Is obsolescence creeping in with slow turnover?

Fixed Capital

Plant and

equipment

How long it will take for the new machine to payoff? 3 years? 5 years? Should we have to keep it in business regardless of pay-off time? . How soon we can get the new plant into production? .What are the operating costs?

#### **4. Breakeven concept**

4. In every business, some costs are fixed (regulated by time and decision, not by volume), and the rest of the costs are less than the total, and also less than the unit selling price, that is why business break even.

#### **5 • Fixed or Stand-by is Turnover of Time**

5.1. Turnover has been defined as "jagged segments of time varying from a day to a week or even to months or years in certain types of Costs. While the costs resulting from this longer time cycles seem to be "fixed" when viewed at a particular moment, they are not really fixed. They can be controlled with time. Hence they are called time costs or period costs based on the time concept. Thus a cost of time which may be affecting a profit relationship can still be controlled by management. They are otherwise called policy costs. The function of control is simply changed to a time decision, instead of a volume decision; Costs commonly having the inflexible standby characteristic include depreciation, property, insurance and taxes,. rent, -costs of keeping open low volume sales offices and warehouses, and the like.

#### **6. Capital Requirements of Industrial Enterprise**

6.1. The capital needed by a company consists of float and variable capital.

*6.1.1. Float:* Similar to breakeven standby, float is the amount of money required to get into business or the minimum necessary to maintain a going business in a position to serve customers. The amount of cash, inventory, plant, and other types of assets is the minimum needed to support the start of the turnover process on the historical scale of activity.

#### *6.2. Variable capital*

6.2.1. For every Rupee of output, a business needs working capital over and above float capital. This volume requirement is governed by the rate of turnover, type of credit, seasonality, out-of-pocket cost content of product sold, breakeven point, etc.

6.2.2 The total capital requirements of a business are determined by its float and variable factors in response to the swings in activity. 'Float' will change with abnormal or capacity expanding expenditures for plant and equipment, and the working capital requirement may also change with practices in cash-deposit distribution, credit and collection, inventory control and the like as they reflect themselves in Better or poorer day-by-day management in the problem of capital turnover. The variable capital requirements will fall as operating managers will be able to produce with shorter material lead times and shorter manufacturing cycles. Conversely, variable requirements will

rise if management chooses more 'comfortable' inventory practices, allows its customers more generous collection terms, or takes on problems such as regional warehousing and similar methods of operation which change the turnover cycle.

## **7. Variance from Industry to Industry**

7.1. Capital requirements vary between industries depending upon many factors, a few of which having the strongest influence are:

- (i) Type of business (high for low capital investment per Rupee of sales)
- (ii) Length of production or distribution cycle.
- (iii) Turnover caused by:
  - (a) Capital policy
  - (b) Capital performance
  - (c) Customers' demands.

7.2. A steel mill is a type of business which, by its nature, requires a large investment in furnaces and other fixed assets. Two identical steel mills with identical sales volume might, however, require differing amounts of capital depending upon another factor-capital turnover. Management alters capital turnover by its decisions as how to buy, how to sell, and how to operate which are capital policy. Even where there is identical capital policy, there is still the test of utilisation, i.e. capital per rupee of sales. The steel mill whose management performs best would require the least amount of capital, or in other words, could get more sales for the same capital.

## **8. Balanced Capital Planning**

8.1. There is a point in the annual sales volume at which working capital will be fully employed, capital turnover is high, and earnings on capital investments are good. Above that point is the area of working capital deficiency. Below that point is the area of idle capital and usually low R.O.R.s. Based on the normal range of activity of the enterprise, the relationship between capital requirements and sales volume is to be ascertained to obtain a favorable R.O.R. Stated in time, the forecast of operating capital is concerned with volumes having widely differing rates of turnover. The working capital section may turn over several times during the year, as the purchase of material and labour to convert the product to be sold and collected. The fixed capital expenditure is concerned with values brought into the business for long terms at irregular rates and in irregular amounts, depending upon the physical capacity required for the volume of output to be handled. A change

in the efficiency of use of operating capital changes the operating capital requirement for a given volume of output, or the volume of output that can be supported by a given amount of operating capital. Adequacy of operating capital is thus qualitative and quantitative, and the greater the relative liquidity the greater the quality. The best way to improve capital utilisation is through control of what is now available, and a clear knowledge of what is needed for expansion.

## *8.2. Illustrations of time-cost relationships*

*8.2.1. Machine utilisation:* It has been pointed out in the discussion on breakeven point that the cost of finished products depends on the fixed/standby/or period costs and variable costs, and that capital equipment is one of the factors affecting fixed cost. Since the cost of production of an article is inversely proportional to the productivity of the machine, we have to bestow special attention on the utilisation of machines.

*8.2.2. Examples:* If a machine produces 100 components in 8 hours, the cost of a component may be, - say, 20 paise, but supposing the same machine with the same operator produces 125 components during the same period, the cost per component will be less than 20 paise, because for the same expenses more components are produced, Which means that the machine has been utilised to a greater extent in the latter case than in the former; in other words, the productivity of the machine has increased in the latter case. If 125 components is the maximum production that can be obtained on this machine in an eight-hour period, then we may say that machine utilisation has been maximum. If we only remember the high cost of investment in modern industries; we will be able to appreciate the importance of machine utilisation.

## *8.2.3. Cost of product varies with machine utilisation*

8.2.3. The cost of a product is affected, among other factors, by:

- (a) Interest on debt finance,
- (b) Depreciation of machinery, and
- (c) Repair and maintenance costs.

If machines are not properly utilised, then the cost on account of the above factors will go on increasing, and the cost per machine hour will increase. To reduce cost, and to have control over the machine-hour rate, it is necessary to aim at maximum machine utilisation. Hence it is needless to say that machines are to be utilised to their maximum capacity-for example, a turret lathe (multi-purpose lathe) is supposed to do three or four operations simultaneously. By advanced planning, the multi-operations can be worked out and implemented on the lathe. The utilisation of such machines to their maximum capacity reduces the cost of manufacture by reducing

machining time. Whenever circumstances permit, machines should be run not only for the full 8 hours in one shift, but, the second and third shifts should also be planned.

### 9. Turnover Studies

9. Money is mercurial, and R. O. R. can be improved by faster rotation of capital. Turnover studies in any industrial enterprise consist of:

Capital Turnover	=	$\frac{\text{Sales}}{\text{Capital (Total investment)}}$
Working Capital Revolutions per annum	=	$\frac{\text{Sales}}{\text{Working capital}}$
Merchandise turnover	=	$\frac{\text{Merchandise cost of sales}}{\text{Average inventory}}$
Accounts receivable turnover	=	$\frac{\text{Credit sales}}{\text{Average outstanding balances}}$
Current assets turnover	=	$\frac{\text{Cost of sales and expenses}}{\text{Current assets}}$
Circulating capital flowspeed	=	$\frac{\text{Circulating capital}}{\text{MAT (Moving Annual Total of gross sales)}}$
Fixed asset utilisation ratio	=	$\frac{\text{Net sales for the year}}{\text{Fixed assets less accumulated depreciation}}$