UNIT 6

Business Finance and Arithmetic

Learning Objectives

After reading this unit the student will be able to:

- Understand the importance and technique of preparing a Cash Register.
- Understand the meaning and concept of the term Cash Inflow and Cash Outflow.
- Understand the concept of COST and its components- Start-up, Fixed and Variable Costs.
- Explain the terms- Unit Cost, Unit of Sale, Unit Price
- Calculate Per Unit Cost of a single product.
- Explain the concept of Profit, its calculation and the impact of direct and indirect expenses on the profit.
- Understand the importance and preparation of Income Statement.
- Appreciate the importance of Cash Flow Projections in the smooth flow of finances in the business.
- Understand the concept of Break Even Analysis.
- Understand the meaning and importance of Taxes.

'Accounting is all about counting - adding sales and subtracting costs. So arithmetical ability is crucial for running a business.' ***- Anonymous***

Most people freeze in on their tracks the moment they hear the word "accounting". That is because accounting has been made into a "complex subject". However, we are not trying to create accountants but entrepreneurs and successful entrepreneurs need to understand the basic accounting concepts in a simple manner. For that, they need to have very simple and basic arithmetic abilities – addition, subtraction, multiplication, division and basic concept of percentage. This will help the entrepreneurs understand the fundamentals of business – numerically. Anything beyond this would be the accountant's job.

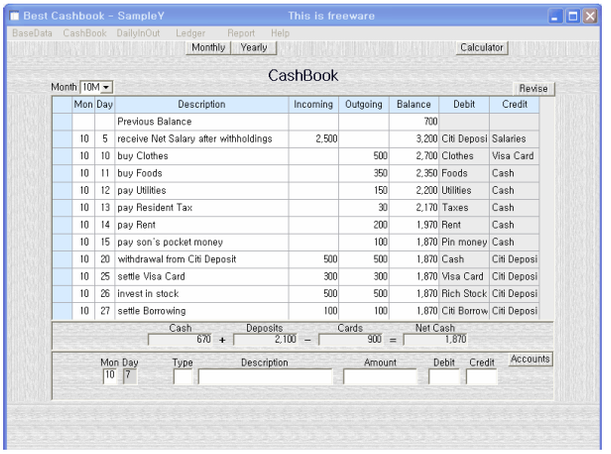
Cash Register

"Never spend your money before you have earned it". ***- Thomas Jefferson***

The importance of cash (money) in business is similar to that of blood in the human or any other living being. In business, all transactions are made by paying or receiving money (except in barter trade) or equivalent of cash such as cheques. Sometimes when the businesses have trust in people, cash does not cross hands immediately but instead they are given what is called "credit' or "loan" with an understanding that money will be paid at some later date and loan considered paid.

All cash transactions are to be recorded in a book called a cash book or cash register. In accounting language, the cash book is a book of original entry. The term entry simply means making a note of the cash received or given.

Maintaining a cash book or register is very essential for every business. Without the entries from the cash Book, no further analysis of expenses, costs, revenues, profit etc. can be made. Hence maintaining a cash book is very critical for the success of a business.



Writing a cash book in business is similar to maintaining household expense by a home maker or noting how pocket money is spent by a student. Examples are:

- List and value all grocery items purchased.
- Amounts of all the bills paid such as, electricity, telephone, water, rent etc.
- Money spent on purchasing vegetables and fruits.
- Money spent on cinema tickets.
- Recharging of a mobile phone.
- Money spent on a bus ticket.

Inflow and Outflow:

We can call receipts of money as **inflow**, and payments made as **outflow**

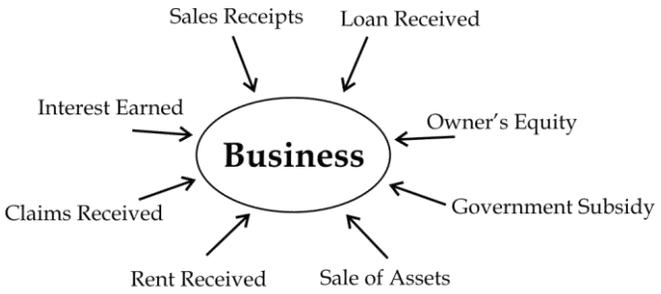
In the case of a housewife, money coming from salary is inflow and money being spent on various items as listed above is outflow. For a student pocket money received from parents is inflow and various outflow items are listed.

Now let us understand some of the ways by which money comes in to the business and reasons for spending the money by the business.

Inflow:

Following is a list of some of the ways in which money comes into the business:

- **Owners' Equity:** own money invested in the business.



Inflow

- **Loan Received:** money borrowed from friends, family, relatives, bank etc.
- **Sales Receipts:** money coming in by selling your products or service.
- **Interest Earned:** money coming in the form of interest on the deposits made in the bank.
- **Rent Received :** Money coming in by renting out building or room.
- **Sale of Assets:** Money coming in by selling surplus property like furniture, machinery, old car etc.
- **Claims Received:** Money coming in the form of insurance claims like accident claims, fire claims, maturity of insurance policies, etc.
- **Government Subsidy Received:** Money coming in the form of grant paid by the government. It is a form of financial assistance paid to an individual starting a business.
- **Sale of Scrap:** Money coming in by selling scrap and waste material, selling rejects etc.

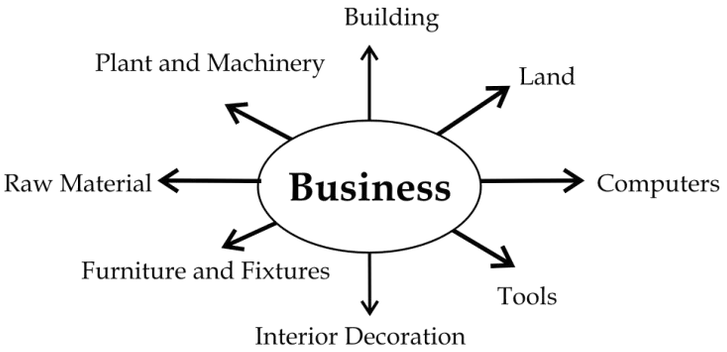
This list is not exhaustive. Think of some more ways in which money comes in to the business and enhance this list.

Note:

Please remember that profit is not to be considered as inflow. Nobody gives money as "profit". Profit is being generated in the business. Hence **profit** is not to be included as "inflow".

Outflow:

Following is a list of some of the ways in which money goes out of the business



Outflow

- **Land:** Purchasing land to start business.
- **Building:** Constructing a building or purchasing a building to start business.
- **Plant and Machinery:** Investing money in Plant and Machinery to start business.
- **Furniture and Fixtures:** Purchasing furniture and fixtures.
- **Interior Decoration:** Investing money in hiring an interior decorator.
- **Tools**: Purchasing tools for the business which will be utilized in the business.
- **Computers:** Purchasing computers.
- **Raw Material:** Buying of raw materials.
- **Packing Material:** Money required to buy packing material for products.
- **Transportation:** Purchasing a vehicle to be used for transporting raw materials, transporting your products to the customer's premises.
- **Salary and Bonus:** The money paid to employees.
- **Employee Benefits:** The perks given to employees like travel allowance, medical benefits etc.
- **Incentives:** Payment of incentives to employees based on their performance.
- **Advertising:** Money spent on publicizing the products through newspaper, television, pamphlets, brochures, public hoardings, etc.
- **Rent at Premises:** Money being spent on paying the rent for the premises used for the business.
- **Interest on Loan:** Borrowed money on which interest is to be paid.
- **Insurance Premium:** Money paid as premium to the insurance company for covering various risks.
- **Travel:** Money spent on travelling for the owners and the employees.
- **Sales Commission:** Money given to the employees or agents as commission on sales.

These are some of the ways in which money gets spent out. Think of some more and enhance this list.

Note:

When items are used with longer life in business (furniture, machinery etc), a part of its original value is computed as the cost for a given period – say a month, year etc. This is known as depreciation. However, money is not paid for "depreciation". So **depreciation** is not a cash outflow. It is a non-cash expenditure.

Recording Cash Inflows and Outflows

Now let's take a look at the format in which a cash book or register is written for only cash transactions. This is a simplified version (compared to what an accountant would use for cash book) in which we have 6 columns as shown below**:**

Cash Register format for Cash only

Date	Description	Ref No.(Voucher/ Bill)	Cash Received (in Rs.)	Cash Paid (in Rs.)	Cash Balance (in Rs.)
1	2	3	4	5	6

- In the above format, the first column is the date on which either received cash or paid cash is entered.
- The second column is the description in which the details for which either received cash or paid cash is entered. For example: monthly tea expenses paid or purchase of furniture, etc.
- The third column is where the bill or voucher details are entered.
- The fourth column is where the amount of cash received is entered.
- The fifth column is the where the amount of cash paid is entered.
- The sixth and last column is where the left over balance is entered.

Let us consider the following example:

- Opening balance of Rs 40,000/-
- Spent Rs 10,000/- for purchasing furniture, then in the fifth column enter Rs. 10,000/- and in the sixth column enter Rs. 30,000/- (Rs. 40,000 – Rs. 10,000).
- Sold products on the next day for Rs. 5,000/-. Then in the fourth column enter Rs. 5,000/- and in the sixth column, enter Rs. 35,000/- (Rs. 30,000 + Rs. 5,000).

Exercise 1 – Cash Transactions Only

Ratan Singh is an owner of a shop in a three-star hotel at Ranthambore. He sells T-shirts and mementos to the tourists at that shop. He also takes a stall on rent at crowded places on a daily basis. Details of daily transactions for the month of July are given below. Let us suppose that he started his business with an opening balance of Rs. 30,000/-

(i) On July 01, to start his business, he buys some furniture and basic supplies that cost him Rs. 15000/-

(ii) On July 2, he buys 3 dozens of T-shirts at Rs. 1200/- per dozen.

(iii) On July 6, he decides to sell T-shirts at the temple area on the forthcoming Sundays. And for that he paid an advance rent of Rs. 100/- per day. Apart from that he spent Rs. 200/- for the banners and Rs. 50/-for handbills.

(iv) On July 7, he sold all the T-shirts at Rs. 200/- per piece.

(v) On July 10, he again purchased five dozens of T-shirts at Rs. 1200/- per dozen.

(vi) On July 14, he sold four dozens of T-shirts at Rs. 200/- per piece and the remaining T-Shirts, he sold at Rs.190/- per piece.

(vii) On July 16, Ratan Singh again purchased five dozens T-shirts for Rs. 1200/- per dozen. He spent Rs. 500/- on commissions and Rs. 300/- more on pamphlets and Rs. 100/- on another banner.

(viii) On July 21 Mr. Singh sells 3 dozens of T-shirts at Rs 200/- per T-shirt.

(ix) On July 25, he purchased 3 dozens of T-shirts at Rs. 1200/- per dozen and manages to sell all his T-shirts at Rs. 200/- per piece on that same day.

(x) He pays the tea expenses of Rs. 300/- for the current month on July 31.

Cash Book format for Cash only

Date	Description	Ref No.(Voucher/Bill)	Cash Received (in Rs.)	Cash Paid (in Rs.)	Cash Balance (in Rs.)
July 1	Opening Balance				30,000/-
July 1	Purchase of Furniture	No: 3675 and Date: 1/07/2012		15,000/-	15,000/-
July 2	Purchase 3 Dozen T-shirts	No: 863 and Date: 2/07/2012		3,600/-	11,400/-
July 6	Rent, Banner and Handbill	No:5640 and Date: 6/07/2012		350/-	11,050/-
July 7	Sale of 3 Dozen T- shirts	No: 6012 and Date: 7/07/2012	7,200/-		18,250/-
July 10	Purchase 5 Dozen T- shirts	No: 887 and Date: 10/07/2012		6,000/-	12,250/-
July 14	Sale of 5 Dozen T- shirts	No: 6087 and Date: 14/07/2012	11,880/-		24,130/-
July 16	Purchase 5 Dozen T- shirts	No: 906 and Date: 16/07/2012		6,000/-	18,130/-

July 16	Commission Paid	No: 1294 and Date: 16/07/2012		500/-	17.630/-
July 16	Banner and pamphlets	No: 765 and Date: 16/07/2012		400/-	17.230/-
July 21	Sale of 3 Dozen T- shirts	No: 6127 and Date: 21/07/2012	7,200/-		24,430/-
July 25	Purchase 3 Dozen T- shirts	No: 918 and Date:25/07/2012		3,600/-	20,830/-
July 25	Sale of 5 Dozen T- shirts	No: 6159 and Date: 25/07/2012	12,000/-		32,830/-
July 31	Monthly Tea Expenses paid	No: 189 and Date: 31/07/2012		300/-	32,530/-
	TOTAL		**38,280/-**	**35,750/-**	

The balance in the cash register (or the cash box) does not represent the profit. It only shows the cash balance of the firm.

It is important to write the cash register regularly (daily or even more frequently) to ensure no transaction is missed out. Every transaction, however small, must be recorded immediately.

Cash Register Format for Cash and Bank Transactions:

Now the cash register format for both cash and bank is as shown below. Here we have 9 columns:

Date	**Description**	**Ref No.(Voucher /Bill)**	**CASH**			**BANK**		
			Cash Recd. (in Rs.)	**Cash Paid (in Rs.)**	**Cash Balance (in Rs.)**	**Cheque Received (in Rs.)**	**Cheque Issued (in Rs.)**	**Bank Balance (in Rs.)**
1	2	3	4	5	6	7	8	9

- In the above format we have 3 more additional columns pertaining to the bank transactions. So here the first 6 columns remain the same as the previous format, which was for only cash.
- In the 7thcolumn enter the amount of money received through cheque.

- In the 8thcolumn enter the amount of money paid through cheque.
- In the 9th column enter the amount of money in the bank either after receiving or paying the money.

Let us consider the following example:

- Opening balance in bank account is Rs. 1,00,000/-.
- Purchase raw material for Rs. 5,000/- and paid the amount through cheque; Column 8 will be Rs. 5,000/- and column 9 (bank balance) would be Rs. 1,00,000/-Rs. 5,000/- = Rs. 95,000/- . So enter Rs. 95,000/- in bank balance (column 9).
- Sold product for Rs. 20,000/- on the next day, received this amount by cheque; Column 7 will be Rs. 20,000/- and column 9 would be Rs. 95,000 + Rs. 20,000/- = Rs. 1, 15,000/-.

Exercise 2 – Cash and Bank Transactions

Ms. Laxmi, who runs a stationary store, has the following transactions. Please help her with the Cashbook for her operations.

(i) On 1st of January, she has Rs. 12, 500/- in cash and Rs. 25,000/-in bank account.

(ii) On 3rd January, she makes a cash sale of Rs. 9, 500/-.

(iii) On 4th January, she receives a check for Rs. 6,000/- from Excel Company for sales made in December.

(iv) On 6th January, she buys filing cabinets and makes a check payment of Rs. 5,000/-

(v) On 6h January, she makes cash payment of Rs. 15,000/- for various stationary purchased.

(vi) On 7th January, she withdraws cash of Rs. 5,000/- from her checking account.

(vii) On 8th January, she pays salary of Rs. 5,000/- to her sales staff.

(viii) On 9th January, she pays the monthly rent of Rs. 2,500/- by check.

(ix) On 10th January, she deposits Rs. 5,000/-in her bank account.

Cash Register format for Cash and Bank

Date	Description	Ref No.(Voucher/ Bill)	CASH			BANK		
			Cash Recd (in Rs.)	Cash Paid (in Rs.)	Cash Balance (in Rs.)	Cheque Received (in Rs.)	Cheque Issued (in Rs.)	Bank Balance (in Rs.)
Jan 1	Opening Balance				12,500/-			25,000/-

Jan 3	Sale	No:682 and Date: 1/01/2012	9,500/-		22,000/-			25,000/-
Jan 4	Paid by Excel	No: 1752 and Date: 4/01/2012			22,000/-	6,000/-		31,000/-
Jan 6	Filing Cabinet Purchase	No: 546 and Date: 6/01/2012			22,000/-		5,000/-	26,000/-
Jan 6	Purchase of Stationary	No: 3784 and Date: 6/01/2012		15,000/-	7,000/-			26,000/-
Jan 7	Cash Withdrawal	No: 1821 and Date: 7/01/2012	5,000/-		12,000/-		5,000/-	21,000/-
Jan 8	Salary Paid	No: 236 and Date: 8/01/2012		5,000/-	7,000/-			21,000/-
Jan 9	Rent Paid	No: 107 and Date: 9/01/2012			7,000/-		2,500/-	18,500/-
Jan 10	Deposit to Bank	No: 3481 and Date: 10/01/2012		5,000/-	2,000/-	5,000/-		23,500/-
	Total		**14,500/-**	**25,000/-**		**11,000/-**	**12,500/-**	

Now we observe in the above exercise that, only the transactions on 7th January and 10th January have two entries; others have only one entry.

Let's look at the transaction taken place on January 7th.

- As soon as a cash withdrawal is done from the checking account, then there is an entry made both in the cash and bank accounts.
- In the above exercise, on January 7th, Ms. Laxmi withdraws Rs. 5,000/- from her checking account. So immediately there has to be an entry in the Bank account. i.e you have to enter Rs. 5,000/- in the cheque issued column and immediately the bank balance will be Rs. 26,000—Rs. 5,000 = Rs. 21,000/-.
- This Rs. 21,000/- must be entered in the bank balance column, on January 7th.

- Here we have observed that there is money outflow from the bank account and money inflow into the cash box.
- Now, since Ms. Laxmi has withdrawn Rs. 5,000/- from her checking account this money has to be entered in the cash received column because money is coming into the cash box.
- Immediately you will have to add Rs. 5,000/ to the cash balance. i.e it will be Rs. 7,000/+Rs. 5,000/= Rs. 12,000/-.
- This Rs. 12,000/- will have to be entered in the cash balance on January 7th.

Let's look at the transaction taken place on January 10th.

- As soon as a deposit is done in the bank account, there will be an entry made both in the cash as well as bank account.
- In the above exercise, on January 10th, Ms. Laxmi deposits Rs. 5,000/- to her bank account.
- So immediately you have to enter Rs. 5,000/- in the cheque received and subsequently the bank balance will be Rs. 18,500 + Rs. 5,000 = Rs. 23,500/-.
- This Rs. 23,500/- will be entered in the bank balance.
- Now since Ms. Laxmi has deposited Rs. 5,000/- to her bank account, make an entry of Rs. 5,000/- in the cash paid column because she has taken theRs5,000/- from her cash box.
- So this means that the cash balance will be Rs. 7,000/- Rs. 5,000/- =Rs. 2,000/-.
- Hence this Rs. 2,000/- has to be entered in the cash balance column.
- There is money outflow from cash box and money inflow into the bank account.

Note:

Money being withdrawn from ATM is like cheque issued and there will be two entries – cheque issued (hence out flow from bank) and similar amount received as cash (inflow into the cash box).

It is also to be noted that when money is withdrawn from bank or deposited in the bank – there are two entries; one in cash column and the other in cheque column. These are known as "contra" entry. It is like taking money from the left pocket and putting it in the right pocket. Money does not go out to anyone else; it just changes pocket (cash box or bank account) but still remains with the owner.

Credit Transactions:

Sometimes in business, products are sold on credit which means that the buyer does not pay the money immediately. The buyer will pay at a later date. This is called selling on credit.

Buying on credit means that the buyer will purchase a product from a seller but will not pay the seller immediately. The buyer makes the payment at a later date. This is called buying on credit.

While credit (whether given or taken) transactions do not get entered in the cash book, it is very important for the entrepreneur to keep track of these and make appropriate entries in the cash

book. To help achieve this, a simple format like the one below would be helpful. It will also ensure that tallying or reconciliation becomes easy.

Also, note that entrepreneurs must try to keep all transactions as cash and not give too much credit. This is sometimes difficult but must be kept to a very minimal. Otherwise, the entrepreneur often ends of spending more time in collecting credit and losing money when the creditors don't pay.

Format for keeping track of credit transactions

Sold on Credit					Bought on Credit				
Date	Amount (in Rs.)	Descr-iption	Date money received	Date Entry made in Cash Book	Dat	Amount (in Rs.)	Descri-ption	Date money paid	Date Entry made in Cash Book

Worksheet:

Fill in the blanks using the options given below:

(i) The importance of ----------in business is similar to that of blood in the human body.

(ii) A notebook in which we write to keep track of all the daily transactions which happens in the business is called as the ----------.

(iii) Sometimes when the businesses have trust in people, cash does not cross hands but instead they are given what is called ----------or ----------.

(iv) The money which comes into the business is called ---------- and the money which goes out of the business is called ----------.

(v) When the buyer pays the money to the seller at a later date it is called ----------.

(vi) Balance in the cashbook (or the cash box) does not represent the ----------. (outflow, profit, credit transactions, cashbook, credit or loan, inflow, cash flow, cash, expenses)

Unit of Sale, Unit Cost and Unit Price

(For a single product or service)

"Without a standard, there is no logical basis for making a decision or taking action"

Joseph Juran

Unit of Sale

Measurement is essential and crucial in any business. It is important to measure sales, costs and profits. Without a common standard or yard stick, it would be difficult, if not impossible, to

manage meaningfully. So "Unit of Sale" is an important concept and it is the heart of any business.

Unit of sales can be defined as the measure of what products are sold. Think of a Unit of Sale as the unit you would use to bill a customer. So how does a lawyer bill his client- mostly by the number of hours he/she has worked for the client. So, for the lawyer, "time" (one hr or part thereof) is the unit of sale. In the example of selling shoes, a pair of shoes will be the unit of sale. To understand this further, look at some of businesses with their respective unit of sale. It is as shown below:

Business	Item being Sold/ Serviced	Unit of Sale
Fruit Vendor	Apple	Kilogram
Grocer	Rice	Kilogram
Dairy	Milk	Litre
Grocer	Oil	Litre
Garment Shop	T-Shirt	Piece or Number
Textile Shop	Fabric	Meter (of fixed width)
Real Estate Developer	Apartment	Square Feet (Area)
Plumber	Plumbing Service	Time: Hour
Lawyer	Legal advice	Time: Hour
Consultant	Special advice	Time: Hour
Coaching Class	Tuition	Time: Hour
Baker	Cake	Kilogram/pound
Baker	Vegetable Puffs	Piece or Dozen

Unit of sale is required to understand the **economics of the business** in an easy and standardized manner and for tracking the past with the future and to be able to take corrective action.

Unit Cost

Cost of unit can be defined as the cost incurred by a company to produce, store and sell one unit of sale of a particular product or service. Here the unit cost refers to the variable cost like raw material, packing material, sales commission, freight, etc. (More about variable costs is covered in another section).

Let's take the example of a tea vendor:

For the tea vendor the sum of **cost (per cup)** of milk, sugar, tea leaves as well as cooking fuel used and disposable cups make up the **Variable Cost / Unit Cost**. While calculating the unit cost, the wastage aspect must be counted. In this example, 1 liter milk and 2litres water may not give 30 cups of 100 ml, but less, say 28 or so, due to evaporation, spillage etc.

For the tea vendor, one cup (of 100 ml) is the **unit of sale** and the total of the variable costs (such as milk, sugar, tea powder, etc) per cup is the unit cost.

In order to calculate per unit cost, calculate the cost of milk, sugar, tea leaves as well as cooking fuel used and disposable cups for, say 100 cups, and divide by the total quantity.

Sometimes add the labor of the person making the tea to the unit cost (if it is variable in nature).

Unit Price

Unit Price is the price at which one unit of sale is sold. In the case of the tea vendor, it is the amount charged for a cup of tea (100 ml). There are many factors that influence the price one fixes for the product or service (more about it in another chapter).

Ultimately, it is the consumer (market place) that determines the price at which transaction takes place. Consider the example of the same tea vendor.

If the unit cost (i.e. the cost to prepare one cup of tea) is Rs. 3/-, then obviously the unit price has to be more than the unit cost i.e. more than Rs. 3/-. The tea vendor may have his unit priced at Rs. 4/-.

Gross Profit

Excess of Unit Price over Unit Cost is known as the Unit Gross Profit or Unit Gross Margin. This represents the business's profit from selling a product or providing service before deducting fixed expenses such as salaries, rent, and other expenses. Unit Cost (or variable cost) is also known as Cost of Goods Sold.

$$\boldsymbol{Unit\ Price - Unit\ Cost = Gross\ Profit\ Per\ Unit}$$

Consider the example further:

The unit price is Rs. 4/- per cup.

Unit Cost, which includes milk, sugar, tea powder, etc for one cup is Rs. 3/-.

The Gross Profit per unit (one cup) would be Rs. 1/- = (Rs. 4 – Rs. 3).

Conclusion:

For any business it is very essential to know what one unit of sale is. Unit of sale will aid the business in determining the direction in which it is heading. For example if the number of units sold in the first 3 months is 9,000 units and the number in the next 3 months is 10,000 units then it indicates that the business is doing better in terms of sales.

Worksheet:

Fill in the blanks using the options given below:

1. ---------- can be defined as individual item that a company sells.
2. The cost incurred by a company to produce, store and sell one unit of a particular product is referred to as ----------.
3. Unit cost refers to the ---------- cost.
4. Gross profit equals ---------- minus the ----------.

(Variable, cost of goods sold, unit of sale, net sales, unit cost, unit price)

Match the following:

(a)	Garment Shop	(i)	Kilogram
(b)	Plumber	(ii)	Litre
(c)	Real Estate/Apartment	(iii)	Piece/Dozen
(d)	Consultant	(iv)	Meter (of fixed width)
(e)	Fruit Vendor	(v)	Time: Hour
(f)	Textile	(vi)	Square feet
(g)	Dairy	(vii)	Time: Hour

Types of Cost

"Pricing is a policy, cost is a concept but expenses are real!" ***- Anonymus***

Cost, Expense and Expenditure

You have learnt that in running a business one of the most important components is managing money. We saw in the Cash Register chapter, some of the ways of inflow and outflow of money. Now the question is how we treat all these flows to arrive at our profit and various other information we need for knowing the health of our business.

Before we get in to it, there should be some clarity about the three terms very often used interchangeably by entrepreneurs or business people (not their accountants!).

These terms are **expenditure, expense and cost.**

Expenditure:

Expenditure is a payment or disbursement. The expenditure may be for the purchase of an asset like buying machinery, paying dues for items bought on credit, a distribution to the owners, buying raw material, paying for advertising, salaries, etc.

In simple terms, expenditure can be equated to outflow of money (not just cash but including cheque payment).

Expense:

An expense is the value of the resource that was used up, or was necessary in order to earn the revenues during the time period. For example, the cost of the goods that were sold during the period are considered to be expenses along with other items such as advertising, salaries, interest, commissions, rent, and so on.

Distinction between expenses and expenditure can best be understood with couple of examples:

Here's one example to illustrate the difference between an expense and expenditure. A company makes an ***expenditure*** **of Rs. 5,00,000/-** (five lakhs) to purchase equipment. The expenditure occurs on a single day and the equipment is placed in service. Assuming the equipment will be used for ten years; part of the original expenditure in buying the equipment will be reported as depreciation ***expense*** **of Rs. 50,000 per year** for the next 10 years.

Another example is in the area of buying of raw materials. Because of price consideration, minimum order quantity or economic order lot etc, the company buys and pays for say 1,000 tons of raw material at Rs. 6,000/- per ton. Thus the **expenditure on that particular day is Rs. 60,00,000/- (Rs. 60 lakhs).** During the month 400 tons of raw material was used up to produce and sell company products. Thus **Rs. 24,00,000/- (Rs. 24 lakhs) was the expense (or cost as you will see it later)** for producing the saleable end product which generates revenue. Balance of Rs. 36 lakhs stays in the inventory.

So the distinction between expenditure and expense can be summarized as:

Expenditure is the outflow of money for the purpose of making various payments. Although expenditure and expenses are used synonymously, there is a thin line of difference. Expenses are a subset of expenditures or payments made specifically for consuming goods and services, while expenditure includes payments made to buy assets. For instance, when a business acquires a machine, it would be called expenditure, while when the business pays for electricity for running the machine, this would be called an expense.

Cost:

"Cost" and "Expense". What is the difference?

These terms are not clearly defined by the Financial Accounting Standards Board. So the explanations given here are derived from common usage. We should keep in mind that many people use these terms interchangeably and will not make the distinction.

So then what is an **expense** and what is **cost**?

Expenses are incurred. Technically, an expense is a specific accounting event related to the outflow of cash. Expense simply records the event and is used to understand 'what happened' from an accounting perspective.

Costs are derived. A cost is a derived value of money consumed to produce a current or future outcome; hence, costs provide management a decision supporting view to improve business economics. Costs are expressed as a value measured in relationship to a causal volume of consumption.

Couple of examples may help in understanding the difference.

1. In a factory there are three products being manufactured. Production unit of each is separate – occupying 50%, 30% and 20% space respectively. The rent of Rs. 50,000/- per month being paid for the factory is an **expense**. This amount is then allocated between the three products in proportion to the area occupied–Rs. 25,000/-, Rs. 15,000/- and Rs. 10,000/-. These amounts represent the **space cost** for each of the products to be used in determining what it costs to produce the product.(Here cost is allocated).

2. A business pays Rs. 1,20,000/- at the beginning of the year as the insurance premium. This is an **expense**. (Accounting jargon is pre-paid expense). Every month Rs. 10,000/- is charged as insurance premium before arriving at the business profitability. This is the **cost of insurance** per month. (Cost is derived)

   It is quite likely that we will be using the words "expense" and "cost" interchangeably as they are quite closely linked. All expenses ultimately end up as cost – either directly and immediately or indirectly (through allocation and derivation) and with a lag time.

Types of Expenses or Costs

Expenses or costs incurred to start and run a business can be classified in to two broad categories – **(1) Start-up** and **(2) Operational** (which will include **fixed** and **variable costs**)

1. Start-up cost

Start-up cost is the cost which is incurred initially a business is started. It consists of expenses for (a) acquiring assets as well as (b) for acquiring initial raw material and other related items of initial expenses, till such time the cash flow (i.e money coming in and money going out) from the business can provide for these. This part of the Start-up expenses is known as working capital. All these expenses occur from the time you start the planning and preparation (i.e. many months before the actual operation beginning).

Quite often the terms "Start-up" and "One time" are used interchangeably. We prefer "start-up" to "one time" as some of the items in the "start-up" phase may again be purchased in the near future.

For example: Computer, furniture, machines etc. So the "one time" label creates some confusion

The following is a list of some of the items to be bought to start your business:

- Land: Acquiring land to set up your business.
- Building: Constructing building to start your business.
- Computers: Purchasing computers.
- Equipments: Investing money in purchasing equipments.
- Machinery: Buying and installing machine.
- Vehicles: Buying vehicles used for transportation purposes.

- Vessels: The vessels which will be used in case of catering business.
- Software: The software needed to be installed in computer.
- Registration: For registering the company.
- Inauguration Ceremony.
- Raw Materials: Purchasing raw materials for a manufacturing business
- Salary during initial period.
- Rent Advance: Money to be paid as advance to the landlord.

Based on your business idea, you can compile a list of your own Start-up expenses or costs.

2. **Operational Costs**, as the name suggests, are for carrying out the day-to-day operations of the business or enterprise. These can be broadly categorized in to **Fixed and Variable Costs.**

Fixed Cost

Fixed costs are the ones one has to incur by virtue of the fact that one has started a business and are operating it. These are ongoing costs not affected by changing sales volume. In other words, whether a business is producing and selling or not, one has to spend money for these items. This is the reason it is called as fixed cost. The fixed costs are not dependent upon the level of output. They take place in a time frame or over a period of time.

It is important to remember that these costs are "fixed in nature" and not necessarily "fixed in amount". For example, telephone bill may vary slightly month to month, depending on the usage. However, this variation is not linked to the sales volume directly. Rent is fixed per month, till it is revised by negotiation. Thus, it may be different in different years, but not because of sales increase or decrease.

The following is a list of some of the items on which expenses will remain fixed in nature:

- Consultancy Charges
- Travel
- Salary
- Wages
- Rent
- Telephone
- Water
- Office lighting
- Office stationary
- Employee welfare
- Advertising
- Insurance premium

Think of others, depending on the business and business model.

Variable Cost

Variable costs are those which vary as a total cost to the organization when output (number of items -goods or services- produced) varies. In fact, a true variable cost will vary in exactly the same proportion as the output. In other words, as sales doubles the variable costs (total) will double.

An example of a variable cost for a bakery would be the cost of flour, sugar, baking powder etc.

In a service business, there are often fewer variable costs. Often the main variable cost in providing a service is the cost of wages for an employee working directly in providing the service. Other variable costs in a service business would be anything directly 'used up' during the provision of the service.

For example: Washing detergent in a laundry or a car wash unit, polishing material in a polishing unit, hair shampoo in a saloon.

The following is a list of some of the items for which the costs incurred are variable:

- Raw Materials
- Packing Material
- Freight inward and outbound
- Sales Commission
- Royalty
- Factory Power
- Piece rate: Wages paid based on production

For all the above items, the cost incurred will be more if the sales are more and will be less if the sales are less.

List more variable cost items.

Note:

For classifying a particular expense/cost as either fixed or variable, it is important to know for which industry or type of business is it related to. For example:

- Telephone bill is generally a fixed expense, except when it relates to a "Call Center".
- Paper bill in an office or shop would be fixed but in a printing business it would be variable cost (like raw material).
- Fodder to the cows is variable, because more cows means more milk
- Water in the office is fixed; water in a soft drink factory is variable.
- Stationary in a coaching class is variable because more students mean more but stationary in an office is fixed.

The most important point to remember is, not to get trapped in classifying an expense in one or the other category, **without knowing which business it refers to.**

Why we need to know the classification of Costs?

The purpose and objective of every business is to earn profit, which in simple term means getting back more than what you have spent. For doing this, you need to price your product or service appropriately after treating different costs in appropriate manner. What you have spent on machinery cannot be recovered from the production in one month. Raw material used in a product must be recovered from that product. There are more examples which will be discussed in subsequent chapters. But to understand those, we must have a good command of the classification of costs as explained here.

In this chapter, we have seen the types of costs, which are: Start-up Costs and Operational Costs. Operational cost is further sub-divided into fixed and variable cost. One has to know what type of business one is doing, in order to classify an expense as fixed or variable.

Worksheet:

Fill in the blanks using the options given below:

1. The two types of costs are --------- and ----------.
2. Quite often the terms "Start-up" and "----------"are used interchangeably.
3. It is important to remember that fixed costs are "fixed in ----------" and not necessarily "fixed in ----------."
4. Do not fall in to the trap of classifying an expense in one or the other category, without knowing which ---------- it refers to.

   (one time cost, fixed, amount, Start-up cost, business, operational cost, nature, variable)

Income Statement

"Do what you love, but be damned sure it's profitable". - **Steve Pavlina**

The reason one is in business is to **earn profit**. So, what is profit and how is it determined?

Profit is a financial benefit that is realized when the amount of revenue gained from a business activity exceeds the expenses, costs and taxes needed to sustain the activity.

Statement that enables us to determine the profit over a period of time is known as ***Profit and Loss Statement or Income Statement.*** *It is also very often known as Statement of Operations*

This is a statement which shows revenues, expenses, gains, and losses; it does not show cash receipts (money you receive) nor cash disbursements (money you pay out).

The income statement is important because it shows the profitability of a company during the time interval specified in its heading. The period of time that the statement covers is chosen by the business and will vary.

For example, the heading may state: "For the **Three Months Ended December 31, 2011**" (The period of October 1 through December 31, 2011) or "**The Four Weeks Ended December 27, 2011**" (The period of November 29 through December 27, 2011.)"**The Fiscal Year Ended June 30, 2012**" (The period of July 1, 2011 through June 30, 2012). From this it is clear that Income Statement can be prepared for a day, week, month etc based on the need of the business owner.

$$Profit = Total\ Sales\ Revenue - Total\ Sales\ Expenses$$

Look at the following examples:

Example 1:

Suman has started selling bed sheets from her own house. She purchases 25 bed sheets from a wholesale dealer @ Rs. 100/- per bed sheet and selling @ Rs. 200/- per bed sheet. She spent Rs. 500/- for advertisement. You have to calculate her income by preparing an income statement.

Example 2:

If Suman sells only 20 bed sheets out of 25 bed sheets purchased, what will her income statement look like?

The Income Statement for the above two examples are as shown below:

			Example 1			Example 2	
		Qty	Rate	Total	Qty	Rate	Total
Sales	A	25	200	5,000	20	200	4,000
Cost of Goods Sold (Variable Cost)	B	25	100	2,500	20	100	2,000
Gross Profit	C=A-B		100	2,500		100	2,000
Fixed Cost	D			500			500
Profit Before Tax	E=C-D			2,000			1,500

In example 1:

Suman purchases 25 bed sheets at a rate of Rs. 100/- per bed sheet. So in the "Quantity" column and "Cost of Goods Sold" row we have to enter 25 and enter 100 in the "Rate" column.

Hence the total cost of goods sold for 25 bed sheets is 25 x Rs. 100 = Rs. 2,500/-. So enter Rs. 2,500/- in the "Total" Column for cost of goods sold.

Now she is selling all the bed sheets at a price of Rs. 200/- for one bed sheet. So in the "Rate" column and "Sales" row enter 200 in the "Rate" column and 25 in the 'Quantity" column.

Hence the total Sales will be 25 x Rs.200 = Rs. 5,000/-. So enter 5,000 in the "Total" column.

$$Gross\ Profit = Total\ Sales - Total\ Cost\ of\ Goods\ Sold$$

$$= Rs.5{,}000 - Rs.2{,}500$$

$$= Rs.2{,}500/-$$

Enter Rs. 2,500/- in the "Total Gross Profit" column.

Now, observe that Suman has spent Rs. 500/- for advertisement. This falls under Fixed Cost. This is the cost for running the business. So in the Fixed Cost row and "Total" column, enter 500.

Now to see what her profit before tax is, we have to subtract the fixed cost from the Total Gross profit.

$$\boldsymbol{Profit\ Before\ Tax = Gross\ Profit - Fixed\ Cost}$$

$$PBT = 2{,}500/-500/-$$

$$PBT = 2{,}000/-$$

Hence her Profit Before tax will be Rs. 2,000/-.

Let's consider example 2:

Here Suman sells only 20 bed sheets for Rs. 200/- per bed sheet.

So in the "Cost of Goods Sold' row and in "Quantity" column enter 20 and in the "Rate" column enter 100. So the total cost of goods sold will be 20 x 100 = 2000. In the "Total" column enter 2,000.

In the "Sales" row and in the "Quantity" column enter 20 and in the "Rate' column enter 200. So the total sales will be 20 x 200 = 400. So enter 400 in the "Total Sales" column.

Fixed cost remains the same as Rs 500/-

Now the Gross Profit will be (Total Sales) - (Total Cost of Goods Sold)

= Rs. 4000 - Rs. 2000

= Rs. 2,000/-

So enter 2,000 in the "Total Gross Profit" column

Now, her income will be the (Total Gross Profit) – (Total Fixed Cost)

=Rs. 2000 - Rs 500

= Rs. 1500/-.

Hence her Profit before Tax will be Rs. 1500/-.

Income statement is also called as Profit and Loss statement. It describes the various expenses, revenues, gains and losses of a particular duration. By looking at the Income Statement one can find out whether the organization is making profit or running at a loss. Income Statement does not show you the cash transactions or cash flow.

Worksheet:

1) Fill in the blanks using the options given below:

a) Income Statement is also referred as ----------.

b) Income Statement does not show ---------- transactions

c) It shows the ----------of the company for a specified duration.

d) Profit is a financial benefit that is realized when the amount of ---------- gained from a business activity exceeds the ----------, ---------- and ---------- needed to sustain the activity.

e) Profit is calculated as the difference between ---------- and ----------.

(cash, taxes, revenue, costs, expenses, Profit and Loss Statement, profitability, total expenses, total revenue)

2) Following story "Savitha Sari Shop" can be used as exercise both for Income Statement and Cash Flow Projections.

Savitha Sari Shop

Savitha conducted a survey in her neighborhood and was convinced that there was an opportunity to start a Sari Shop.

She plans to bring saris from Surat and sell it to her clients.

She has decided on the types of saris that could sell for Rs. 250/- per piece. She will be able to get these saris at Rs. 125/- per piece. The packing of each sari will cost Rs. 12.50/-.

She wants to employ two sales staff (shop sale as well as door to door and office sale) at a salary of Rs. 1,000/- each per month. She will also be working in the business and take salary of 1,000/- per month. The sales staff will earn commission @ 10% on sales. The freight for saris from Surat works out to Rs. 12.50/- per sari.

The front portion of her house, which was rented at Rs. 1,500/- per month is now vacant. She will do this up with proper lighting, painting etc. She also wants to put proper seating, cupboards and show –cases to exhibit her products.

Cost of all the furniture, painting, lighting etc is Rs. 90,000/- (Quotations from vendors). She has Rs. 20,000/- of her savings, which she will invest in this business. Besides, she has convinced her bankers about the profitability of the business and has been assured of a loan of Rs. 100,000/- at 12% interest per annum. For the first 12 months, only interest will be payable. Repayment will start thereafter.

Supplier from Surat sends goods once a month. Savitha has to forecast her sale for the following month and buy the goods by paying cash.

Savitha knows very well that cash is the blood in business and hence plans to be very cautious about credit sales.

Monthly utility bill is expected to be the average of Rs. 500/-, phone bill Rs. 500/- and various other office expenses (including publicity) estimated around Rs. 1,000/- per month.

Projected Sales for six months are as shown:

Month	1	2	3	4	5	6	7
Total saris sold in quantity	72	84	100	120	152	192	192
Cash sale in quantity	60	68	80	100	128	160	160
Credit sale in quantity	12	16	20	20	24	32	32

Cash sale rupees	15,000	17,000	20,000	25,000	32,000	40,000	
Credit sale rupees	3,000	4,000	5,000	5,000	6,000	8,000	

Money from Credit Sales comes in the following month.
Please prepare a projected monthly Income Statement for Savitha Sari Shop in the format shown here:

Savitha sari shop	**Income Statement**							
		Mth 1	**Mth 2**	**Mth 3**	**Mth 4**	**Mth 5**	**Mth 6**	**Total**
Sales revenue (rs.)								
Cash								
Credit								
Total sales	**A**							
Cost of goods sold								
Raw material								
Packing material								
Sales commission								
Freight								
Total cog (variable cost)	**B**							
Gross profit	**C=A-B**							
Fixed expenses								
Salary								
Rent								
Utilities								
Interest								
Phone								
Office exp								
Depreciation								
Total fixed expenses	**D**							
Profit/(loss) b4 tax	**E=C-D**							
Cumulative profit/loss								

Cash Flow Projections

"Profits are an opinion, cash is a fact". ***– Unknown***

Cash Flow

Cash flow refers to the movement of money in and out of a business during a specific period of time. It is a record of company's inflows and outflows. Cash inflow is the movement of money into a business and cash outflow is the movement of money out of a business.

A **Cash Flow Projection** shows how cash is **expected to flow in and out** of your business. For you, it's an important tool for cash management, letting you know when your outlays are too high or when you might want to arrange short term investments to deal with a cash surplus. A Cash Flow Projection will give a much better idea of how much capital investment a business idea needs.

The difference between Cash Flow Projection and Cash Flow Statement: One is for the future and another is historical.

The historical Cash Flow Statement shows how cash has flowed in and out of a business. In other words, it describes the cash inflow and outflow that has occurred in the past. The Cash Flow Projection shows the cash that is anticipated to be generated or expended over a chosen period of time in the future.

The easy and simple way of understanding how to prepare a Cash Flow Projection is by actually preparing one and for this, we can use the "Savitha Sari Shop", story given in the previous section.

Preparing a Cash Flow Projection

Summarizing the points from the story to help prepare the Cash Flow Projection:

- Savitha conducted a survey in her neighborhood and was convinced that there was an opportunity to start a Sari shop.
- She plans to bring saris from Surat and sell it to her clients.
- She has decided on the types of saris, that could sell for Rs. 250/- per piece. She will be able to get the saris at Rs.125/- per piece. The packing of each sari will cost her Rs. 12.50/- each.
- She wants to employ two sales girls (shop sale as well as door to door and office sale) at a salary of Rs. 1,000/- each per month. She will also be working in the business and takes salary of Rs. 1,000/- per month. These sales girls will earn commission of 10% on sales.
- The freight for saris from Surat works out to Rs.12.50/- per sari.
- Front portion of her house, which was rented at Rs. 1,500/- per month is now vacant. She will do this up with proper lighting, painting etc. She also wants to put proper seating, cupboards and showcases to exhibit her products.

- Cost of all the furniture, painting, lighting etc is Rs. 90,000/- (quotations from vendors).This expenditure is to be recovered over 5 years. She has Rs. 20,000/- of her savings, which she will invest in this business. Besides, she has convinced her bankers about the profitability of the business and has been assured of a loan of Rs.100,000/- at 12% interest per annum. For the first 12 months, only interest will be payable. Repayment will start thereafter.
- Supplier from Surat sends goods once a month. Savitha has to forecast her sale for the following month and buy the goods by paying cash.
- Savitha knows very well that cash is the blood in business and hence plans to be very cautious about credit sales.
- Monthly utility bill is expected to be average of Rs. 500/=, phone bill 500/- = and various other office expense (including publicity) estimated around Rs.1,000/- per month.

Projected Sales for six months are as under:

Month	1	2	3	4	5	6	7
Total saris sold	72	84	100	120	152	192	192
Cash sales of saris	60	68	80	100	128	160	160
Credit sales of saris	12	16	20	20	24	32	32
Cash sale rupees	15,000	17,000	20,000	25,000	32,000	40,000	
Credit sale rupees	3,000	4,000	5,000	5,000	6,000	8,000	

- Money from Credit Sales comes in the following month.

These are the facts (or assumptions as the case may be).

Now, Savitha is ready with the following before **starting** the business:

- She has her own money which amounts to Rs. 20,000/-
- She has borrowed a loan of Rs. 1,00,000/- from the bank.
- The front portion of her house, which was rented at Rs. 1,500/- per month is now vacant. She will do this up with proper lighting, painting etc. She also wants to put proper seating, cup boards and show cases to exhibit her products. Cost of all the furniture, painting, lighting etc is Rs. 90,000/-.
- She purchases 72 saris at the rate of Rs. 125/-, which will amount to Rs. 9,000/-.
- She is purchasing packing material for 72 saris at the rate of Rs. 12.50/ per sari, which amounts to Rs. 900/-.
- The freight for saris from Surat works out to Rs.12.50/- per sari.

The Cash Flow Projection for the next six months is to be done using the following format. Solution is provided at the end of the lesson. Try doing it step by step as explained here.

	Mth0	Mth1	Mth2	Mth3	Mth4	Mth5	Mth6
Cash in flow							
Owners equity							
Loan from friends							
Bank loan							
Cash sale receipt							
Credit sale receipt							
Total inflow							
Cash out flow							
Start-up exp							
Assets (tangible and intangible)							
Working capital							
Raw material							
Packing material							
Sales commission							
Freight							
Salary							
Rent							
Utilities							
Interest							
Phone							
Office exp.							
Loan repayment							
Total outflow							
Surplus/(deficit)							
Cumulative surplus/(deficit) or Closing balance							

In the above cash flow projection format, observe that the first column is Month 0. This is all the months put together prior to the actual commencement of the business. Hence it is termed as Month 0.

In this month all the arrangements are done to start the business.

Look at Month 0:

Inflow (money coming into the business)

- Savitha's own money = Rs. 20,0000/-
- Bank Loan = Rs. 1,00,000/-
- Hence Total inflow = Rs. 20,000 + Rs. 1,00,000 = Rs. 1,20,000/-

Outflow (i.e. money going out of the business)

- Expenses for painting, furniture, lighting etc = Rs. 90,000/-
- Purchasing 72 saris = Rs. 9,000/-
- Purchasing packing material for 72 saris = Rs. 900/-
- Freight charges for saris from Surat = Rs. 900/ -
- Total outflow = 9,000 + 900 + 900 = Rs. 10,800/-
- Total inflow was Rs. 1,20,000/- and total outflow is Rs. 1,00,800/-.
- Hence the closing balance = Rs. 1,20,000- 1,00,800 = Rs. 19,200/-

For Month 1:

- Opening balance on the starting of the first month is Rs. 19,200/-

Inflow:

- By selling 60 saris on cash at the rate of Rs. 250/- per sari, which is 60 x 250 = Rs. 15,000/-. Hence the total inflow for Month 1 = Rs. 15,000/-
- The money for the saris sold on credit (125 x 12 = 2,000) will be received in the following month. This **must not be** entered in Month 1.

Outflow:

- Savitha purchases 84 saris at the rate of Rs. 125/- per sari which amounts to 84 x Rs. 125= Rs. 10,500/-.
- She purchase packing material for 84 saris at the rate of 12.5 per sari, which amounts to 84 x Rs. 12.5 = Rs. 1,050/-.
- Now Savitha has to pay sales staff commission on the sales made. In Month 1, the total sales (Cash and Credit) is Rs.18,000/-. Hence, 10% of Rs. 18,000 is Rs.1,800/-.
- The freight for 84 saris will be at the rate of Rs. 12.50 per sari, which will amount to 84 x 12.50= Rs. 1,050/-.

- Now the salary she has fixed is Rs.1,000/ for each sales girl and she also has to pay herself Rs.1,000/- Hence the total salary = Rs. 3,000/-.
- Rent= Rs. 1,000/-
- Utilities=Rs. 500/-
- Interest= Rs. 1,000/- (loan of Rs.1,00,000/- = at 12% interest per annum. For the first 12 months, only interest will be payable).
- Phone = Rs. 500/-
- Other Office expenses= Rs. 1,000/-
- Hence the total outflow for Month 1 will be the sum of all the above

  Rs. 10,500 + Rs. 1,050 + Rs. 1,800 + Rs. 1,050 + Rs. 3,000 + Rs. 500 + Rs. 500 + Rs. 1,000 + Rs. 500 + Rs. 1,000 = Rs. 21,900/-.
- Hence the surplus/deficit for Month 1will be :Total Inflow- Total Outflow

  = Rs. 15,000 – Rs. 21,900 = - Rs. 6,900/-
- Hence there is a deficit of Rs. 6,900/ i.e the outflow is more than the inflow for Month 1.
- Hence the closing balance = Rs. 19,200 - Rs. 6,900= Rs. 12,300/-

Now look at Month 2:

- Opening Balance = Rs. 12,300/-

Inflow:

- Cash received by selling 68 saris at the rate of Rs. 250/- per sari amounts to 68 x Rs. 250 = Rs. 17,000/-
- Cash received in this month from previous month for credit sales= Rs. 3,000/-
- Hence the total inflow = 17,000 + 3,000 = Rs. 20,000/-

Outflow:

- Savitha purchases 100 saris at the rate of Rs. 125/ per sari, which will amount to (100 x 125=12500) Rs. 12,500/-
- She purchases packing material for 100 saris at the rate of Rs.12.50 per sari which will amount to Rs. 1,250/-.
- Now Savitha has to pay the sales commission of 10% of Rs. 21,000/- which will amount to Rs. 2,100/-.
- The freight of 100 saris from Surat at the rate of Rs. 12.50 per sari will amount to 100 x Rs. 12.50 = Rs. 1,250/-.
- The remaining expenses which includes the salary, rent, utilities, interest, phone and office expenses will amount to Rs. 7,500/- (as in the previous month)

- Hence the Total Outflow for Month 2 will be the sum of all the above
- Rs. 12,500 + Rs. 1, 250 + Rs. 2,100 + Rs. 1,250 + Rs. 7,500 = Rs. 24,600/-.
- Hence the surplus/deficit for Month 2 will be = Rs. 20,000 – Rs. 24,600= - Rs. 4,600/-
- Closing balance at the end of month 2 = Rs. 12,300 - Rs. 4,600 = Rs. 7,700/-.

Now look at Month 3

- Opening Balance = Rs. 7,700/-

Inflow:

- Cash received by selling 80 saris at the rate of Rs. 250/- per sari which amounts to 80 x Rs. 250 = Rs. 20,000/-
- Cash received through credit sales from previous month = Rs. 4,000/-.
- Hence Total Inflow for Month 3 = Rs. 20,000 + 4,000 = Rs. 24,000/-

Outflow:

- Savitha purchases 120 saris at the rate of Rs. 125/- per sari, which will amount to 120 x Rs. 125 = Rs. 15,000/-.
- She purchases packing material for 120 saris at the rate of Rs. 12.50 per sari which will amount to Rs. 1,500/-.
- Now Savitha has to pay the sales commission of 10% of Rs. 25,000/- which will amount to Rs. 2,500/-.
- The freight of 120 saris from Surat at the rate of Rs. 12.50/- per sari will amount to 120 x Rs. 12.50 = Rs. 1,500/-.
- The remaining expenses which includes the salary, rent, utilities, interest, phone and office expenses will amount to Rs. 7,500/-
- Hence the Total Outflow for Month 3 will be the sum of all the above
- 15,000 + 1,500 + 2,500 + 1,500 + 7,500 = Rs. 28,000/-
- Month 3 surplus/deficit will be = 24,000 - 28,000 = -4,000/-
- Hence there is a deficit of Rs. 4,000/
- Closing Balance = 7,700 – 4000 = Rs. 3,700/-

Now look at Month 4:

- Opening Balance = Rs. 3,700/-

Inflow:

- Cash received by selling 100 saris at the rate of Rs. 250/ per sari which amounts to 100 x Rs. 250= Rs. 25,000/
- Cash received through credit sales from previous month= Rs. 5,000/-
- Hence Total Inflow for Month 4= Rs. 25,000 + Rs. 5,000 = Rs. 30,000/-

Outflow:

- Savitha purchases 152 saris at the rate of Rs. 125/ per sari, which will amount to 152 x Rs. 125 = Rs. 19,000/-
- She purchases packing material for 152 saris at the rate of Rs.12,50/- per sari which will amount to Rs. 1,900/-.
- Now Savitha has to pay the sales commission of 10% of Rs. 30,000/- which will amount to Rs. 3,000/-
- The freight of 152 saris from Surat at the rate of Rs. Rs. 12.50/- per sari will amount to 152 x Rs. 12.50 = Rs. 1,900/-
- The remaining expenses which includes the salary, rent, utilities, interest, phone and office expenses will amount to Rs. 7,500/-
- Hence the Total Outflow for Month 3 will be the sum of all the above
- Rs. 19,000 + Rs. 1,900 + Rs. 3,000 + Rs. 1,900 + Rs. 7,500 = Rs. 33,300/-
- Surplus/Deficit for Month 4 will be = Rs. 30,000/- Rs. 33,300/- = Rs. 3,300/-
- Hence there is a deficit of Rs. 3,300/- for Month 4.
- Closing Balance = 3,700- 3,300= Rs. 400/-.

Now look at Month 5:

- Opening Balance= Rs. 400/- .

Inflow:

- Cash received by selling 128 saris at the rate of Rs. 250/ per sari which amounts to 128 x Rs. 250= Rs. 32,000/-.
- Cash received through credit sales from previous month= Rs. 5,000/-.
- Hence Inflow for Month 5 = 32,000 + 5,000 = Rs. 37,000/-.

Outflow:

- Savitha purchases 192 saris at the rate of Rs. 125/ per sari, which will amount to 192 x Rs. 125 = Rs. 24,000/-
- She purchases packing material for 192 saris at the rate of Rs.12, 50 per sari which will amount to Rs. 2,400/-.
- Now Savitha has to pay the sales commission of 10% of Rs. 38,000/- which will amount to Rs. 3,800/-
- The freight of 192 saris from Surat at the rate of Rs. 12.50 per sari will amount to 192 x 12.50 = Rs. 2,400/-
- The remaining expenses which includes the salary, rent, utilities, interest, phone and office expenses will amount to Rs. 7,500/-

- Hence the Total Outflow for Month 3 will be the sum of all the above
- Rs. 24,000 + Rs. 2,400 + Rs. 3,800 + Rs. 2,400 + Rs. 7,500 = Rs. 40,100/-
- Month 5 surplus/deficit will be = Rs. 37,000 - Rs. 40,100 = - Rs. 3,100/-
- Hence, there is a deficit of Rs. 3,100/- Month 5.
- Closing Balance = (400 - 3,100= – 2,700) = Rs. 27,00/-.

This means that there will be no money available at the end of month, but complete the projection to see what the total picture is like.

Now look at Month 6:

- Opening Balance (Rs. -2,700/-) i.e. there is deficit of Rs. 2,700/- in opening balance

Inflow:

- Cash received by selling 160 saris at the rate of Rs. 250/- per sari which amounts to 160 x Rs. 250 = Rs. 40,000/-
- Cash received through credit sales from previous month= Rs. 6,000/-
- Hence the total inflow for Month 6= Rs. 40,000 + Rs. 6,000 = Rs. 46,000/-

Outflow:

- Savitha purchases 192 saris at the rate of Rs. 125/- per sari, which will amount to (192 x 125 = 24,000) Rs. 24,000/-.
- She purchases packing material for 192 saris at the rate of Rs.12.50/- per sari which will amount to Rs. 2,400/-.
- Now Savitha has to pay the sales commission of 10% of Rs. 48,000/- which will amount to Rs. 4,800/-.
- The freight of 192 saris from Surat at the rate of Rs. 12.50/- per saris 192 x Rs. 12.50 = Rs. 2,400/-.
- The remaining expenses which includes the salary, rent, utilities, interest, phone and office expenses will amount to Rs. 7,500/-.
- Hence the Total Outflow for Month 3 will be the sum of all of the above
- Rs. 24,000 + Rs. 2,400 + Rs. 4,800 + Rs. 2,400 + Rs. 7,500 = Rs. 41,100/-.
- Hence the surplus/deficit for Month 6 will be = 46,000 - 41,100 = Rs.4,900
- There is a surplus of Rs. 4,900/ for Month 6.
- Closing Balance = (-2,700) + (4,900) = Rs. 2,200/-.

Discussion:

- Preparing a projection, using assumptions and facts, gives Savitha in insight in to what is likely to happen in her business in terms of cash management.
- In this case, she is aware well in advance that during month 5 she is likely to run out of money. She has a better chance of making arrangements for the month 5 now rather than wake-up at the end of month 5 and find out that there is no money to run the business.
- Savitha can handle the projected cash deficit in Month 5 by taking one or more of the following actions- faster collection, requesting credit from sari supplier, postponing her own salary and/or rent, requesting short term loan from friends etc.

6 Month Cash Flow Projections

Savith's Sari Shop	**Cash Flow**						
	Mth0	**Mth1**	**Mth2**	**Mth3**	**Mth4**	**Mth5**	**Mth6**
CASHINFLOW							
Owner's Equity	20,000						
Loan from Friends							
Bank Loan	100,000						
Cash Sale Receipt		15,000	17,000	20,000	25,000	32,000	40,000
Credit Sale Receipt			3,000	4,000	5,000	5,000	6,000
Total In flow	**120,000**	**15,000**	**20,000**	**24,000**	**30,000**	**37,000**	**46,000**
CASH OUT FLOW							
Start-up Exp							
Assets (Tangible and Intangible) Working Capital	90,000						
Raw Material	9,000	10,500	12,500	15,000	19,000	24,000	24,000
Packing Material	900	1,050	1,250	1,500	1,900	2,400	2,400
Sales Commission		1,800	2,100	2,500	3,000	3,800	4,800
Freight	900	1,050	1,250	1,500	1,900	2,400	2,400

Salary		3,000	3,000	3,000	3,000	3,000	3,000
Rent		1,500	1,500	1,500	1,500	1,500	1,500
Utilities		500	500	500	500	500	500
Interest		1,000	1,000	1,000	1,000	1,000	1,000
Phone		500	500	500	500	500	500
Office Exp		1,000	1,000	1,000	1,000	1,000	1,000
Loan Repayment							
Total Out flow	**100,800**	**21,900**	**24,600**	**28,000**	**33,300**	**40,100**	**41,100**
Surplus/(Deficit)	**19,200**	**(6,900)**	**(4,600)**	**(4,000)**	**(3,300)**	**(3,100)**	**4,900**
Cumulative Surplus/(Deficit) or Closing Balance	**19,200**	**12,300**	**7,700**	**3,700**	**400**	**(2,700)**	**2,200**

SUMMARY

- *Cash Flow Projection helps an entrepreneur manage the money better.*
- *It gives a much better idea of how much capital investment the business idea needs.*
- *The best way to manage money is to develop the habit of doing weekly cash flow projections for the business.*

Break Even Analysis – for a single product or service

"The worst crime against working people is a company which fails to operate at a profit" - **Samuel Gompers**

Why are we in Business?

Main economic motive for starting a business is to earn profit. That is the objective. Now, one needs to have a goal in mind in achieving this objective – How much profit do I need to make and by when should I make it?

Majority of the businesses do not make profit from day one. Some take longer while others do it quicker – all depends on the business model, type of industry and many other factors. This period of not making any profit is known as the gestation period.

Everyone understands that, generally speaking, more sales (quantity) means more revenue and hence chances of profit or higher profit. However, certain quantification is needed for this to be useful information. How much should one sell if one needs to avoid losses, how much to sell for making "**X**" amount of profit etc are all important questions.

Break Even Point

A business's break-even point is the amount or level of sales or revenues that it must generate in order to equal its expenses. In other words, it is the point at which the company neither makes a profit nor suffers a loss. Calculating the break-even point (through break-even analysis) can provide a simple, yet powerful quantitative tool for managers. In its simplest form, break-even analysis provides insight into whether or not revenue from a product or service has the ability to cover the relevant costs of production of that product or service. Entrepreneurs can use this information in making a wide range of business decisions, including setting prices, preparing competitive bids, and applying for loans. It also helps in Profit Planning and Goal setting.

At the break even level,

Total Revenue= Total Expenses

The formula for calculating break even level is:

$$\text{Break Even Volume (Per Month)} = \frac{\textbf{Fixed Cost (Per month)}}{\textbf{Gross Margin Per Unit}}$$

Let us understand this further through a simple example of Ram and his tea vending business considering the following facts or assumptions:

- Ram, who was earlier working in a restaurant, has now decided to start a tea vending business. He was getting Rs. 300/- per day as his wages, while working in the restaurant.
- Ram is thinking in terms of a mobile hand cart for his tea vending business, which he will take around to the various construction sites in the given locality and during day light only.
- Before starting the business he needs to buy vessels, cart, stove, fuel, strainer, thermos flask etc. for which he needs Rs. 12,000/-.
- He will need to buy the initial supply of milk, sugar, cups, tea leaves for which he will need around Rs. 1,000/-.
- Ram had Rs. 1,000/- which he used for buying various consumable items. He borrowed Rs. 12,000/- from a friend and agreed to pay him Rs. 4/- per day as interest. (approximately 12% per annum).
- The cost of producing tea from one litre milk for Ram is as shown below:

One Litre Milk	=	Rs. 30/-
Two Litre Water	=	Rs. 2 /-
Sugar (300 gms)	=	Rs. 30 /-
Tea leaves (100 gms)	=	Rs. 20 /-
Fuel	=	Rs. 2 /-
Total	**=**	**Rs. 84 /-**

- From this, Ram will be able to get 30 cups of 100ml quantity. Now we also have to consider the wastage aspect where there will be evaporation while boiling water and milk, there may be spillage etc. Hence, the actual number of cups of tea, which can be made from one litre of milk will come down to 28 cups. Which means it costs Rs. 3/- per cup (84 divided by 28)
- Each disposable cup costs 50 paise.
- So, the unit cost will be Rs. 3.50/- per cup.
- Ram has surveyed the place and finds that all similar vendors are charging Rs.5/- per cup. He also decides to sell his tea at Rs.5/- per cup.
- The Gross Profit or Margin per cup is Rs.1.5/- (= 5.00- 3.50).
- Ram employs a helper on a daily wage of Rs. 99/-. He pays no rent but Rs. 10/- per day of protection money to be able to do business in that area. He pays interest of Rs. 4/- per day. Also his own wages of Rs. 300/- per day.
- Ram knows that he needs to recover the initial investment of Rs. 12,000/- over a period of time. He decides to do this over 5 years or 60 months. This translates to approximately Rs. 7/- per day.
- Total fixed costs per day for Ram are: (Rs. 300 + Rs. 99 + Rs. 10 + Rs. 4 + Rs. 7) = Rs. 420/-.

The following is the Income Statement of Ram's Tea Vending Business:

Ram's Tea Vending Business: Income Statement

		Day 1	Day 2	Day 3	Day 4
Number of Cups Sold		200	280	500	1,000
Sales Revenue at Rs.5/- a cup	A	1,000	1,400	2,500	5,000
Cost of Goods Sold (Variable Cost) at Rs. 3.5/ a cup	B	700	980	1,750	3,500
Gross Margin	C=A-B	300	420	750	1,500
Fixed Expenses					
Helper Wage		99	99	99	99
Own Wage		300	300	300	300
Interest		4	4	4	4
Rent (Protection Money)		10	10	10	10
Depreciation		7	7	7	7

Total Fixed Expenses	**D**	**420**	**420**	**420**	**420**
Profit/(Loss) before tax	**E= C-D**	**(120)**	**0**	**330**	**1,080**

In the above Income Statement we observe that:

- On Day 1, Ram sells 200 cups, the Gross Margin is Rs 300/- and Total Fixed Expenses is Rs. 420/-. So on the first day there is a loss of Rs. 120/.
- On Day 2 , Ram sells 280 cups, the Gross Margin is 420 and Total Fixed Expenses is Rs. 420/-. So on the second day, there is neither a loss nor profit, because total revenue is equal to the total expenses.
- At the level of sales of Day 2, Ram breaks even (no profit or loss). **This is 280 cups per day.**

To calculate the breakeven point:

$$\text{Break even volume (per day)} = \frac{\text{Fixed Cost (per day)}}{\text{Gross Margin per Unit}}$$

$$\text{Break even volume (per day)} = \frac{420}{1.50}$$

$$= 280$$

Break even level for Ram is 280 cups per day.

Target Setting:

Let us assume that Ram has a goal of achieving a daily profit of Rs.600/-. What should his sales target be?

- Expected Profit per day = Rs. 600/-
- Fixed Cost per day = Rs. 420/-

Total = Rs. 1,020/-

Gross Margin per Cup = Rs. 1.50/-

$$\text{Sales Target/Day} = \frac{\text{Fixed Cost (per day) + Expected Profit (per day)}}{\text{Gross Margin per Unit}}$$

Number of cups to be sold = Rs. 1,020/1.50 = **680 cups per day**

SUMMARY

- *In this chapter we have learnt about Break Even Point.*
- *For an entrepreneur, Break Even Point is very critical because by knowing the Break Even Point you can begin to set targets.*
- *Break Even Point is expressed as quantity for a period (day, week, month etc)*

Worksheet

Fill in the blanks using the options below

1. A business's break-even point is the amount or level of ---------- that it must generate in order to equal its ----------.
2. At the break-even level ---------- is equal to the total expenses.
3. Break even volume per month is equal to ----------/----------.
4. The business is at neither---------- nor ----------, when it is at break even point.

(Fixed cost per month, profit, sales or revenues, loss, expenses, total revenue, gross margin per unit, income, fixed cost**).**

Taxes

In this world nothing is certain but death and taxes. - Benjamin Franklin

What are Taxes and who levies them?

A **tax** (from the Latin *taxo*; "I estimate") is a financial charge or other levy imposed upon a taxpayer (an individual or legal entity) by a state or the functional equivalent of a state such that failure to pay is punishable by law. It can also be explained as a fee charged or ("levied") by a government on a product, income, or activity.

The government needs money to operate, and taxes are a way for it to get this money. This money goes to fund many different types of programs. It may be used to fix roads and bridges. It may be used to pay for the military. It may be used to help your own education!

Why do Governments levy taxes?

The Governments levy and collect taxes so as to later spend it for social welfare in the form of public expenditure like laying roads, providing social service, paying government workers, and providing other social amenities.

Why and How Much to Learn about Taxes?

The purpose of the lesson is not to make you an expert on taxation. That is totally a different field of expertise. However, as an entrepreneur, one needs to know some fundamentals and what the obligations are:

1. In business one might be required to act as a collection agent for the government and collect taxes from employees, service providers, vendors, customers/clients etc.
2. As a businessman/women one might have to pay taxes on purchases, sales and services (sales tax or Vat, service tax, excise or etc). If one is importing raw material, then Customs duty and related items need to be paid and included in the cost of goods sold.
3. For an export house the duty paid on any imported material may be eligible for Duty Draw Back. In this case, one does not include the custom duty in the cost of goods sold.

The details (quantum, exemption, exceptions etc) of the taxes levied by the government are too many and they keep changing every year based on the government budget. So as an entrepreneur, one should take expert guidance on these matters. One should however be clear in mind as to which taxes one is collecting on behalf of the government, which ones form part of the cost (whether variable or fixed) and which ones come out of the profit.

Types of Tax:

There are fundamentally two types of taxes: **Direct Tax** and **Indirect Tax.**

Direct Tax:

- A Direct tax is a kind of charge, which is imposed directly on the taxpayer and paid directly to the government by the persons (legal or natural) on whom it is imposed.
- A direct tax is one that cannot be shifted by the taxpayer to someone else.
- Direct Taxes are levied directly on income, capital value, wealth, corporate assets.

The following are some Direct Taxes:

Income Tax:

Income tax is an annual tax on income (profit). Rates and other details vary based on whether sole proprietor, partnership or corporation. This is charge on the profit and cannot be included in your costs. That is why we have "income before tax" and "income after tax" terms in the income statement.

Corporation Tax:

Corporation tax is a tax levied on the Income (Profit) of the Domestic Company or Foreign Company.

Property Tax:

Property tax or 'house tax' is a local tax on buildings, along with the belonging land, and imposed on owners.

Indirect Tax:

- If tax is levied on the **price** of a good or **service**, then it is called an **indirect tax**, like service tax, sales tax or VAT, central excise tax, custom duty etc.

- An indirect tax is a tax collected by an intermediary (such as a retail store) from the person who bears the ultimate economic burden of the tax (such as the customer).
- An indirect tax is one that can be shifted by the taxpayer to someone else. In other words, it can be included as a cost element in computation.

Some important indirect taxes imposed in India are as under:

- Customs Duty
- Central Excise Duty
- Service Tax
- Sales Tax or VAT (Value Added Tax)

SUMMARY

- *In this chapter we learnt about the two types of taxes and the purpose for which the government levies taxes.*
- *There are Direct Taxes and Indirect Taxes*
- *Direct Taxes are paid directly by the person to the government (The entrepreneur may be collection agent)*
- *Indirect taxes are the taxes paid indirectly like while purchasing a product etc.*
- *The government mainly collects taxes in order to provide public welfare.*

Worksheet

Fill in the blanks using the options given below:

1. A ----------is one that cannot be shifted by the taxpayer to someone else, whereas an ---------- can be.
2. ---------- or ---------- is a local tax on buildings, along with the belonging land, and imposed on owners.
3. If tax is levied on the price of a good or service, then it is called an ----------
4. Governments collect taxes so as to collect revenue and later spend it for ----------
5. Income tax, Wealth tax and Corporate Assets tax are examples of ----------

(Property tax, indirect tax, direct tax, revenue, social welfare, income tax)

Q.1. Answer the following in about 15 words.

(i) What do you mean by Unit of Sale?

(ii) What do you mean by Gross Profit?

(iii) "*When you sell your product but the buyer does not pay your money immediately*" It is known as?

Q.2. Answer the following in about 50 words

(i) Give 4 examples of Fixed Costs.

(ii) Give 2 examples of Start-up Cost.

(iii) Give four examples of Inflow and Outflow of cash.

(iv) What do you mean by Cash Inflow and Cash Outflow?

Q.3. Answer the following in about 75 words

(i) Give one difference between Direct Tax and Indirect tax.

(ii) Why motive of Business is to learn profit and not Loss?

(iii) Give one different between Cash flow and Income statement.

(iv) What do you mean by Non Cash Expenses?

(v) What do you mean by Startup Cost?

(vi) Explain Cost, Expenses and Expenditure.

(vii) What is a Cash Register? Why is it important for any business?

Q.4. Answer the following in about 150 words.

(i) Why do we pay taxes?

(ii) What do you mean by Break Even Point?

(iii) How much profit can we earn? Is there any policy of the Government for Maximum Profit earning?

(iv) A company makes a product with a selling price of Rs.20 per unit and variable costs of Rs. 12 per unit. The fixed costs for the period are Rs. 40,000/. What is the required output level to make a target profit of Rs. 0,000/-.

(v) Identify the following items as inflow/outflow. Also give reason for your choice.

a. raw material
b. depreciation
c. machinery purchased
d. loan from bank
e. equity shares issued
f. excise duty paid
g. profit on sale of asset
h. interest received on investments

vi) What is 'Startup Cost'? Identify the areas for requirement of Startup Cost.

Q.5. Answer the following in about 250 words

(i) Define the term 'break-even'.

(ii) Explain why break-even analysis is of reduced value to a multi-product firm?

Analyse the factors that any business should take into consideration before using break-even analysis as a basis for decision making.

Q.6. HOTS: (High Order Thinking)

i). The following information relates to a company, which produces a single product.

Direct labour per unit	Rs. 22/-
Direct materials per unit	Rs.12/-
Variable overheads per unit	Rs.6/-
Fixed costs	Rs. 4, 00,000/-
Selling price per unit	Rs. 60/-

Use the figures above to show the minimum number of units that must be sold for the company to break even.

ii). Distinguish between:

(i) Unit Cost and Unit Price

(ii) Expenses and Expenditure

(iii) Fixed Cost and Variable Cost

(iv) 'Profit is not to be considered as inflow'. Comment with apt reason.

Q.7. Application based exercise:

i) Take a business of your choice, now list the all things under Start-up, variable and fixed cost for it. Is it possible to make a change in anything from a variable cost to fixed cost, if yes list it.

Activities:

1. Finance is one of the most important factor of any business, managing finances is also an important life skill. Planning for managing finance and taking right decision while investing the money is winning half the battle. Take a business of your choice, now list the all things under Start-up, variable and fixed cost for it. Is it possible to make a change in anything from a variable cost to fixed cost, if it is possible, list it.
2. Until fifty years ago, farmers around the world tended to grow the crops they wanted to eat, and enough extra to sell for the things they needed. Then science and farming mixed to create this thing called the Green Revolution which helped to increase the production and hence the export of items. Prepare a presentation on how revolutions or inventions helped in trade.
3. There are 3 components of cost of any product, namely; Startup cost, Variable cost and Fixed cost. Given here are items required to start and run a chocolate factory. Tabulate the given costs in three basic types and also give reason for qualifying a particular item in that category.

Chocolate Bar (Raw)	Nuts and dry fruits; Rice crisps	Moulds	Gas stove	Gas Cylinder
Refrigerator	Double Boiler	Spoons and Cutlery	Water	Packing Material
Kitchen Accessories	Staff	Electricity	Working Space	Labour
Advertisement	Selling Expenses	Washing area	Working Table	Vehicle for delivery

(On the same lines, the students can be asked to make a list of any Business of their choice)

5. Given below are some economic activities. Segregate these as Manufacturing, Trading, Services provided.

Coaching Institute	Beauty Parlor	Tiffin Service	Dabbawallas of Mumbai	A florist
Dairy Farms	Legal Consultancy	Doctor	School	KFC outlet
Banquet Halls	SPA and Gyms	Poultry Farms	Rent a Costume	Bakery