**Business Economics**

**Supply**

In economics, supply is the amount of a resource that firms, producers, labourers, providers of financial assets, or other economic agents are willing and able to provide to the marketplace or directly to another agent in the marketplace. Supply can be in currency, time, raw materials, or any other scarce or valuable object that can be provided to another agent. This is often fairly abstract. For example in the case of time, supply is not transferred to one agent from another, but one agent may offer some other resource in exchange for the first spending time doing something. Supply is often plotted graphically as a supply curve, with the quantity provided (the dependent variable) plotted horizontally and the price (the independent variable) plotted vertically.

In the goods market, supply is the amount of a product per unit of time that producers are willing to sell at various given prices when all other factors are held constant. In the labor market, the supply of labor is the amount of time per week, month, or year that individuals are willing to spend working, as a function of the wage rate.

In financial markets, the money supply is the amount of highly liquid assets available in the money market, which is either determined or influenced by a country's monetary authority. This can vary based on which type of money supply one is discussing. M1 for example is commonly used to refer to narrow money, coins, cash, and other money equivalents that can be converted to currency nearly instantly. M2 by contrast includes all of M1 but also includes short-term deposits and certain types of market funds.

**Factors affecting supply**

Innumerable factors and circumstances could affect a seller's willingness or ability to produce and sell a good. Some of the more common factors are:

Good's own price: The basic supply relationship is between the price of a good and the quantity supplied. Although there is no "Law of Supply", generally, the relationship is positive, meaning that an increase in price will induce an increase in the quantity supplied.

Prices of related goods: For purposes of supply analysis related goods refer to goods from which inputs are derived to be used in the production of the primary good. For example, Spam is made from pork shoulders and ham. Both are derived from pigs. Therefore, pigs would be considered a related good to Spam. In this case the relationship would be negative or inverse. If the price of pigs goes up the supply of Spam would decrease (supply curve shifts left) because the cost of production would have increased. A related good may also be a good that can be produced with the firm's existing factors of production. For example, suppose that a firm produces leather belts, and that the firm's managers learn that leather pouches for smartphones are more profitable than belts. The firm might reduce its production of belts and begin production of cell phone pouches based on this information. Finally, a change in the price of a joint product will affect supply. For example, beef products and leather are joint products. If a company runs both a beef processing operation and a tannery an increase in the price of steaks would mean that more cattle are processed which would increase the supply of leather.

Conditions of production: The most significant factor here is the state of technology. If there is a technological advancement in one good's production, the supply increases. Other variables may also affect production conditions. For instance, for agricultural goods, weather is crucial for it may affect the production outputs. Economies of scale can also affect conditions of production.

Expectations: Sellers' concern for future market conditions can directly affect supply. If the seller believes that the demand for his product will sharply increase in the foreseeable future the firm owner may immediately increase production in anticipation of future price increases. The supply curve would shift out.

Price of inputs: Inputs include land, labor, energy and raw materials.If the price of inputs increases the supply curve will shift left as sellers are less willing or able to sell goods at any given price. For example, if the price of electricity increased a seller may reduce his supply of his product because of the increased costs of production.[6] Fixed inputs can affect the price of inputs, and the scale of production can affect how much the fixed costs translate into the end price of the good.

Number of suppliers: The market supply curve is the horizontal summation of the individual supply curves. As more firms enter the industry, the market supply curve will shift out, driving down prices.

Government policies and regulations: Government intervention can have a significant effect on supply.Government intervention can take many forms including environmental and health regulations, hour and wage laws, taxes, electrical and natural gas rates and zoning and land use regulations.

**Supply Schedule**

The Law of Supply states that when the price of a commodity falls, its supply decreases and when the price of a commodity rises, its supply increases; other things remaining constant. Supply refers to the amount of quantity that a firm is willing to produce or offer for sale in the market. Supply schedule can be defined as a relation between the price of goods or services versus and the number of goods supplied. Now let us discuss the Supply Schedule in detail.

Joe grew tomatoes on his farm and sold 50 of them in one lot for $10 each. For each lot he incurred costs of around $8, making a $2 profit on each lot. He later learned from another farmer, Zac, that growing potatoes and selling them was more profitable due to increase in its demand in the market.

Zac told Joe that he could earn $20 for selling a lot of 100 potatoes with a profit of around $10 for each lot. This appeared significantly profitable to Joe as he could earn $8 more in profit on this new product. Joe started growing potatoes on his farm, which had the capacity of growing maximum of 100 potatoes. He thinks the demand for his potatoes will increase and consumers will be willing to pay $25 per lot of potatoes. Looking at his supply schedule, Joe is willing to produce 125 potatoes at this price, but he is limited by his farm.

Currently, no matter how much he can charge for his potatoes, he can only produce 100 potatoes. Therefore, he is required to invest more capital to purchase another piece of land to expand his production and take advantage of this growing market.

**Individual Supply Schedule**

This type of supply schedule focuses on a single firm’s produce relative to the price of that product. This means that it keeps track of the price of each unit of a commodity and also the quantity of the commodity that the company supplies. Below is an example of an individual supply schedule.

Price per unit of product X (Px) Quantity supplied of product X (Dx)

100 1,000

200 2,000

300 3,000

400 4,000

500 5,000

The above chart demonstrates the impact of higher prices on the supply where higher prices are characterized by higher quantity supplied as supplies aim to take advantage of the higher prices so that they can earn more. The reverse is also true where the lower the prices of a commodity, the lower the supply.

**Market Supply Schedule**

This is where different individual supply schedules are combined so that they can demonstrate the relationship between commodities supplied to different customers and the price. This option is also called the aggregate supply schedule. Below is an example of a market supply schedule.

Price per unit of product X (Px) Quantity supplied by Company A (Qa) Quantity supplied by Company B (Qb) Market Supply (Qa + Qb)

100 1,000 3,000 4,000

200 2,000 4,000 6,000

300 3,000 5,000 8,000

400 4,000 6,000 10,000

500 5,000 7,000 12,000

Data compiled in a supply scheduled can be used to create a supply chart where the supply curve can be plotted. Such a graph would be used to demonstrate how different price levels would affect the quantity supplied to the market. Supply and demand curves are usually plotted together and so economists can use this approach to identify a market equilibrium point.

**price elasticity of supply**

The **price elasticity of supply** (**PES** or **Es**) is a measure used in [economics](https://en.wikipedia.org/wiki/Economics) to show the responsiveness, or [elasticity](https://en.wikipedia.org/wiki/Elasticity_of_a_function), of the quantity supplied of a good or service to a change in its price.

The elasticity is represented in numerical form, and is defined as the percentage change in the quantity supplied divided by the percentage change in price.

When the elasticity is less than one, the supply of the good can be described as *inelastic*; when it is greater than one, the supply can be described as *elastic*.[[1]](https://en.wikipedia.org/wiki/Price_elasticity_of_supply#cite_note-png-1) An elasticity of zero indicates that quantity supplied does not respond to a price change: the good is "fixed" in supply. Such goods often have no labor component or are not produced, limiting the [short run](https://en.wikipedia.org/wiki/Long_run_and_short_run#Short_run) prospects of expansion. If the elasticity is exactly one, the good is said to be *unit-elastic*.

The quantity of goods supplied can, in the short term, be different from the amount produced, as manufacturers will have stocks which they can build up or run down.

**FACTORS**

Availability of raw materials

For example, availability may cap the amount of gold that can be produced in a country regardless of price. Likewise, the price of Van Gogh paintings is unlikely to affect their supply.

Length and complexity of production

Much depends on the complexity of the production process. Textile production is relatively simple. The labour is largely unskilled and production facilities are little more than buildings – no special structures are needed. Thus the PES for textiles is elastic. On the other hand, the PES for specific types of motor vehicles is relatively inelastic. Auto manufacture is a multi-stage process that requires specialized equipment, skilled labour, a large suppliers network and large R&D costs.

Mobility of factors

If the factors of production are easily available and if a producer producing one good can switch their resources and put it towards the creation of a product in demand, then it can be said that the PES is relatively elastic. The inverse applies to this, to make it relatively inelastic.

Time to respond

The more time a producer has to respond to price changes the more elastic the supply. Supply is normally more elastic in the long run than in the short run for produced goods, since it is generally assumed that in the long run all factors of production can be utilised to increase supply, whereas in the short run only labor can be increased, and even then, changes may be prohibitively costly. For example, a cotton farmer cannot immediately (i.e. in the short run) respond to an increase in the price of soybeans because of the time it would take to procure the necessary land.

Inventories

A producer who has a supply of goods or available storage capacity can quickly increase supply to market.

Spare or excess production capacity

A producer who has unused capacity can (and will) quickly respond to price changes in his market assuming that variable factors are readily available. The existence of spare capacity within a firm, would be indicative of more proportionate response in quantity supplied to changes in price (hence suggesting price elasticity). It indicates that the producer would be able to utilise spare factor markets (factors of production) at its disposal and hence respond to changes in demand to match with supply. The greater the extent of spare production capacity, the quicker suppliers can respond to price changes and hence the more price elastic the good/service would be.

Various research methods are used to calculate price elasticities in real life, including analysis of historic sales data, both public and private, and use of present-day surveys of customers' preferences to build up test markets capable of modelling elasticity such changes. Alternatively, conjoint analysis (a ranking of users' preferences which can then be statistically analysed) may be used.

Monopolistic competition



Short-run equilibrium of the firm under monopolistic competition. The firm maximizes its profits and produces a quantity where the firm's marginal revenue (MR) is equal to its marginal cost (MC). The firm is able to collect a price based on the average revenue (AR) curve. The difference between the firm's average revenue and average cost, multiplied by the quantity sold (Qs), gives the total profit.



Long-run equilibrium of the firm under monopolistic competition. The firm still produces where marginal cost and marginal revenue are equal; however, the demand curve (MR and AR) has shifted as other firms entered the market and increased competition. The firm no longer sells its goods above average cost and can no longer claim an economic profit.

Monopolistic competition is a type of [imperfect competition](https://en.wikipedia.org/wiki/Imperfect_competition) such that many producers sell products that are [differentiated](https://en.wikipedia.org/wiki/Differentiation_%28economics%29) from one another (e.g. by branding or quality) and hence are not perfect [substitutes](https://en.wikipedia.org/wiki/Substitute_good). In monopolistic competition, a firm takes the prices charged by its rivals as given and ignores the impact of its own prices on the prices of other firms. In the presence of coercive government, monopolistic competition will fall into [government-granted monopoly](https://en.wikipedia.org/wiki/Government-granted_monopoly). Unlike [perfect competition](https://en.wikipedia.org/wiki/Perfect_competition), the firm maintains spare capacity. Models of monopolistic competition are often used to model industries. Textbook examples of industries with market structures similar to monopolistic competition include [restaurants](https://en.wikipedia.org/wiki/Restaurants), [cereal](https://en.wikipedia.org/wiki/Cereal), [clothing](https://en.wikipedia.org/wiki/Clothing), [shoes](https://en.wikipedia.org/wiki/Shoes), and service industries in large cities. The "founding father" of the theory of monopolistic competition is [Edward Hastings Chamberlin](https://en.wikipedia.org/wiki/Edward_Hastings_Chamberlin), who wrote a pioneering book on the subject, Theory of Monopolistic Competition (1933). [Joan Robinson](https://en.wikipedia.org/wiki/Joan_Robinson) published a book The Economics of Imperfect Competition with a comparable theme of distinguishing perfect from imperfect competition.

Monopolistically competitive markets have the following characteristics:

There are many producers and many consumers in the market, and no business has total control over the market price.

Consumers perceive that there are non-price differences among the competitors' products.

There are few [barriers to entry](https://en.wikipedia.org/wiki/Barriers_to_entry) and exit.

Producers have a degree of control over price.

The principal goal of the firm is to maximize its profits.

Factor prices and technology are given.

A firm is assumed to behave as if it knew its demand and cost curves with certainty.

The decision regarding price and output of any firm does not affect the behavior of other firms in a group,i.e., impact of the decision made by a single firm is spread sufficiently evenly across the entire group. Thus, there is no conscious rivalry among the firms.

Each firm earns only normal profit in the long run.

Each firm spends substantial amount on advertisement. The publicity and advertisement costs are known as selling costs.

The long-run characteristics of a monopolistically competitive market are almost the same as a perfectly competitive market. Two differences between the two are that monopolistic competition produces heterogeneous products and that monopolistic competition involves a great deal of non-price competition, which is based on subtle product differentiation. A firm making profits in the short run will nonetheless only break even in the long run because demand will decrease and average total cost will increase. This means in the long run, a monopolistically competitive firm will make zero economic profit. This illustrates the amount of influence the firm has over the market; because of brand loyalty, it can raise its prices without losing all of its customers. This means that an individual firm's demand curve is downward sloping, in contrast to perfect competition, which has a perfectly elastic demand schedule.

**Characteristics of monopolistic competition**

There are six characteristics of monopolistic competition (MC):

* Product differentiation
* Many firms
* Freedom of Entry and Exit
* Independent decision making
* Some degree of market power
* Buyers and sellers do not have perfect information (Imperfect Information)

**Oligopolistic Competition**

a competitive situation in which there are only a few sellers (of products that can be differentiated but not to any great extent); each seller has a high percentage of the market and cannot afford to ignore the actions of the others.

**Characteristics**

* Profit maximization conditions
* An oligopoly maximizes profits.
* Ability to set price
* Oligopolies are price setters rather than price takers.[3]
* Entry and exit

Barriers to entry are high.[4] The most important barriers are government licenses, economies of scale, patents, access to expensive and complex technology, and strategic actions by incumbent firms designed to discourage or destroy nascent firms. Additional sources of barriers to entry often result from government regulation favoring existing firms making it difficult for new firms to enter the market.[5]

* Number of firms

"Few" – a "handful" of sellers.[4] There are so few firms that the actions of one firm can influence the actions of the other firms.[6]

* Long run profits

Oligopolies can retain long run abnormal profits. High barriers of entry prevent sideline firms from entering market to capture excess profits.

* Product differentiation

Product may be homogeneous (steel) or differentiated (automobiles).[5]

* Perfect knowledge

Assumptions about perfect knowledge vary but the knowledge of various economic factors can be generally described as selective. Oligopolies have perfect knowledge of their own cost and demand functions but their inter-firm information may be incomplete. Buyers have only imperfect knowledge as to price,[4] cost and product quality.

* Interdependence

The distinctive feature of an oligopoly is interdependence.[7] Oligopolies are typically composed of a few large firms. Each firm is so large that its actions affect market conditions. Therefore, the competing firms will be aware of a firm's market actions and will respond appropriately. This means that in contemplating a market action, a firm must take into consideration the possible reactions of all competing firms and the firms' countermoves.[8] It is very much like a game of chess, in which a player must anticipate a whole sequence of moves and countermoves in order to determine how to achieve his or her objectives; this is known as game theory. For example, an oligopoly considering a price reduction may wish to estimate the likelihood that competing firms would also lower their prices and possibly trigger a ruinous price war. Or if the firm is considering a price increase, it may want to know whether other firms will also increase prices or hold existing prices constant. This anticipation leads to price rigidity, as firms will only be willing to adjust their prices and quantity of output in accordance with a "price leader" in the market. This high degree of interdependence and need to be aware of what other firms are doing or might do stands in contrast with the lack of interdependence in other market structures. In a perfectly competitive (PC) market there is zero interdependence because no firm is large enough to affect market price. All firms in a PC market are price takers, as current market selling price can be followed predictably to maximize short-term profits. In a monopoly, there are no competitors to be concerned about. In a monopolistically-competitive market, each firm's effects on market conditions is so negligible as to be safely ignored by competitors.

* Non-Price Competition

Oligopolies tend to compete on terms other than price. Loyalty schemes, advertisement, and product differentiation are all examples of non-price competition.

**What Is a Duopoly?**

A duopoly is a situation where two companies together own all, or nearly all, of the market for a given product or service. A duopoly is the most basic form of oligopoly, a market dominated by a small number of companies. A duopoly can have the same impact on the market as a monopoly if the two players collude on prices or output. Collusion results in consumers paying higher prices than they would in a truly competitive market, and it is illegal under U.S. antitrust law.

What are the advantages and disadvantages of a Duopoly? What are some examples?

* Companies cooperate with each other to maximize their profits.
* There is a cooperative equilibrium that is known as collusive
* Companies compete friendly with each other to generate higher profits.
* Each of the companies is pending on the other’s decisions to agree on prices and production. In this way they are able to reach an agreement to optimize their profits.
* As a result of the competition between duopoly businessmen, consumers are the ones who are favored because monopoly prices have been eliminated.

Disadvantages of duopoly

* It affects free trade opportunities between companies as they are dependent on each other.
* There is no diversified supply of goods and services whose production requires an enormous amount of capital.
* The theory that competition favors consumer interests is very difficult to achieve as the two companies will find themselves struggling to improve prices and to impose
* On many occasions, State must intervene in order to control both the quality of the goods or services offered and the setting of maximum prices offered to the public.

**NATIONAL INCOME**

A variety of measures of national income and output are used in economics to estimate total economic activity in a country or region, including gross domestic product (GDP), gross national product (GNP), net national income (NNI), and adjusted national income (NNI adjusted for natural resource depletion – also called as NNI at factor cost). All are specially concerned with counting the total amount of goods and services produced within the economy and by various sectors. The boundary is usually defined by geography or citizenship, and it is also defined as the total income of the nation and also restrict the goods and services that are counted. For instance, some measures count only goods & services that are exchanged for money, excluding bartered goods, while other measures may attempt to include bartered goods by imputing monetary values to them.

How to Measure National Income:

### Method # 1. Output (Product) Method:

The product method is based on returns made by firms and public corporations concerning the annual value of their output. In most countries these returns are obtained through the census of production.

In India, a full census is taken every 10 years and sample censuses are taken in the intermediate years. Additional information may now be obtained from returns with respect to sales tax and/or excise duty.

National income is measured by the output method by calculating the total value of goods and services produced in the country during the year. The money value of goods and services produced in an economy in an accounting year is called Gross National Product (GNP). It is defined by J. R. Hicks as “the collection of goods and services reduced to a common basis by being measured in terms of money.”

In most countries GNP or GDP is measured at current (market) prices. Table 17.1 shows the national income of a hypothetical economy in an accounting year.

Table 17.1: The National Product of a Hypothetical Economy 1998-99:



Thus, we see that all types of activities are covered—the primary sector, e.g., agriculture, forestry and fishing; secondary sector, e.g., manufacturing and construction; and tertiary sector, e.g., distribution, transport, banking and insurance.

The national product is the total value of everything produced in the country. It is a measure of the goods and services becoming available to the nation for consumption or adding to wealth.

#### Problems:

When we use the output method certain problems arise:

(i) Unpaid Service:

The GNP figure includes only productive activity for which payment is received. Any unpaid service (s) will not be included. For example, housewives do a lot of work such as cooking, nursing, drawing of water, coaching children and so on. But they are not paid specifically for this. Any housekeeping allowance given to the wife by her husband is regarded as a transfer within the family. If, however, another person were employed and paid to undertake the cleaning of house, the payment to him (her) would be included in the figures, because she is providing a service for which she is being paid.

Thus, any service which people undertake for themselves will be excluded from the figures. This indicates one area for caution in comparing national income figures for different countries. In less developed countries like India, people do more things for themselves — grow their own food, make their own clothes, etc. They do not pay for all the commodities and services they need. The national income of such a country will be that much less because most people provide so many unpaid (free) services for themselves.

(ii) Double Counting:

Another problem is drawing up the production figures is the need to avoid double-counting, i.e., including the same item twice. For example, the value of the output of the steel industry is calculated, but some of the steel has gone to the car industry to be used in the production of cars.

So if we simply calculate the value of the output of the car industry and add it to the figure for the steel industry, then some of the steel has been included twice in the calculations — once as steel and once as part of the cars.

In order to avoid this problem of double counting, it is only the value added by each industry which is included, i.e., the value of the industry’s output minus the value of the materials, etc. bought from other industries. Thus, we need figures of only the final selling values of goods and services.

(iii) Stock Appreciation:

Another problem arises due to stock appreciation. Some final goods will be added to stocks and not incorporated in other goods in the current year. On the other hand, the value of current output will include the using up of stocks inherited from the past. These problems are dealt with by including net additions to stocks, which may be positive or negative, in the domestic product.

Net addition to stock must refer to additions to the physical stock of assets and not just the money value (price x quantity) of stocks. The latter can rise because the normal accounting of firms writes up the value of stocks as price rise. Such a rise in the book value of stocks is recorded as stock appreciation.

This item takes account of the fact that stocks of goods will increase in value from one year to the next simply because of price rise. For example, if there was a stock of 100 cars in a factory last year and the same number of the same type of cars this year, the value of the stock will be greater this year, because the price of the cars has risen—yet there has been no increase in the number of cars involved.

A deduction, therefore, needs to be made to remove the influence of price changes on stocks. In other words, stock appreciation must be subtracted from the estimates of stock changes. (As stock appreciation affects the calculation of profits, a similar deduction has to be made when using the income method).

(iv) International Transactions:

The value of goods and services produced within the country includes their import content. Imports yields incomes to owners of resources in other countries. They are part of the domestic products of other countries. Hence, they must be deducted from the GNP. Exports yield income to the domestic factors. So they are included in the domestic product. Their import is dealt with in the general deduction of imports.

So we arrive at the following estimate:

GNP – Imports = Gross Domestic Product.

The domestic product is the value of every­thing produced in a particular territory. It differs from the national product by the amount of any factor incomes paid to (or by) non­residents. This interest paid to foreigners who have provided capital in a country is included in the domestic product since it is part of the value of what has been produced in the country. But it is excluded from the national product since the income does not accrue to residents in the country.

### Method # 2. The Income Method:

The income method of calculating the national incomes is based on figures collected from the income tax departments. In advanced countries the majority of people have to submit returns about income for assessment. So a fairly accurate estimate of total incomes can be obtained in this way. By contrast, in a country like India, where few people make tax returns or where there is wide-scale tax evasion, the income method is not much reliable.

The income method of calculating national income is to work out the total of all incomes received by people and organizations in the country. The national income includes the income earned by all the resources of the country from their participation in productive (i.e., money-earning) activities.

Everything that is produced in an economy belongs to someone; it may be kept by the owner of the capital used in producing it, in which case it represents the interest on his capital; it may be shared out directly among those whose labour has produced it, as with fishermen, in which case it represents their wages; or it may be bought by another man with the money income which he has earned in another form of production. It, therefore, follows that the total national product must be equal to the total national income. The following table shows the different types (sources) of income in a hypothetical economy.

Table 17.2: National Income of a Hypothetical Economy 1998-99:



The national income can thus be measured by adding up all the incomes earned by the owners of the factors of production; it includes the total of all wages and salaries earned, rents and royalties, interest received on loans, and the profits of companies, private businesses, farms, fisherman and traders. This is called national income at factor cost, because it shows the costs of production as it is paid out or imputed to the factors employed.

One can compare this with the national product and the total will be the same. It is so because the national product is the total value of everything produced in the country and is a measure of the goods and services becoming available to the nation for consumption or adding to wealth (i.e., investment).

#### Problems:

(i) Mixed Income:

Although this table attempts to separate the payments to different factors of production, ‘mixed’ income are derived from a mixture of factors. So, in practice, it is virtually impossible to separate the returns to land, labour and capital. An example is a wheat farmer, whose income is derived from land, capital and labour—all supplied by himself. Again, retailers (such as grocers) provide both labour and capital, but we cannot find out how much each factor has earned.

(ii) Transfer Income:

It is important to include in the calculations only those incomes which correspond to the production of goods and services. Otherwise there may be double- entry, i.e., the same income may be counted twice. For example, a worker in a jute mill may receive Rs. 2,000 per month, of which Rs. 302 is taxed away by the government.

A freedom fighter receives a pension of Rs. 300 per month. The total income for both is Rs. 2,300; yet only Rs. 2,000 of this corresponds to productive activity. Therefore, the pension should not be included. The figure for total income would then be Rs. 2,000 — corres­ponding to the amount of production involved.

There are other payments which do not correspond to the production of goods and services—unemployment compensation and other social security payments, interest on government bonds, subsidies to poor families, scholarships to students, pocket money paid by parents to children, gift by one individual to another (within the same country). Such incomes are paid to the recipients out of the earnings of producers by means of taxes, insurance contributions and gifts. These incomes differ from the incomes of the factors of production, called factor incomes.

Interest on national debt is also counted as a transfer income of its recipients because it is paid out of taxes without any current goods and services being made available in return. Such payments are known as ‘transfer payments’. These are to be excluded when calculating national income.

These are excluded from national income because such incomes do not represent payment for contributing to the production of goods and services. Thus, recipients of retirement pensions, family allowances, students’ grants and social security benefits do not make any current contribution to society’s output of goods and services.

Taxes which transfer income from the factors of production to the relevant bene­ficiaries are called transfer payment.

The sum-total of all incomes includes both factor incomes and transfer incomes. Since the latter are paid of the former without any goods and services being made available as a result, they exaggerate the flow of income in real terms. They are double-counted, once as factor incomes and again as transfer incomes. They must, therefore, be excluded from national income.

(iii) Imputed Income:

One item which often creates problem is ‘ownership of dwellings’. People who let out houses for rent are providing a service. So the rents received by them must be included in the national income figures. But account must also be taken of owner- occupied houses. No rent is actually paid here. But the houses provide the same service to the dwellers as rented accommodation. The problem is overcome by imputing a rent to such houses, i.e., the amount the owners would probably have received if they had rented the houses.

(iv) Government Services:

There are many services provided by the government of a country which satisfy the collective wants of the community as opposed to the individual wants of the citizens. Thus, administration through the civil service, defence by the armed forces, protection by the police force, justice through the law courts, health care and education are provided by the state.

Each citizen does not pay according to the amount of such services that he (or she) wants. A pacifist has to help to pay for defence; a wealthy person has to help in the provision of social health and education services which he or she may never use. This list of anomalies could be greatly extended. Is it, then, realistic to include the incomes derived from producing such services as part of the income derived from satisfying wants?

In fact, government services of this kind are included in the national income on the ground that the community pays for them simply because it surely needs them.

(v) Net Factor Income from Abroad:

Some people and firms earn income by producing goods and services or owning property in other countries. Such incomes will not be included in calculations based on the earnings of factors within the country (the domestic income) and must be added to the total.

On the other hand, some of the domestic income is earned by non-residents as a result, for example, of the operation of foreign firms within a country. These incomes must be deducted when computing the national income. These two adjustments can be made together by adding net income from abroad if it is positive or by deducting it if it is negative.

### Method # 3. The Expenditure Method:

A third way of arriving at this same total is to add up the total national expenditure. We have to include private and government expenditure and the value of newly — created capital. If everything we buy were produced at home and nothing were sold abroad, then the total national expenditure would be equal to the total income and to the total national product.

But, of course, every country trades with others to a certain extent. Thus, unless the value of everything they export is equal to the value of their imports, national expenditure will be either greater or less than the national product and income.

Some countries export more than they import. They have an export surplus, which we may regard as a balance of unspent income. In such countries we have, therefore, to include the export surplus as an item in our total national expenditure. If there is an import surplus we have to deduct this from the total national expenditure.

For balancing this third account with the other two, we have to make one further adjust­ment. Expenditure at market prices includes, for some goods, a payment to the government as indirect tax like sales tax or excise duty. These taxes are not really a payment for any goods or services. So we deduct them from total expenditure to arrive at a final figure which is equal to the value of the national product or national income at factor cost.

The following table illustrates this method:



The table 17.3 shows that the major portion of the national product is enjoyed by the people as food, clothing, bicycles and other ‘consumer’ goods. A certain portion goes abroad as an export surplus. It is a form of savings which can later be turned into imports, thus enabling the country (under consideration), if necessary, to consume more at some future time than its current national product. Two other components of aggregate expenditure are: private investment (capital formation) and government expenditure (on currently produced goods and services).

There are two other groups of spenders in the country whose expenditure must be included, namely, public authorities and firms. (Public authorities consist of central and local govern­ments). With regard to the second item in Table 17.3, we are concerned only with the expenditure of public authorities on goods and services.

Expenditure on such items as pensions, student grants (i.e., loans and scholarships), unemployment benefit, etc. is not included, because such expenditure does not correspond to any production in the economy. The inclusion of such expenditure would not give a true indication of the value of the goods and services produced in the economy during the year. It is only expenditure on goods and services which is relevant here.

The expenditure method depends on some­what less accurate statistics because of the great number of retail outlets where most of the relevant transactions take place. Information about retailing, wholesaling and the provision of some service is obtained from the Census of Distribution. Additional information is obtained from sales tax (and excise duty) returns.

**Public finance**

Public finance is the study of the role of the government in the economy. It is the branch of economics that assesses the government revenue and government expenditure of the public authorities and the adjustment of one or the other to achieve desirable effects and avoid undesirable ones. The purview of public finance is considered to be threefold: governmental effects on (1) efficient allocation of resources, (2) distribution of income, and (3) macroeconomic stabilization.

M.I.T. economist Jonathan Gruber (economist) has put forth a framework to assess the broad field of public finance. Gruber suggests public finance should be thought of in terms of four central questions: (1) When should the government intervene in the economy? To which there are two central motivations for government intervention, Market failure and redistribution of income and wealth. (2) How might the government intervene? Once the decision is made to intervene the government must choose the specific tool or policy choice to carry out the intervention (for example public provision, taxation, or subsidization). (3) What is the effect of those interventions on economic outcomes? A question to assess the empirical direct and indirect effects of specific government intervention. (4) And finally, why do governments choose to intervene in the way that they do? This question is centrally concerned with the study of political economy, theorizing how governments make public policy.

**Public finance management**

Collection of sufficient resources from the economy in an appropriate manner along with allocating and use of these resources efficiently and effectively constitute good financial management. Resource generation, resource allocation, and expenditure management (resource utilization) are the essential components of a public financial management system.

The following subdivisions form the subject matter of public finance.

Public expenditure

Public revenue

Public debt

Financial administration

Federal finance

**Fiscal policy**

In economics and political science, fiscal policy is the use of government revenue collection (taxes or tax cuts) and expenditure (spending) to influence a country's economy. The use of government revenues and expenditures to influence macroeconomic variables developed as a result of the Great Depression, when the previous laissez-faire approach to economic management became unpopular. Fiscal policy is based on the theories of the British economist John Maynard Keynes, whose Keynesian economics theorized that government changes in the levels of taxation and government spending influences aggregate demand and the level of economic activity. Fiscal and monetary policy are the key strategies used by a country's government and central bank to advance its economic objectives. The combination of these policies enables these authorities to target the inflation (which is considered "healthy" at the level in the range 2%–3%) and to increase employment. Additionally, it is designed to try to keep GDP growth at 2%–3% and the unemployment rate near the natural unemployment rate of 4%–5%. This implies that fiscal policy is used to stabilize the economy over the course of the business cycle.

Changes in the level and composition of taxation and government spending can affect macroeconomic variables, including:

* aggregate demand and the level of economic activity
* saving and investment
* income distribution
* allocation of resources.

Fiscal policy can be distinguished from monetary policy, in that fiscal policy deals with taxation and government spending and is often administered by a government department; while monetary policy deals with the money supply, interest rates and is often administered by a country's central bank. Both fiscal and monetary policies influence a country's economic performance.

**Stances**

Depending on the state of the economy, fiscal policy may reach for different objectives: its focus can be to restrict economic growth by mediating inflation or, in turn, increase economic growth by decreasing taxes, encouraging spending on different projects that act as stimuli to economic growth and enabling borrowing and spending. The three stances of fiscal policy are the following:

Neutral fiscal policy is usually undertaken when an economy is in neither a recession nor an expansion. The amount of government deficit spending (the excess not financed by tax revenue) is roughly the same as it has been on average over time, so no changes to it are occurring that would have an effect on the level of economic activity.

Expansionary fiscal policy is used by the government when trying to balance the contraction phase in the business cycle. It involves government spending exceeding tax revenue by more than it has tended to, and is usually undertaken during recessions. Examples of expansionary fiscal policy measures include increased government spending on public works (e.g., building schools) and providing the residents of the economy with tax cuts to increase their purchasing power (in order to fix a decrease in the demand).

Contractionary fiscal policy, on the other hand, is a measure to increase tax rates and decrease government spending. It occurs when government deficit spending is lower than usual. This has the potential to slow economic growth if inflation, which was caused by a significant increase in aggregate demand and the supply of money, is excessive. By reducing the economy's amount of aggregate income, the available amount for consumers to spend is also reduced. So, contractionary fiscal policy measures are employed when unsustainable growth takes place, leading to inflation, high prices of investment, recession and unemployment above the "healthy" level of 3%–4%.

However, these definitions can be misleading because, even with no changes in spending or tax laws at all, cyclic fluctuations of the economy cause cyclic fluctuations of tax revenues and of some types of government spending, altering the deficit situation; these are not considered to be policy changes. Therefore, for purposes of the above definitions, "government spending" and "tax revenue" are normally replaced by "cyclically adjusted government spending" and "cyclically adjusted tax revenue". Thus, for example, a government budget that is balanced over the course of the business cycle is considered to represent a neutral and effective fiscal policy stance.