



**NABARD**

**Grade B - (Phase 2)**

**National Bank for Agriculture and Rural Development (NABARD)**

**Volume - 4**

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**Development Economics, Statistics, and Management**



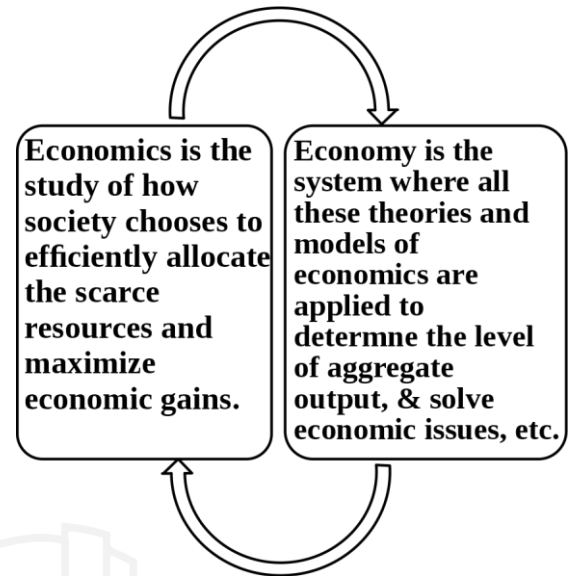
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# 1 CHAPTER

## Growth and Development

- Economics studies how society manages scarce resources to produce goods and services and distribute them efficiently to maximize overall welfare.
- Because resources are limited and have alternative uses, choices become unavoidable.
- **Microeconomics** focuses on individual units such as consumers and firms, explaining consumer behaviour and producer decisions.
- **Macroeconomics** studies the economy as a whole, dealing with aggregates like national income, inflation, unemployment, poverty, and money supply.
- **Economics v/s Economy**



### Sectors of Economy

**Primary Sector:** Involves the extraction and use of natural resources to produce goods, such as agriculture, dairy, fishing, forestry, and mining. Also called the **agriculture and allied sector**.

**Secondary Sector:** Concerned with processing and manufacturing raw materials into finished or semi-finished goods. Also known as the **industrial sector**.

**Tertiary Sector:** Provides services that support production and distribution, such as transport, banking, trade, and communication. Also called the **service sector**. The services sector is further divided into:

- **Quaternary Sector:** Knowledge-based services involving research, data processing, and information management. Includes professionals such as software developers, analysts, and consultants.
- **Quinary Sector:** Top-level decision-making and policy-related services. Includes senior executives, government officials, and high-level consultants, often called **gold-collar professions**.

### Central Problems of an Economy

- The availability of resources does not automatically ensure economic growth. Since resources are scarce and have multiple alternative uses, an economy inevitably faces the **problem of choice**.
  - Producers and governments must decide how to allocate these limited resources efficiently and which production technologies to adopt. Consequently, every economy regardless of the quantity or type of resources it possesses confronts **three fundamental central problems** in the process of economic decision-making.
1. **What to produce?**
    - ✓ Economies must decide how much to produce of consumer goods versus capital goods.
    - ✓ Consumer goods satisfy immediate needs, while capital goods support future production and growth.
  2. **How to produce?**
    - ✓ This concerns the choice of production technique. Labour-intensive techniques are suitable for labour-abundant countries, whereas capital-intensive techniques suit capital-rich economies.

### 3. For whom to produce?

- ✓ This relates to the distribution of goods and income. The aim is to reduce inequality, ensure efficient allocation of resources, and promote social welfare.

## Types of Goods

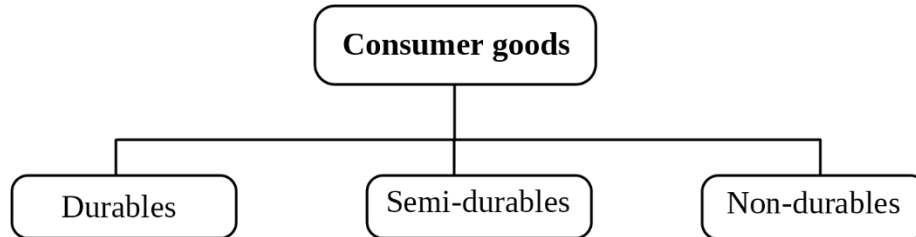
Goods produced in an economy can be classified in different ways:

### 1. Based on Value Addition

- ✓ **Intermediate goods:** Used as inputs for further production (e.g., wheat flour for a bakery).
- ✓ **Final goods:** Ready for consumption and require no further processing (e.g., books, clothes).

### 2. Based on End Use

- ✓ **Consumer goods:** Used directly for satisfaction of wants.



- **Durable goods** are those goods that can be used repeatedly over a long period because of their relatively long-life span, such as automobiles, mobile phones, and computers.
- **Semi-durable goods** are goods that do not have a very long-life span but are also not exhausted in a single use. Examples include footwear, crockery, clothing, and other textile products.
- **Non-durable goods** are goods with a very short life span that are generally consumed in a single use. Examples include fruits, milk, vegetables, and disposable items.
- ✓ **Capital goods:** Used in production of other goods (machinery, buildings).

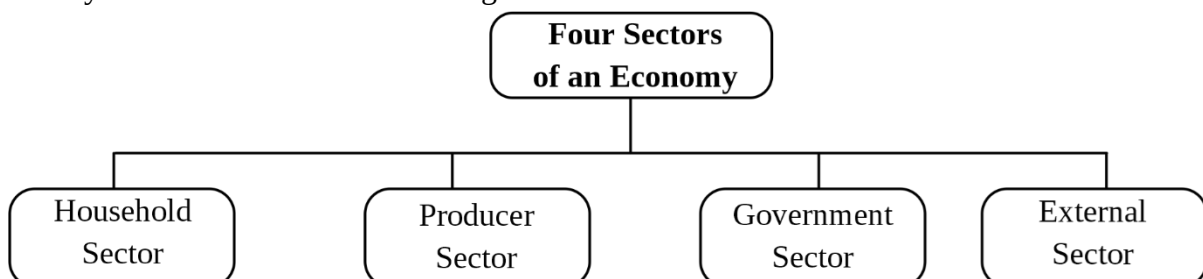
**Did you Know?** The same good can be a capital good and a consumer good. Its classification would depend upon the purpose of its use. The Fan installed in a house is a consumer good whereas when it is installed in a factory it is classified as capital good.

## Types of Economies

1. **Free Market Economy:** Economic decisions are guided by demand and supply with minimal government intervention (e.g., Singapore).
2. **Centrally Planned Economy:** The state owns major resources and prioritizes social welfare over profits (e.g., Cuba).
3. **Mixed Economy:** Combines market forces with government regulation (e.g., India). Industries of strategic importance like atomic energy, Space, Defence, etc. are not completely left to the market forces of demand and supply. Such economies try to strike a balance between the aim of profit maximization and public welfare.

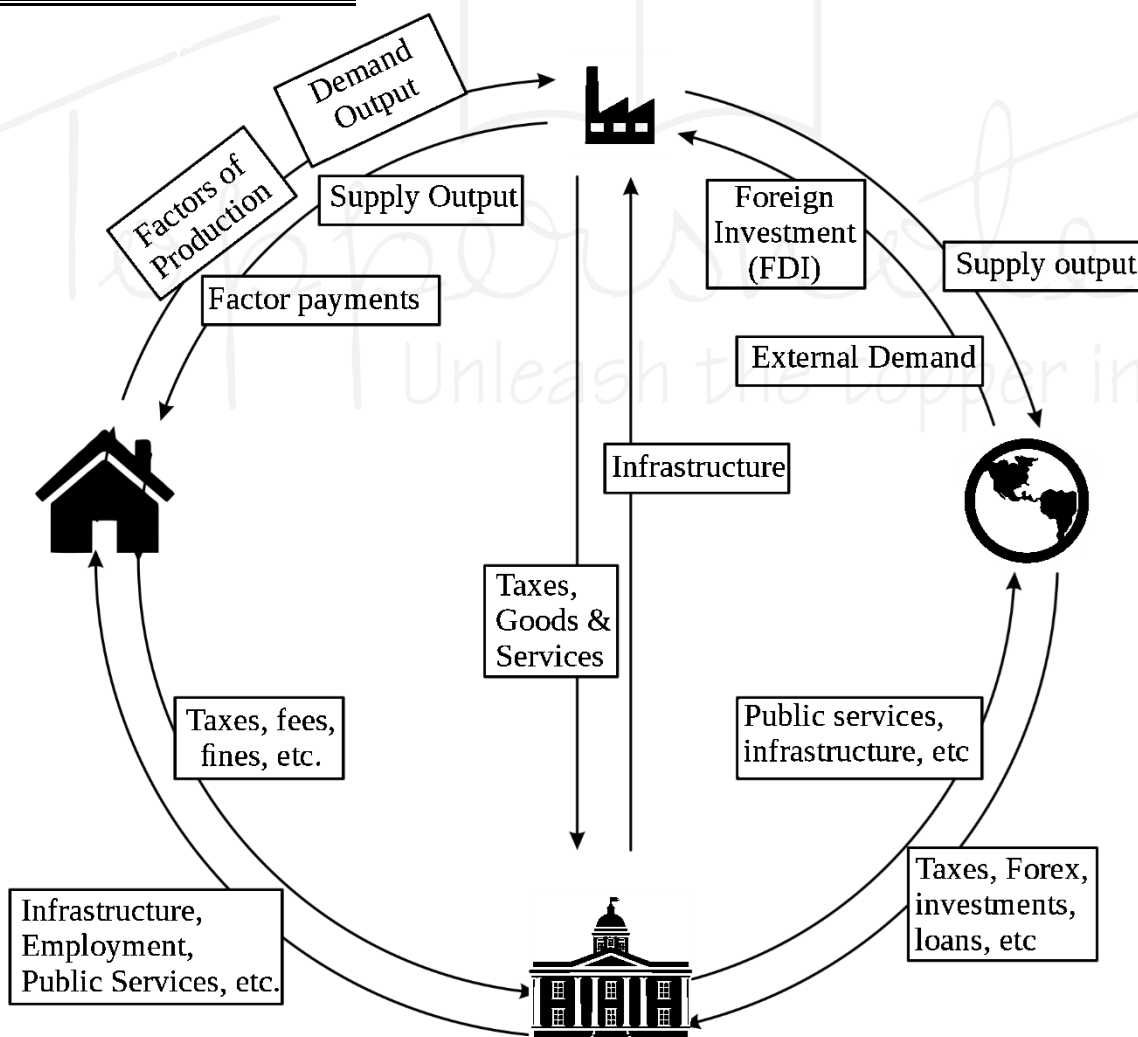
## Sectors of an Economy

An economy is divided into four interacting sectors:



Sector of Economy	Description / Role
<b>Household Sector</b>	Comprises individuals and families who <b>consume goods and services</b> . Households also act as <b>suppliers of factors of production</b> such as land, labour, capital, and entrepreneurship, and earn factor incomes in return.
<b>Producer Sector</b>	Includes <b>all producing units</b> in the economy that are engaged in the production of goods and services for the market.
<b>Government Sector</b>	Represents the state's economic activities. The government functions as a <b>consumer</b> , a <b>producer</b> through public sector enterprises (e.g., NTPC, Rural Electrification Corporation), and plays a crucial role in ensuring <b>public welfare and regulation</b> .
<b>External Sector (Rest of the World)</b>	Covers all <b>economic transactions with foreign countries</b> , including <b>exports and imports</b> and <b>financial flows</b> recorded under the <b>current account and capital account</b> . 1) Land: The return for land is rent. 2) Labor: The return for labor is Wage, or Compensation of employees. 3) Capital: Anything which is used in the process of production of any good or service is capital. It can be money, or any physical asset like machinery, human capital etc. The return for capital is interest. 4) Entrepreneur: An entrepreneur runs and manages the business/industry. Entrepreneurs earn profit.

## Circular Flow of Income



Goods and services flow from producers to households, while money flows in the opposite direction as factor payments. This continuous flow links production, income generation, and expenditure.

## Theory of Demand

Demand refers to the quantity of a good that consumers are willing and able to purchase at different prices over a period of time.

**Determinants of Demand** include price of the good, consumer income, prices of substitutes and complements, tastes, population, and weather.

### **DID YOU KNOW?**

Normal goods are goods for which the demand is directly related to the consumer's income.  
Inferior goods are goods for which demand is inversely related to consumer's income.

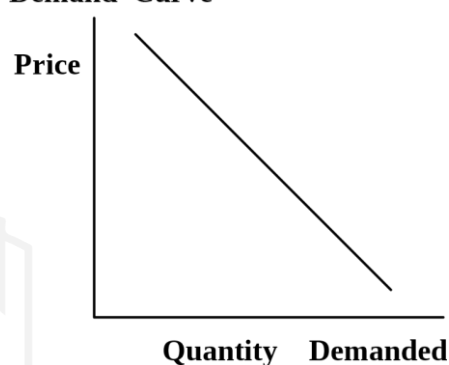


**Law of Demand** states that, other things remaining constant, quantity demanded varies inversely with price.

The Law of Demand does not apply in certain special situations, which are explained below.

- i. **Ostentatious goods:** These goods are purchased to display wealth and social status, such as expensive cars and diamond jewellery. In this case, demand increases when the price rises and decreases when the price falls.
- ii. **Giffen goods:** This concept was identified by the British economist Sir Robert Giffen. Giffen goods are a special category of inferior goods in which the income effect is negative and stronger than the substitution effect. As a result, demand increases when the price rises and decreases when the price falls. These goods are usually basic necessities like rice, bread, salt, and potatoes, on which consumers spend a large part of their income and which have no close substitutes.
- iii. **Shares or speculative market:** In speculative markets, especially the stock market, demand increases when prices are rising because investors expect further price increases, and demand falls when prices are declining.
- iv. **Bandwagon effect:** This occurs when consumers' demand for goods and services is influenced by social trends, fashion, or the choices of others. For example, owning an iPhone is often considered a status symbol rather than a basic necessity.
- v. **Veblen effect:** This refers to the belief that goods with higher prices are of superior quality compared to lower-priced goods, which leads to higher demand for expensive products.

**Demand Curve**



## Theory of Supply

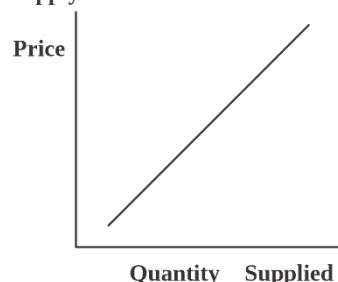
Supply is the quantity of a good that producers are willing and able to sell at a given price during a specific period.

**Law of Supply** states that price and quantity supplied are positively related, assuming other factors remain constant.

### **Assumptions of Law of Supply**

- a) There is no change in the price of factors of production
- b) There is no change in the techniques of production
- c) There is no change in the goal of the firm
- d) There is no change in the price of related goods
- e) Investors have full confidence over business

**Supply Curve**



## Investment

- Investment refers to the process of creating assets or capital. In other words, it is that portion of GDP which is used again in the production process.
- Investment is a **flow concept**, while capital is a **stock concept**. Since investment leads to the creation of capital, it can be defined as a flow that adds to the existing stock of capital.

### Gross and Net Investment:

#### **Gross Investment:**

- Gross investment includes expenditure on fixed capital such as machinery and equipment, as well as spending on inventories.
- It also covers the amount spent on replacing depreciated or worn-out capital.

#### **Net Investment:**

- Net investment is obtained by deducting the replacement cost of depreciated assets from gross investment. It shows the actual addition made to the capital stock.

$$\text{Net Investment} + \text{Depreciation} = \text{Gross Investment}$$

**Depreciation** is the fall in an asset's value over the period of time. It is also known as 'Consumption of Fixed Capital'. For example: wear and tear in machinery

## National Income

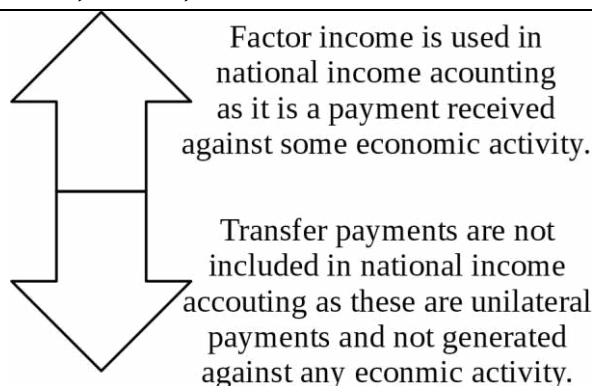
National income represents the total value of goods and services produced and the income generated in an economy during a year.

### Gross Domestic Product (GDP)

- GDP is the central concept in national income accounting. The growth of GDP is significant because it reflects the level of production and consumption in an economy, which in turn influences employment opportunities and overall economic development.
- GDP refers to the total market value of all **final goods and services** produced by the factors of production within the domestic territory of a country during an accounting year.

The domestic territory is not only the geographical area under jurisdiction, it also includes:

- Aircrafts and shipping vessels operated by our residents.
- Military bases, Embassies, Consulates of India abroad.
- Other offshore platforms, boats, vessels, etc.



**Note:** The second-hand goods are not considered for GDP calculation

## Factor Income

Factor income is the income earned by the factors of production. It can also be defined as the payment received in return for performing an economic activity. Examples include wages, rent, interest, and profit.

## Transfer Income

Transfer income consists of unilateral payments that are not made in exchange for any economic activity. Such payments are not included in national income calculations. Examples include unemployment allowance, pensions, grants, and donations.

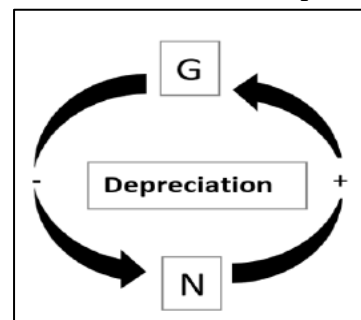
**Note:** Only factor income is considered in national income accounting.

## GDP and Related Aggregates

**Gross Domestic Product (GDP) and Net Domestic Product (NDP):** Domestic income or output is commonly measured using Gross Domestic Product and Net Domestic Product.

### **Gross Domestic Product (GDP):**

GDP refers to the total market value of all final goods and services produced by the factors of production within the domestic territory of a country during an accounting year, **including depreciation**.



### **Net Domestic Product (NDP):**

NDP is the total market value of all final goods and services produced by the factors of production within the domestic territory of a country during an accounting year, **excluding depreciation**.

## Domestic Product vs National Product:

### **Domestic Product**

- Domestic Product refers to the total market value of all final goods and services produced within the domestic territory of a country during an accounting year, regardless of whether they are produced by residents or non-residents.
- It does not include Net Factor Income from Abroad.

### **National Product**

- National Product is the total of all factor incomes earned by the normal residents of a country during an accounting year, irrespective of whether the income is generated within the domestic territory or outside the country.
- It includes Net Factor Income from Abroad.

**Note:** The national product measures all goods and services arising out of economic activity while national income is the sum of all incomes as a result of the economic activity. These two are synonymous.

## Market Price vs Factor Cost:

Domestic Product or National Product can be measured at market price or factor cost. Market price includes the Net Indirect Taxes, while Factor cost does not.

$$\text{Net Indirect Taxes} = \text{Indirect Taxes} - \text{Subsidies}$$

### **GDP at Market Price (GDP<sub>mp</sub>):**

GDP at market price refers to the total market value of all final goods and services produced by the factors of production within the domestic territory of a country during an accounting year.

### **GDP at Factor Cost (GDP<sub>fc</sub>):**

When a domestic product is measured as the sum of all factor incomes generated within the domestic territory of a country during an accounting year, rather than as the total market value of output, it is called GDP at factor cost.

$$\begin{aligned} \text{GDP}_{\text{MP}} - \text{Net Indirect Taxes (NIT)} &= \text{GDP}_{\text{FC}} \\ \text{GDP}_{\text{FC}} + \text{NIT} &= \text{GDP}_{\text{MP}} \end{aligned}$$

## Net Domestic Product (NDP):

NDP refers to the total market value of all final goods and services produced within the domestic territory of a country during an accounting year, **excluding depreciation**.

$GDP - Depreciation = NDP$

GNP:  $GDP + \text{Net Factor Income from Abroad}$

NNP:  $GDP + NFIA - Depreciation$

$GDP_{MP} = GDP_{FC} + \text{Net Indirect taxes}$

$GDP_{FC} = GDP_{MP} - \text{Net Indirect Taxes}$

## GVA at Basic Prices

- Gross Value Added (GVA) is a metric that measures the value that producers have added to the goods and services they have bought.
- In the revision of National Accounts Statistics carried out by the Central Statistical Organization (CSO) in January 2015, it was decided that sector-wise estimates of Gross Value Added (GVA) would henceforth be presented at **basic prices** instead of **factor cost**.

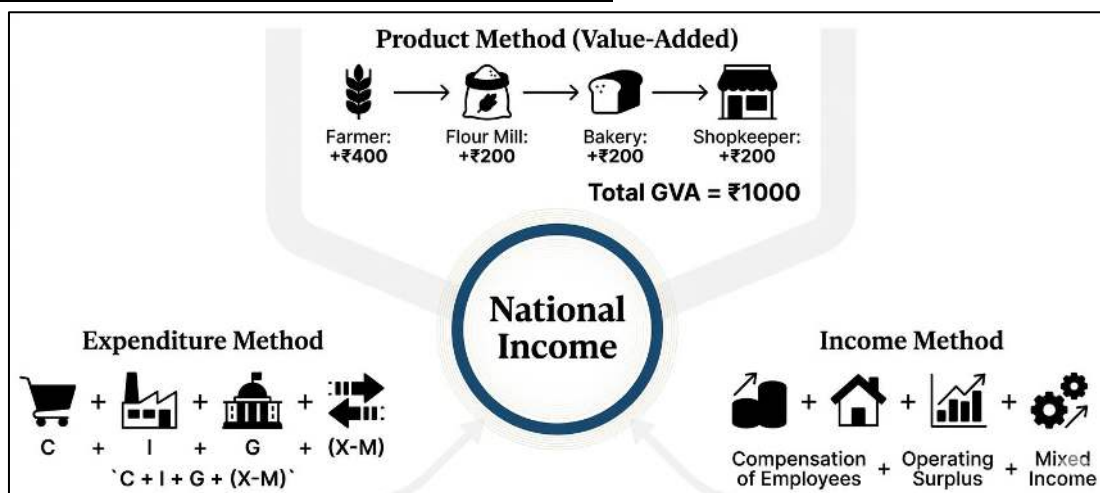
## Basic Prices

- Basic prices exclude taxes on products that are collected by producers from purchasers and paid to the government, but they include subsidies received by producers from the government that help reduce the prices charged to consumers.
- In simple terms, the basic price of a commodity is the amount receivable by the producer from the purchaser per unit of output, **minus product taxes and plus product subsidies**.
- However, **GVA at basic prices** includes **production taxes** and excludes **production subsidies** applicable to the commodity.
- In contrast, **GVA at factor cost** excludes all taxes and includes all subsidies. **GDP at market prices**, on the other hand, includes both production and product taxes and excludes both production and product subsidies.

### **GDP vs GVA**

- GDP gives the demand side view of the output. It reflects the demand of the goods and services produced within the domestic territory.
- GVA reflects the supply side of the economy. It shows the sectoral contribution of each sector in overall GDP like, how much the agricultural, industrial, services sectors have contributed to the overall GDP.

## Methods of Measuring National Income



**1. Product (Value Added) Method:** It measures the National income as value addition by all the producing units or different sectors in an economy, in an accounting year. Or, by summing up the value added at each stage of production in an economy.

**2. Income Method**

- ✓ Under this method, national income is calculated by way of factor payments received by the factors of production, within the domestic territory, during an accounting year.

**3. Expenditure Method**

- ✓ Under this method, the National Income is calculated as the sum of all the expenditures incurred on the purchase of final goods and services produced in an economy during an accounting year.
- ✓ The expenditures can be classified as:
  - C: Private Final Consumption Expenditure: Household spending on the final consumer goods.
  - I: Investment Expenditure: The Investment done by Firms and Households on capital, machinery, equipment, inventory, etc.
  - G: Government Final Consumption Expenditure: Government spending on Public goods and services.
  - Net Exports(X-M): Exports- Imports
  - $Y = C + I + G + (X - M)$
- ✓ The expenditure method gives us the GDP at market price.

All three methods theoretically yield the same result.

**Nominal and Real GDP**

- **Nominal GDP** is measured at current prices.
- **Real GDP** is measured at constant (base year) prices and is a better indicator of real growth.

**GDP Deflator** measures price level changes between base and current year.

$$\frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

**National Disposable Income:**

It is the sum total of income from all the sources available for a country’s disposal or saving, during an accounting year.

Net National Disposable Income \$=\$ NNI + net taxes on income and wealth receivable (NNDI) from abroad + net social contributions and benefits receivable from abroad.

National Disposable Income can be further classified as:

- Gross National Disposable Income: GNDI is inclusive of depreciation.
- Net National Disposable Income: NNDI excludes depreciation.

**Private Income:**

It is a measure of income derived from national income, by adding the sum of govt transfer payments and interest on national debt, and subtracting profits and property income of government entities/departments.

**Personal Income:**

It is the sum total of all the income actually received by individuals and households, from all sources (both factor income and transfer payments).

Personal Income = Private Income - UDP (Undistributed Profits retained by corporates) - Corporate Profit Tax.

**Personal Disposable Income:**

The part of personal income which, an individual, or a household can use at their will, after paying all the taxes, fees, fines, etc.

Personal Disposable Income = Personal Income - Direct Taxes - (Fees, Fines etc.)

## Limitations of GDP

- Domestic or non-market activities like housework or child care are not counted in GDP calculation.
- GDP does not reflect social ills. For example, a country might be witnessing an increase in GDP numbers due to an increase in production of weapons or munition, etc.
- GDP does not take into account the transactions involving black money, or the unorganized sector's transactions.
- GDP only reflects the amount of output produced within the domestic territory. It does not reflect the distribution of the output or income proceeds.

## Green GDP

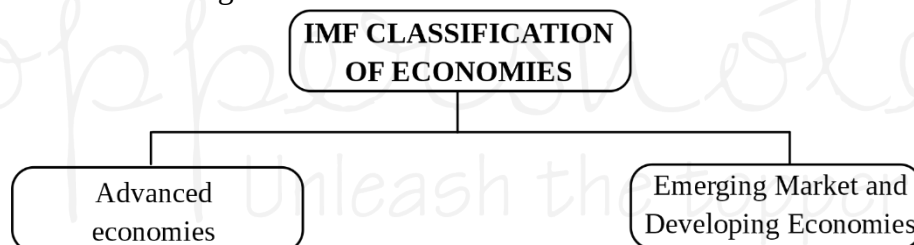
- The green GDP is the measurement of GDP growth with the environmental consequences of that growth factored in. Green GDP accounts for the monetized loss of biodiversity, costs caused by climate change etc. It is a measure of how a country is prepared for sustainable development.
- In 1987, the United Nations Brundtland Commission defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

## International Classification of Economies

- The World Bank Group assigns the world's economies into four income groups: low, lower-middle, upper-middle, and high.

	Low Income	Lower-middle Income	Upper-middle Income	High Income
July 1, 2024 - for FY25 (new)	≤ 1,145	1,146-4,515	4,516-14,005	> 14,005
July 1, 2023 - for FY24 (previous)	≤ 1,135	1,136-4,465	4,466-13,845	> 13,845

- As per this classification, India comes under the Lower- middle income category.
- **IMF** classifies economies as advanced or emerging and developing based on income, export diversification, and financial integration.



- ✓ As per this classification India comes under Emerging market and Developing economies.
- ✓ IMF uses following parameters for classification
  - **Per capita income:** A country's per capita income level is a key criterion for classification.
  - **Export diversification:** The extent to which a country diversifies its exports is another important factor.
  - **Global financial system integration:** How integrated a country is into the global financial system is also considered.

## National Income Accounting in India

- National income is measured by the National Statistical Office under the Ministry of Statistics and Programme Implementation. Key divisions include National Accounts, Economic Statistics, Social Statistics, and National Sample Survey.
- National income accounting provides a systematic framework to measure economic performance, guide policy decisions, and compare development levels across countries. While GDP remains central, complementary indicators are essential for a holistic understanding of development.

# 2

# Health

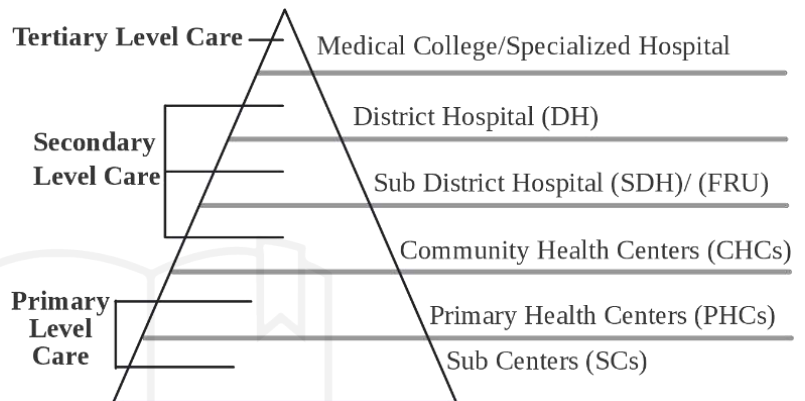
## CHAPTER

Health is a crucial component of human development and economic progress. In India, despite being one of the fastest-growing economies, public healthcare spending remains low. As per Economic Survey 2024–25, India’s public healthcare expenditure is projected to decline from 2.5% of GDP in FY25 to 1.9% in FY26, highlighting a concerning trend. Furthermore, the “Health in India” report reveals that nearly 40% (2 out of 5) children fail to complete their full immunization schedule, which poses serious public health risks.

### Structure of the Healthcare System

#### 1. Primary Healthcare (First Contact)

- ✓ **Focus:** Preventive and basic curative care
- ✓ **Services:** Health education, immunization, maternal-child health, sanitation, & disease prevention.
- ✓ **Infrastructure:**
  - Sub-Centres (SCs): Operated by Auxiliary Nurse Midwives (ANMs), focusing on rural outreach.
  - Primary Health Centres (PHCs): Provide basic medical care and act as the first referral unit.



#### 2. Secondary Healthcare (Referral Services)

- ✓ **Focus:** Specialist services and emergency care
- ✓ **Services:** Obstetrics, gynecology, pediatrics, minor surgeries.
- ✓ **Infrastructure:**
  - Community Health Centres: Serve as a bridge between PHCs and district hospitals.
  - District Hospitals: Provide comprehensive specialist care.

#### 3. Tertiary Healthcare (Advanced/Super-Specialty)

- ✓ **Focus:** Complex & specialized treatments
- ✓ **Services:** Cancer care, organ transplants, neurosurgery, etc.
- ✓ **Infrastructure:**
  - AIIMS, PGIs, Corporate Hospitals
  - Teaching & research-linked hospitals

### **Community level healthcare intervention: A Prerequisite to achieve “Health for All”**

1. **Accessibility and Reach:** Local community healthcare centers such as Sub-Centres (SCs), Primary Health Centres (PHCs) are the first point of contact for millions. Strengthening these facilities ensures that essential health services are available within reach, reducing dependence on distant hospitals.
2. **Preventive and Promotive Health Focus:** Community-level interventions emphasize preventive care like immunization, maternal and child health, sanitation, nutrition, and health education.

3. **Cultural Sensitivity and Trust:** Local health workers (like ASHAs and ANMs) are often from the communities they serve, which helps build trust and ensures culturally appropriate healthcare delivery. This increases acceptance of medical advice, immunization & helps combating vaccine hesitancy.
4. **Reduced Out-of-Pocket Expenditure:** By managing common illnesses and preventive care locally, the need for expensive treatments and travel to urban hospitals is minimized lowering out-of-pocket expenses for poor & marginalized.
5. **Early Detection and Management of Diseases:** Community-level health workers identify health problems early, enabling timely intervention and referral. This is critical in controlling communicable diseases & managing lifestyle conditions.
6. **Empowerment and Participation of Communities:** When communities are actively involved in health programs, through mechanisms like health panchayats or women-led health initiatives, they take ownership of their health outcomes fostering sustained behavior change & better utilization of health services.
7. **Bridging Urban-Rural Health Divide:** Strengthening local healthcare infrastructure helps reduce disparities between urban and rural areas by providing equitable services and reducing overcrowding in tertiary hospitals.

### Key Challenges

- **Urban-rural gap:** Rural areas face shortages of PHCs and CHCs, limiting access.
- **Shortage of healthcare professionals:** The doctor-patient ratio is below the WHO norm of 1:1000.
- **Poor infrastructure:** Concentrated in urban areas, neglecting rural regions.
- **High out-of-pocket expenditure:** Over 55% of health costs are borne by individuals.
- **Rising dual disease burden:** Rising incidence of both communicable and lifestyle diseases.
- **Low public spending on health:** Healthcare expenditure remains under 2% of GDP.
- **Climate change & threats:** Increased risk of climate-sensitive diseases like malaria and dengue.
- **Governance & policy gaps:** Centralized policymaking often overlooks local health needs.
- **Low insurance penetration:** Limited reach of schemes like Ayushman Bharat.
- **Vaccine hesitancy:** Misinformation and fear reduce immunization rates.
- **Private sector regulation:** Weak oversight of the private sector affects affordability and ethics.
- **Weak Research & Development:** India spends less than 1% of GDP on health research.
- **Neglect of mental health:** Severe shortage of mental health professionals (1 psychiatrist per 100,000 people).

### Major Government Initiatives

- **Ayushman Bharat (PMJAY):** Provides free secondary and tertiary health coverage.
- **National Health Mission (NHM):** Focuses on strengthening rural healthcare.
- **Jan Aushadhi Scheme:** Promotes affordable generic medicines.
- **Mission Indradhanush:** Aims for full immunization coverage against diseases like polio and measles.
- **Digital Health Mission:** Promotes electronic health records and telemedicine.
- **PM Matru Vandana Yojana:** Maternity benefits scheme offering ₹5000 incentives.
- **e-Sanjeevani:** Telemedicine platform for remote consultations.
- **Indian public health standards:** Set standards for infrastructure, staff, and equipment.
- **National Mental Health Programme (NMHP):** Aims to provide mental health services at the community level by integrating mental health into primary healthcare, addressing the acute shortage of professionals.

- 
- **National AIDS Control Programme (NACP):** Implements targeted interventions, awareness, and free testing and treatment at local centers to control HIV/AIDS.
  - **Janani Suraksha Yojana (JSY):** Promotes institutional deliveries and reduces maternal and infant mortality by providing cash incentives to pregnant women for childbirth in health facilities.
  - **Poshan Abhiyan (National Nutrition Mission):** Targets malnutrition through community-based interventions including supplementary nutrition, health education, and monitoring of mothers and children.

## Why Geriatric and Maternal Healthcare Are Vital for Social Development

### 1. Geriatric Healthcare

- ✓ **Ageing Population:** As per the 2021 Elderly in India report, the proportion of elderly (60+ years) is projected to rise from 10% (2021) to 20% by 2050.
- ✓ **Healthcare Burden:** Elderly are prone to non-communicable diseases (NCDs) like diabetes, hypertension, cancer, and dementia, requiring long-term care.
- ✓ **Social Isolation and Mental Health:** Older adults often face depression, loneliness, and neglect, especially in nuclear families and urban settings.
- ✓ **Economic Dependency:** Many elderly lack pension, social security, or access to affordable healthcare, worsening their vulnerability.
- ✓ **Elderly Women's Vulnerability:** Elderly women are more likely to be widowed, dependent, and suffer from chronic ailments, making them doubly vulnerable.
- ✓ **Burden of Non-Communicable Diseases (NCDs):** More than 70% of elderly deaths are due to NCDs (WHO India). This burden affects not just health systems but also the economic productivity of caregivers and families.
- ✓ **Economic and Intergenerational Impact:** Rising elderly healthcare costs without social security leads to intergenerational poverty and financial stress in families.
- ✓ **Lack of Geriatric Infrastructure:** There are very few dedicated geriatric wards in hospitals and a severe shortage of trained geriatricians, especially in rural areas.
- ✓ **Human Rights Perspective:** Access to healthcare for the elderly is a matter of dignity, equality, and justice, central to the principles of a welfare state.
- ✓ **Political Participation and Inclusion:** A healthy elderly population is more likely to engage in community affairs, volunteering, and local governance, enriching social capital.

### 2. Maternal Healthcare

- ✓ **High Maternal Mortality Rate (MMR):** Although India's MMR has improved to 97 per 100,000 live births (2020), it still lags behind the SDG target of 70.
- ✓ **Anemia and Malnutrition:** Over 50% of Indian women of reproductive age are anemic, impacting pregnancy outcomes.
- ✓ **Access and Quality Issues:** Rural areas and poorer states still suffer from shortage of obstetric services, skilled birth attendants, and institutional deliveries.
- ✓ **Social Development Link:** Healthy mothers ensure lower infant mortality, better child nutrition, and overall human capital development.
- ✓ **Demographic Dividend Utilization:** Healthy mothers are key to nurturing a healthy next generation, critical to reaping the benefits of India's demographic dividend.
- ✓ **Maternal Mental Health:** Postpartum depression and related issues are poorly recognized but have long-term impacts on both the mother and child's development.
- ✓ **Synergy with Education and Employment:** Healthy mothers are more likely to ensure education and care for children, thereby enhancing future workforce quality and productivity.

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## Strategies for Improvement

- **Regulatory Reforms:** Implement risk-based tiered regulations for easier approvals, especially for low-risk clinics.
- **Health-Education-Livelihood (HEL) Campuses:** Integrated rural campuses combining healthcare, skill development, and health-tech innovation.
- **Ayush in Action:** Integrate AYUSH practitioners into mainstream.
- **Expansion of ABHA (Ayushman Bharat Health Account):** Leveraging AI for hyperlocal public health insights and targeted preventive care.
- **Women-Led Health Panchayats:** Empowering women-led health councils at the panchayat level with rewards for performance.
- **Public health expenditure:** Aim to raise government spending to at least 2.5% of GDP.
- **Strengthen human resources:** Recruitment and retention of nurses, doctors, and frontline workers like ASHAs.
- **Ensure last mile delivery:** Strengthen Health and Wellness Centres for comprehensive rural outreach.

## Primary health structure: Necessary precondition for Sustainable Development

- **Healthy Population = Productive Workforce:** Good health at the grassroots level increases labor productivity and economic participation.
- **Reduced Poverty:** Ill-health leads to high out-of-pocket expenditure and loss of income, pushing families into poverty; PHC mitigates this risk.
- **Population Control and Women's Empowerment:** PHC provides maternal and reproductive health services, empowering women and controlling population growth.
- **Environmental Sustainability:** PHC promotes health education, sanitation, and hygiene, reducing environmental degradation linked to disease.
- **Alignment with SDGs:** PHC underpins several Sustainable Development Goals (SDGs), including no poverty (SDG 1), good health and well-being (SDG 3), quality education (SDG 4), and reduced inequalities (SDG 10)..
- **Promotion of Healthy Behaviors:** Community outreach and health education encourage lifestyles that prevent chronic diseases, enhancing quality of life and reducing future healthcare costs.
- **Strengthening Social Cohesion:** Community-based health initiatives foster trust between citizens and the state, promoting social stability and inclusiveness.
- **Empowerment through Health Literacy:** PHC equips individuals with knowledge about hygiene, nutrition, and disease prevention, enabling informed decisions and greater autonomy.
- **Facilitation of Universal Health Coverage (UHC):** Primary health care is the foundation for achieving UHC by making essential health services accessible to all without financial hardship.
- **Supporting Aging Populations:** PHC provides preventive and chronic care management critical for aging societies, reducing the burden on families and health infrastructure.
- **Environmental Health Linkages:** Primary health programs often integrate water, sanitation, and hygiene (WASH) initiatives, crucial for controlling diseases related to environmental degradation.
- **Catalyst for Inclusive Growth:** By reducing health inequalities, PHC helps bridge socio-economic divides, fostering inclusive and equitable development.

## Reforms advocated by Professor Amartya Sen in Primary Healthcare:

1. **Universal Basic Healthcare:** Public provision of essential healthcare services to all, especially the poor.
2. **Preventive and Community-Based Care:** Focus on immunization, nutrition, maternal and child health.

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3. **Increased Public Investment:** Raise public spending on health to at least match global standards.
  4. **Decentralized Health Services:** Local governance in managing primary health centers (PHCs).
  5. **Integration of Health and Education:** Combine health interventions with school-based programs.
  6. **Combat Malnutrition:** Address child and maternal malnutrition as a top health priority.
  7. **Equity in Healthcare Access:** Reduce urban-rural and rich-poor disparities in healthcare availability.
  8. **Monitoring and Accountability:** Create mechanisms for transparency and community monitoring.

### **Private Sector Role in bridging the gap of Urban Healthcare system**

India's public health system faces several challenges such as inadequate infrastructure, shortage of healthcare professionals, and funding constraints, limiting its capacity to provide Universal Health Coverage (UHC). The private sector, which accounts for a significant share of healthcare delivery, can potentially help bridge this gap, but there are concerns also.

#### **Advantages:**

- **Infrastructure and Technology:** The private sector often has better infra, advanced tech, and specialized services that complement public health facilities.
- **Efficiency and Innovation:** Private healthcare providers can bring innovation, efficiency, and patient-centric services.
- **Expanded Access:** Especially in urban and semi-urban areas, private providers increase the availability of health services, reducing pressure on public hospitals.
- **Faster Service Delivery:** Private hospitals and clinics often have shorter waiting times and more streamlined processes compared to overloaded public facilities.
- **Specialized and High-End Care:** Private sector provides access to specialized treatments, super-specialty care, and advanced surgeries which may be limited in public hospitals.
- **Global Standards and Medical Tourism:** Many private hospitals adhere to international quality standards, attracting medical tourists, which contributes to the economy.
- **Patient-Centric Approach:** Market competition often pushes private providers to offer better amenities, personalized care, and improved patient satisfaction.
- **Flexibility and Adaptability:** Private providers can quickly adapt to changing healthcare needs (e.g., COVID-19 response), deploying resources faster than bureaucratic public systems.
- **Complementary Role:** Private sector services can fill gaps in areas like diagnostics, rehabilitation, and chronic disease management where public services may be weak.

#### **Challenges of Private Sector Involvement in Healthcare**

- **High Costs and Affordability Issues:** Private healthcare is often expensive, making it inaccessible to poor and marginalized populations without insurance or subsidies.
- **Profit Motive Over Public Health Goals:** Private providers may prioritize profitable treatments and specialties, neglecting essential but less lucrative primary and preventive care.
- **Unequal Geographic Distribution:** Private healthcare facilities are predominantly concentrated in urban and metro areas, leaving rural and remote regions underserved.
- **Variable Quality and Regulation Gaps:** Lack of uniform regulation leads to wide disparities in service quality, with some private providers practicing unethical behavior or malpractice.
- **Fragmented Healthcare System:** Uncoordinated private services can result in duplication, inefficiencies, and poor continuity of care, especially for chronic diseases.
- **Risk of Over-Medicalization and Unnecessary Procedures:** There are concerns about overtreatment, unnecessary diagnostics, and surgeries motivated by financial gain rather than patient need.

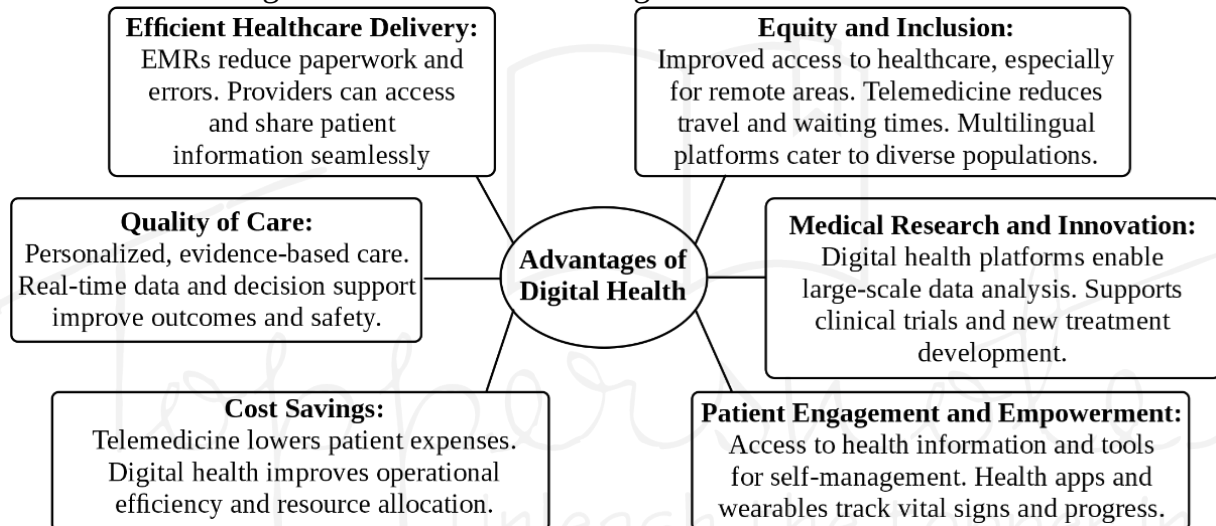
- **Limited Data Sharing and Integration:** Private sector often lacks integration with public health data systems, making disease surveillance and policy planning difficult.
- **Insurance and Out-of-Pocket Burden:** Private treatment often requires out-of-pocket payments; insurance penetration is low and many schemes have limited coverage.
- **Ethical Concerns and Commercialization:** Commercial interests may lead to exploitation of vulnerable patients, with inflated billing and unnecessary prescriptions.
- **Limited Focus on Public Health Emergencies:** Private facilities may not prioritize communicable diseases, vaccinations, or other public health interventions crucial for population health.

## Digital Healthcare

Integration of medical services and IT technologies to improve patient care, monitoring, and management.

### ➤ **Key Components:**

- ✓ Telemedicine: Remote consultation and treatment.
- ✓ Robot-assisted surgeries: High-precision surgeries using robotics.
- ✓ Self-monitoring devices: Track health metrics.
- ✓ Electronic Health Records (EHRs): Digital patient data.
- ✓ E-pharmacies: Online medicine purchase.
- ✓ E-insurance: Digital health insurance management.



### ➤ **Challenges:**

- ✓ Inadequate infrastructure in public health centers and hospitals.
- ✓ Fragmented service delivery across small facilities increases costs.
- ✓ Limited Health IT vendors to drive innovation and maintain standards.
- ✓ Other issues: Internet access, data security, and standardization of information.

## **National Digital Health Mission (NDHM)**

- **Purpose:** Digitize healthcare in India by linking all stakeholders through digital platforms.
- **Goals:** Enhance efficiency, transparency, and effectiveness in healthcare; aid achievement of health-related SDGs.
- **Supporting Initiatives:**
  - ✓ **National Digital Health Blueprint (NDHB):** Plan for integrated digital health services.
  - ✓ **National Health Mission (NHM):** Funding for telemedicine, tele-radiology, tele-oncology, tele-ophthalmology, and hospital information systems.
  - ✓ **National Health Stack (Niti Aayog):** Shared digital infrastructure for rapid development of health solutions.

## Way Forward

- **Leverage Aadhaar:** Digitize patient data from hospitals, labs, and clinics.
- **Consent-based Data Sharing:** Ensure individuals control their health information.
- **Telemedicine Expansion:** Integrate telemedicine in PHCs, health & wellness centers, and sub-centres; link to specialty hospitals.
- **Model Digital Health Centers:** Rural centers with one doctor (MBBS/Ayush), pharmacist, and IT operator.
- **Low-cost Drug Delivery:** Combine Jan Aushadhi Yojana with e-pharmacies (e.g., 1mg, Netmeds) for affordable medicine access.

## Medical Tourism

Medical tourism refers to international travel to India for advanced or elective medical procedures. In 2023, India attracted 9.23 million international tourists seeking healthcare services.

### **Advantages of India as a Medical Tourism Destination**

- World-class healthcare at a fraction of global costs.
- Highly qualified doctors and English-speaking staff.
- Optimum utilisation of health infra which otherwise may be underutilised
- Advanced medical infrastructure and technology.
- No long waiting periods compared to Western countries.
- Availability of AYUSH treatments (Ayurveda, Yoga, etc.) for holistic healing.
- Forex growth → \$9 billion revenue from MVT & wellness tourism by 2026.
- Global recognition and soft power diplomacy of India
- Development of ancillary services as transports, logistics etc.

### **Challenges**

- Lack of a centralized digital portal for patients.
- Inconsistent quality and accreditation across hospitals.
- Language barriers & cultural differences → lack of trained interpreters
- Post-treatment follow-up and legal redressal issues.
- Competition from Thailand, Malaysia, Turkey, etc.
- Lack of an unified medical tourism ecosystem in India
- Limited global reach and branding of Indian hospitality and services
- Visa and administrative delays → Hinders progress
- Medical tourism mostly urban centric → price inflation challenges
- Underutilised AYUSH potential → no proper research or certification

### **Steps Taken to Promote medical tourism in India**

- Issuance of Special and E-Medical Visas for travelers from 156 countries.
- Market Development Assistance Scheme by the Ministry of Tourism.
- National Strategy for Medical Value Travel (MVT) 2022 to position India as a global healthcare hub.
- “Heal in India” campaign promoting wellness and medical services.
- Accreditation of 37 hospitals (30 private) across 17 cities.
- Planned online MVT portal for bookings, payments, and post-treatment care.

### **Future Roadmap**

- Health insurance portability with global coverage through international TPAs.
- Establishment of dedicated medical enclaves with PPP incentives.
- Development of wellness tourism zones supported by state governments.

- Capacity building to expand infrastructure and workforce.
- Creation of a unified digital portal integrating all patient services.
- Strengthening public-private partnerships (PPP) for innovation and service delivery.
- Implementation of Kayakalp models for improved hygiene and quality.
- Outcome-based financing linking grants to state performance.
- Zonal bio-surveillance labs creation in collaboration with ICMR
- Develop India's Centre for disease control on lines of US CDC
- Development of a district health index to measure local performance.
- Ensuring universal access to essential medicines aligned with local disease burden.

### **Growing Fast Food industries & Increased health concerns in Indian Society**

- **Urbanisation & time scarcity:** Long work hours, traffic and nuclear families increase dependence on quick meals.
- **Changing lifestyles & food habits:** Eating out seen as leisure; westernisation of diets, especially among youth.
- **Rising disposable incomes:** Expanding middle class can afford frequent fast food consumption.
- **Aggressive marketing strategies:** Celebrity endorsements, discounts, combo offers and digital advertising dilute health concerns.
- **Digital food delivery boom:** Platforms like Swiggy/Zomato increase accessibility and frequency of consumption.
- **Localisation of menus:** Indianised fast food (paneer, veg options) reduces resistance to consumption.
- **Socialisation role:** Fast food outlets act as informal social and family spaces in urban areas.
- **Taste & standardisation:** Predictable taste and affordability outweigh nutritional considerations.
- **Awareness-behaviour gap:** Knowledge of health risks does not always translate into healthier choices.
- **Weak regulation & labeling:** Limited enforcement of nutritional warnings compared to tobacco or alcohol.

### **Health and Sustainable Development Goals**

Health is a critical determinant of sustainable development. The United Nations Sustainable Development Goals (SDGs), adopted in 2015 under the 2030 Agenda for Sustainable Development, emphasize a holistic approach to improving health outcomes as a prerequisite for ending poverty, ensuring education, gender equality, and environmental protection.

**SDG 3:** Ensure Healthy Lives and Promote Well-being for All at All Ages. Key targets under this goal includes:

- **Target 3.1:** Reduce maternal mortality to <70 per 100,000 live births.
- **Target 3.2:** End preventable deaths of newborns and children under 5.
- **Target 3.3:** End epidemics of AIDS, TB, malaria, and NTDs.
- **Target 3.4:** Reduce NCDs by one-third through prevention and treatment.
- **Target 3.6:** Halve global deaths/injuries from road traffic accidents.
- **Target 3.7:** Universal access to sexual and reproductive healthcare.
- **Target 3.8:** Achieve Universal Health Coverage (UHC).
- **Target 3.b:** Support research for vaccines and medicines.
- **Target 3.c:** Increase health financing and workforce.
- **Target 3.d:** Strengthen health emergency preparedness (e.g., pandemics).

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## India's Progress on SDG 3 (NITI Aayog SDG Index 2024)

- **Maternal Mortality Ratio (MMR):** Reduced to 97/1,00,000 (Sample Registration System, 2020)
- **Under-5 Mortality Rate:** 32 per 1000 live births
- **Immunization Coverage:** Approx 76% full immunization (NFHS-5)
- **Universal Health Coverage:** Still evolving; Ayushman Bharat is a major initiative
- **Non Communicable Diseases:** Rising burden account for 60% of deaths in India

## Government Initiatives Aligning with SDG 3

### 1. Ayushman Bharat (2018)

- ✓ Two pillars:
  - **PM-JAY:** ₹5 lakh health insurance per family/year for secondary & tertiary care.
  - **Health & Wellness Centres:** Focus on comprehensive primary healthcare.
- ✓ Aimed at achieving Universal Health Coverage (UHC)

### 2. POSHAN Abhiyaan (2018)

- ✓ National Nutrition Mission to address malnutrition, stunting, wasting, and anemia.
- ✓ Uses Jan Andolan (people's movement) for behavior change.

### 3. National Health Mission (NHM)

- ✓ Umbrella scheme with: NRHM (Rural) and NUHM (Urban).
- ✓ Strengthens health systems, maternal & child health, immunization & disease control.

### 4. Mission Indradhanush

- ✓ Aims for 100% immunization coverage of children and pregnant women.
- ✓ Includes Intensified Mission Indradhanush (IMI) for rapid coverage.

### 5. PM National Dialysis Programme

- ✓ Free dialysis services in district hospitals.
- ✓ Addresses the burden of chronic kidney disease.

### 6. Pradhan Mantri Matru Vandana Yojana (PMMVY)

- ✓ ₹5,000 maternity benefit for pregnant and lactating mothers (first child).
- ✓ Supports maternal nutrition and health.

### 7. National Digital Health Mission (NDHM) / Ayushman Bharat Digital Mission

- ✓ Digital Health ID for every citizen. Creates an integrated digital health ecosystem.

### 8. National Programme for Prevention and Control of NCDs (NP-NCD)

- ✓ Early screening, diagnosis, and management of Diabetes, hypertension, cancer, cardiovascular diseases, etc.

### 9. FIT India Movement

- ✓ Promotes physical activity and mental well-being
- ✓ Targets schools, workplaces, and public institutions

### 10. Eat Right India & FSSAI Initiatives

- ✓ Promotes safe, healthy, and sustainable diets
- ✓ Focus on food fortification (iron, vitamin A, iodine, etc.)

### 11. National Mental Health Programme (NMHP)

- ✓ Aims to provide accessible mental healthcare services
- ✓ District Mental Health Programs operational across states

### 12. National Tobacco Control Programme

- ✓ Public awareness, enforcement of COTPA, and tobacco cessation services