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CHAPTER 4 – POVERTY

Introduction

Providing minimum basic needs to the people and reduction of poverty have been the major aims of independent India.

Poverty is a state or condition in which a person or community lacks the financial resources and essentials for a minimum standard of living.

Poverty is not only a challenge for India, as more than one fifth of the world's poor live in India alone; but also, for the world, where about 300 million people are not able to meet their basic needs.

Poverty has many dimensions, it has to be looked at through a variety of indicators — levels of income and consumption, social indicators, and indicators of vulnerability to risks and of socio-political access.

Who are the poor:

Poor is described as any person, who is deprived of the basic necessities i.e., the one who cannot afford to have food, shelter, clothing, education, and health care facilities along with economic activity.

- The poor people possess few assets and reside in kutcha hutments. The poorest of them do not even have such dwellings.
- In rural areas many of them are landless. Even if some of them possess land, it is only dry or waste land.
- Starvation and hunger are the key features of the poorest households. Many do not get to have even two meals a day.
- The poor lack basic literacy and skills and hence have very limited economic opportunities. They also face unstable employment. They are not able to negotiate their legal wages from employers and are exploited.
- Malnutrition is alarmingly high among the poor. Ill health, disability or serious illness makes them physically weak.
- They borrow from moneylenders, who charge high rates of interest that lead them into chronic indebtedness.
- Most poor households have no access to electricity, safe drinking water, cleaner cooking fuel etc.
- There is extreme gender inequality in the participation of gainful employment, education and in decision-making within the family. Poor women receive less care on their way to motherhood.

Economists' views

Economists identify the poor on the basis of their occupation and ownership of assets.

- They state that the rural poor work mainly as landless agricultural labourers, cultivators with very small landholdings, or landless labourers, who are engaged in a variety of non-agricultural jobs and tenant cultivators with small land holdings.
- The urban poor are largely the overflow of the rural poor who had migrated to urban areas in search of alternative employment and livelihood, labourers who do a variety of casual jobs and the self-employed who sell a variety of things on roadsides and are engaged in various activities. Push-cart vendors, street cobblers, women who string flowers, rag pickers, vendors and beggars are some examples of poor and vulnerable groups in urban areas.

How are poor people identified?

Pre-Independence

In pre-independent India, Dadabhai Naoroji was the first to discuss the concept of a Poverty Line.

He used the menu for a prisoner and used appropriate prevailing prices to arrive at what may be called **'jail cost of living'**.

Making some adjustments to account for children (as they do not stay in jails), he assumed that one-third population consisted of children and half of them consumed very little while the other half consumed half of the adult diet.

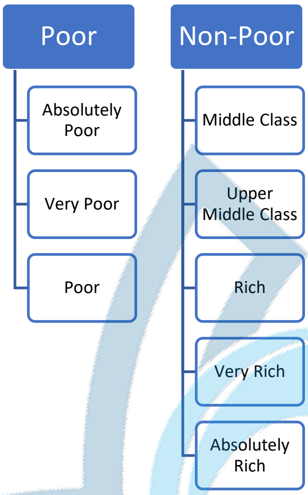
This is how he arrived at the factor of three-fourths; (1/6)(Nil) + (1/6)(Half) + (2/3)(Full) = (3/4) (Full).

Post-Independence

In post-independent India, there have been several attempts to identify the poor.

- For instance, in 1962, the Planning Commission now called as NITI Aayog formed a Study Group.
- In 1979, another body called the 'Task Force on Projections of Minimum Needs and Effective Consumption Demand' was formed.
- In 1989 and 2005, 'Expert Groups' were constituted for the same purpose.
- Besides the Planning Commission, many individual economists have also attempted to develop such a mechanism.

For the purpose of defining poverty, we divide people into two categories; the poor and the non-poor and the poverty line separates the two.



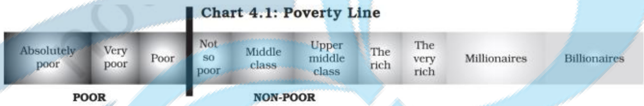


Chart 4.1: Poverty Line

Source: NCERT

Categorising Poverty:

There are many ways to categorise poverty

❍ Chronic poor

This category includes:

- people who are ***always poor***
- people who are ***usually poor*** (They may sometimes have a little more money i.e., casual workers)

❍ Transient poor

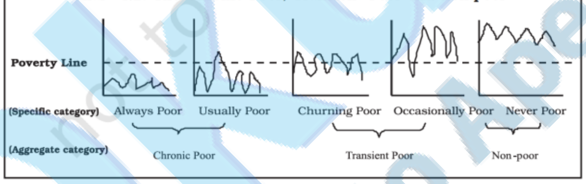
This includes:

- ***churning poor*** who regularly move in and out of poverty (example: small farmers and seasonal workers)
- ***occasionally poor*** who are rich most of the time but may sometimes have a patch of bad luck.

❍ Non-poor

This includes those who are ***never poor***.

Chart 4.2: The Chronic Poor, Transient Poor and Non-poor



Source: NCERT

The Poverty Line

There are many ways of measuring poverty.

- By the **monetary value (per capita expenditure)** of the minimum calorie intake that was estimated at 2,400 calories for a rural person and 2,100 calories for a person in the urban area. Based on this, in 2011-12, the poverty line was defined for rural areas as consumption worth Rs 816 per person a month and for urban areas it was Rs 1,000.
- Government uses Monthly Per Capita Expenditure (MPCE) as proxy for income of households to identify the poor.

Issues with this mechanism:

- It groups all the poor together and does not differentiate between the very poor and the other poor.
- It takes into account expenditure on food and a few select items as proxy for income
- It helps in identifying the poor as a group to be taken care of by the government, but it would be difficult to identify who among the poor need help the most.

There are many factors, other than income and assets, which are associated with poverty; for instance, the accessibility to basic education, health care, drinking water and sanitation. They need to be considered to develop Poverty Line.

The existing mechanism for determining the Poverty Line also does not take into consideration social factors that trigger and perpetuate poverty such as illiteracy, ill health, lack of access to resources, discrimination or lack of civil and political freedoms.

Government claims that higher rate of growth, increase in agricultural production, providing employment in rural areas and economic reform packages introduced in the 1990s have resulted in a decline in poverty levels, economists raise doubts about the government's claim.

They point out that the way the data are collected, items that are included in the consumption basket, methodology followed to estimate the poverty line and the number of poor are manipulated to arrive at the reduced figures of the number of poor in India.

Due to various limitations in the official estimation of poverty, scholars have attempted to find alternative methods. For instance, Amartya Sen, noted Nobel Laureate, has developed an index known as Sen Index. There are other tools such as Poverty Gap Index and Squared Poverty Gap.

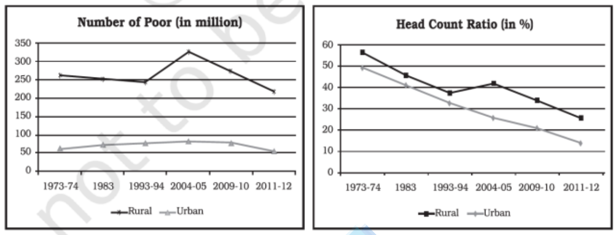
The number of poor in India

When the number of poor is estimated as the proportion of people below the poverty line, it is known as 'Head Count Ratio'.

The official data on poverty is now made available to the public by the NITI Aayog. It is estimated on the basis of consumption expenditure data collected by the National Sample Survey Organisation (NSSO) now called as National Statistical Office.

Chart below shows the number of poor and their proportion to the population in India for the years 1973-2012.

Chart 4.3: Trends in Poverty in India, 1973–2012



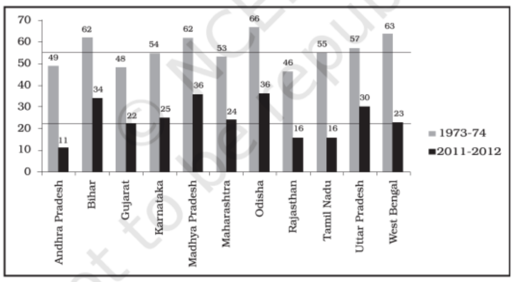
Source: NCERT

Major observations:

- In 1973-74, more than 320 million people were below the poverty line. In 2011-12, this number has come down to about 270 million.
- In terms of proportion, in 1973-74, about 55 per cent of the total population was below the poverty line. In 2011-12, it has fallen to 22 per cent.
- In 1973-74, more than 80 per cent of the poor resided in rural areas and this situation has not changed even in 2011-12.
- In the 1990s, the absolute number of poor in rural areas had declined whereas the number of their urban counterparts increased marginally.
- The poverty ratio declined continuously for both urban and rural areas.
- During 1973-2012, there has been a decline in the number of poor and their proportion but the nature of decline in the two parameters is not encouraging.
- The ratio is declining much slower than the absolute number of poor in the country.
- The gap between the absolute number of poor in rural and urban areas got reduced whereas in the case of ratio the gap has remained the same until 1993-94 and has widened in 2011-12.

The state level trends in poverty are shown in chart below:

Chart 4.4: Population Below Poverty Line in Some Large States, 1973-2012 (%)



Note: *For the year 1973, Uttar Pradesh includes the present Uttarakhand; Madhya Pradesh includes Chhattisgarh and Bihar includes Jharkhand.*

The first line from below indicates poverty level during 2011-12 and the other line indicates the same for the year 1973-74.

Major observations:

- The proportion of poor in India during 1973-2012 has come down from 55 to 22 per cent.
- Six states - Tamil Nadu, Uttar Pradesh, Bihar, Madhya Pradesh, West Bengal and Orissa - contained a large section of poor in 1973-74.
- Poverty levels in four states - Odisha, Madhya Pradesh, Bihar and Uttar Pradesh are still far above the national poverty level.
- West Bengal and Tamil Nadu reduced poverty level much better than other states.

What causes poverty?

The causes of poverty can be a result of:

- social, economic and political inequality
- social exclusion
- unemployment
- indebtedness
- unequal distribution of wealth.

Main causes of poverty are:

❍ **Institutional and Social factors**

- lack of quality education and inability to acquire skills
- **rapidly rising population**
- **inadequate access to clean water, nutritious food, sanitation and hygiene**
- **little or no access to livelihoods or jobs**
- indebtedness
- caste, religious and other discriminatory practices

❍ **Economic factors**

- low capital formation
- **low agricultural productivity**
- **low rate of economic development:**
- lack of demand
- **unemployment**
- pressure of population
- lack of social/welfare nets.

Policies and programmes towards poverty alleviation

According to the First Five Year Plan (1951-56), "the urge to bring economic and social change under present conditions comes from the fact of poverty and inequalities in income, wealth and opportunity".

The Second Five Year Plan (1956-61) also pointed out that "the benefits of economic development must accrue more and more to the relatively less privileged classes of society".

The government's approach to poverty reduction was of three dimensions:

I. Growth oriented approach

It is based on the expectation that the effects of economic growth — rapid increase in gross domestic product and per capita income — would spread to all sections of society and will trickle down to the poor sections also.

It was felt that rapid industrial development and transformation of agriculture through green revolution in select regions would benefit the underdeveloped regions and the more backward sections of the community.

Issues:

- Overall growth and growth of agriculture and industry have not been impressive.
- Population growth has resulted in a very low growth in per capita incomes.
- The gap between poor and rich has actually widened.
- The Green Revolution exacerbated the disparities regionally and between large and small farmers.

II. Incomes and employment for the poor could be raised through the creation of

additional assets and by means of work generation.

This approach has been initiated from the Third Five Year Plan (1961-66)

- Expanding self-employment programmes and wage employment programmes are being considered as the major ways of addressing poverty.
- Examples of self-employment programmes implemented until 2008 were
  - **Rural Employment Generation Programme (REGP)**, aimed at creating self-employment opportunities in urban area implemented by the Khadi and Village Industries Commission. Under this programme, one could get financial assistance in the form of bank loans to set up small industries.
  - Under **Prime Minister's Rozgar Yojana (PMRY)**, the educated unemployed from low-income families in rural and urban areas could get financial help to set up any kind of enterprise that generates employment.
  - **Swarna Jayanti Shahari Rozgar Yojana (SJSRY)** mainly aimed at creating employment opportunities— both self-employment and wage employment—in urban areas.
  - **Swarnajayanti Gram Swarozgar Yojana (SGSY)** is a self-employment programme in which through banks, the government provides partial financial assistance to SHGs which then decide whom the loan is to be given to for self-employment activities
    This has now been restructured as National Rural Livelihoods Mission (NRLM) and renamed as Deendayal Upadhyay Antyodaya Yojana
    National Urban Livelihoods Mission has also been in place for urban poor.
  - **Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA)** – to provide guaranteed wage employment to every rural household whose adult volunteer is to do unskilled manual work for a minimum of 100 days in a year. Under this Act, all those among the poor who are ready to work at the minimum wage can report for work in areas where this programme is implemented.
  - In 2018-19, nearly five crore households got employment opportunities under this law

III. To **provide minimum basic amenities** to the people like — provision of food grains at subsidised rates, education, health, water supply and sanitation—people's living standard could be improved.

- Programmes under this approach are expected to supplement the consumption of the poor, create employment opportunities and bring about improvements in health and education.
- Three major programmes that aim at improving the food and nutritional status of the poor are - Public Distribution System, Integrated Child Development Scheme and Midday Meal Scheme.
- **Pradhan Mantri Gram Sadak Yojana** and **Valmiki Ambedkar Awas Yojana** are also attempts in developing infrastructure and housing conditions.
- **National Social Assistance Programme** is a programme initiated by the central government under which elderly people who do not have anyone to take care of them are given pension to sustain themselves. Poor women who are destitute and widows are also covered under this scheme.
- The government has also introduced a few schemes to provide health insurance to poor people. From 2014, a scheme called **Pradhan Mantri Jan-Dhan Yojana** is available in which people in India are encouraged to open bank accounts. Besides promoting savings habit, this scheme intends to transfer all the benefits of government schemes and subsidies to account holders directly. Each bank account holder is also entitled to Rs. 1 lakh accident

insurance and Rs. 30,000 life insurance cover.

Poverty alleviation programmes — a critical assessment

Despite various strategies to alleviate poverty, hunger, malnourishment, illiteracy and lack of basic amenities continue to be a common feature in many parts of India.

While assessing these poverty alleviation programmes, three major areas of concern which prevent their successful implementation are:

Due to unequal distribution of land and other assets, the amount of resources allocated for these programmes is not sufficient

Non-participation of local level institutions in programme implementation because these programmes depend mainly on government and bank officials for their implementation. Since such officials are ill motivated, inadequately trained, corruption prone and vulnerable to pressure from a variety of local elites, the resources are inefficiently used and wasted.

Lack of active participation of the poor, this can be eradicated through a process of social mobilisation, encouraging poor people to participate and get them empowered.

Conclusion

- The objective of all our policies had been stated as promoting rapid and balanced economic development with equality and social justice.
- Poverty alleviation has always been accepted as one of India's main challenges by the policy makers, regardless of which government was in power.
- The absolute number of poor in the country has gone down and some states have less proportion of poor than even the national average.
- There is improvement in terms of per capita income and average standard of living; some progress towards meeting the basic needs has been made.
- But when compared to the progress made by many other countries, our performance has not been impressive
- The fruits of development have not reached all sections of the population.
- Some sections of people, some sectors of the economy, some regions of the country can compete even with developed countries in terms of social and economic development, yet, there are many others who have not been able to come out of the vicious circle of poverty.

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CHAPTER 18 – BUDGET, TAXATION AND PUBLIC FINANCE

Fiscal Policy

'Fiscal' is a word derived from Greek. It means 'basket' and symbolizes the public purse.

Fiscal Policy is the set of Government's decisions regarding taxation, expenditure, subsidies and other financial operations.

Using fiscal policy, Government influences the savings, investment and consumption in an economy, to accomplish certain national goals such as income redistribution, socio-economic welfare, economic development and inclusive growth.

A well-planned Fiscal Policy can help:

- **To Provide Full Employment**: through rural employment programmes like MGNREGA etc.
- **To Fight Inflation:** Higher Income tax → disposable income will decrease → demand curbed; To fight deflation: direct and indirect taxes are reduced to boost demand.
- **To Boost Economic Growth:** Provide income tax benefits on household savings in LIC/Mutual Fund etc. → industries get new capital investment → factory expansion, jobs, GDP growth.
- **To Boost Inclusive Growth:** Higher taxes on rich → use money for health, education, women, poverty removal programs.
- **To Boost Regionally Balanced Growth:** Tax benefits are given to industrialists for setting up factories in North East, Left-wing Extremism (LWE) & other backward areas.
- **Exchange Rate Stability:** Tax benefits are given to exporters to boost exports; while impose higher taxes on imported items to reduce imports. Thus, Current Account Deficit (CAD) would be under control → ₹ : $ Exchange rate volatility controlled.

Budget

Budget is an annual financial statement containing estimated revenues and expenditures for the next financial year.

Budget is the primary tool used by Government to implement its fiscal policy.

Funds related to Budget

Consolidated Fund of India (Article 266): It includes money from taxes, loans raised, loans recovery etc.

Prior permission of Parliament is needed for withdrawal except charged expenditures like salaries of President, Vice-President, Judges etc.

Public Account of India (Article 266): It includes money from Provident Fund, Postal deposits etc. Government acts as banker transferring funds from one account to another, hence Parliament's permission is not required.

If separate fund for a specific expenditure is to be created for the first time, then parliament permission is needed for its creation, e.g., Central Road Fund Act 2000, where Road Cess on Petrol, Diesel would be deposited.

Contingency Find of India (Article 267): Money is withdrawn from this account in case of any emergency. This fund is operated by Finance Secretary on behalf of President of India.

It is refilled using money from Consolidated Fund of India.

Donation Funds

PMNRF	PM-CARES
Prime Minister's National Relief Fund	Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund
It was started by Congress Government in 1948.	It was started by NDA Government in 2020.
• Originally for helping Pak-refugees. • Nowadays, for floods, cyclones, earthquakes, accidents, heart/kidney transplant, cancer,	For dealing with any kind of emergency or distress situation, e.g., COVID-19 pandemic.

acid attack, riots etc.	
• Not setup by Parliament. (Non-Statutory) • No support given from the budget. • Only runs from donations of ordinary people and institutions & foreigners' donations.	
• Donors get Income tax exemption. • If company donates money, then it is counted under Corporate Social Responsibility (CSR).	
Operated by Prime Minister's Office (PMO).	
PM is the ex-officio chairman. He is assisted by officers.	• Prime Minister is the ex-officio Chairman. • **Ex-officio Trustees:** Ministers of Defence, Home Affairs, Finance • **3 Nominated Trustees:** Experts from health, science, social work, law etc. nominated by PM

Note:

- In 1962, a separate 'National Defence Fund' was set up under PM to help military & paramilitary forces' families. Other features mostly similar to above funds.
- Usually, such Government donation funds are registered under Indian Trust Act, 1882.
- But, some legal experts/critics suggest these donations should be brought under Public Account/Consolidated Fund to bring accountability and transparency.

Recent Controversy: *PM CARES Fund officials refused to give information to a person under Right to information Act (RTI).*

Documents related to Budget

Budget is derived from a French word 'bougette' meaning a leather bag/suitcase.

Finance Minister would keep documents in it and present in parliament.

In 2019, Finance Minister Nirmala Sitharaman ended this colonial practice by presenting the budget in a traditional four-fold red cloth ledger.

CEA K.Subramanian said the 'budget documents' inside this red-cloth should be called "Bahi-Khata".

While the term 'budget' is not given in our constitution, but for each financial year, the Government is required to present following documents in the parliament:

Annual Financial Statement (Article 112): It contains receipt and expenditure of last year and projections for the next year.

- The revenue expenditure must be shown separately from other expenditures.
- There is no compulsion to present railway budget and general budget separately.
- There is also no compulsion to show plan expenditure separately from non-plan expenditure.

Finance Bill (Article 110): It is a type of Money bill to obtain Parliament's permission to collect taxes. Parliament can reduce or abolish a tax proposed by the Government, but Parliament cannot increase tax beyond what Government has proposed in the Finance bill.

E.g., If Modi Government's Finance bill proposes "we want to increase tax on imported machinery from 25% to 35%". Then

- Members of parliament can vote to allow tax at 35%/reduce/remove it.
- Members of parliament cannot vote to increase the tax to 45%.

Appropriation Bill (Article 114): It is presented to obtain Parliament's permission to spend money from Consolidated Fund of India.

Such expenditure can be of two types:

- The expenditures 'charged' upon the Consolidated Fund of India, e.g., salaries of President, Vice President, Judges etc. They can be discussed but they are non-votable and automatically approved.

- The expenditure 'made' from CFI. E.g., Money for a scheme. They are discussed and voted.

The finance bill and appropriation bill are considered money bills under article 110. Therefore, Rajya Sabha approval is not necessary.

At maximum, Rajya Sabha can discuss it for 14 days and give suggestions to Lok Sabha for amendments, but those suggestions are not binding on the Lok Sabha.

Passing of the Budget

The budget goes through the following six stages in the Parliament:

1. Presentation of budget

2. General discussion

3. Scrutiny by departmental committees

4. Voting on demands for grants

5. Passing of appropriation bill

6. Passing of finance bill

*These stages are discussed in detail in **Indian Polity** course.*

Vote On Account

The Constitution does not mandate any specific date for presentation of the Budget, but it is presented to the Lok Sabha on such day as the President directs.

- **Before 2017:** It was presented on the last working day of February. Then it will pass through aforementioned six stages, hence consuming all the time up to May.
- But while those six stages were going on, the financial year will be over (on 31st March), so previous year's Appropriation Act's validity will be over.
- Then govt cannot withdraw money from the Consolidated Fund of India even for the routine expenditure like staff salary, electricity bills.
- So, to avoid such crisis, government will put a motion for vote on account.
- Here, parliament will allow the govt to spend some money from the CFI, till the Appropriation Act for next financial year is passed.
- Vote on Account is generally granted for two months for an amount equivalent to one-sixth of the total budget estimation.

From 2017 onwards, Government started presenting Budget on the first working day of February.

All the six stages are completed by the last week of March.

Appropriation bill gets passed and signed by President before completion of 31st March. So, they did not require vote on account in 2017, 2018.

However, in 2019's Interim Budget, Modi Govt demanded vote on account because they planned to place full-budget after general elections.

Interim Budget

Constitution does not define or mandates interim budget.

But, during election year or extreme situation (E.g., when coalition government may collapse before its term) then it is considered unethical for such Government to make drastic/populist changes in budget like "any monetary benefit scheme for the particular section of the society".

So, while they will present a budget in the regular manner, i.e., 3 documents (Annual Financial Statement, Finance Bill, Appropriation Bill) & 6 Stages of Passing. But it should not have grand populist announcements.

Such budgets are called Interim Budgets, and were presented in 2004 (Yashwant Singh), 2009 (Pranab Mukherjee), 2014 (P Chidambaram) and 2019 (Piyush Goyal).

Just like a Regular General Budget, an Interim budget is valid for the whole financial year, however in between if new government is formed, they may present another budget to change the provisions.

In Feb 2014, FM Chidambaram presented interim budget in 15th Lok Sabha, but then UPA defeated in general election. In July 2014, BJP's

FM Arun Jaitley presented Full General Budget in 16th Lok Sabha.

In Feb 2019, FM Piyush Goyal presented Interim budget in 16th Lok Sabha. In May 2019, NDA won General Election. In July 2019, FM Nirmala Sitharaman presented Full General Budget in 17th Lok Sabha.

Economic Survey

It is a two-volume document prepared by the Chief Economic Adviser (CEA) in the finance ministry.

- ✓ Volume 1 shows prospects & suggestions for the future years.
- ✓ Volume 2 shows annual data of past year.

There is no constitutional obligation to prepare or present it but usually it is presented in the parliament a day before the Union Budget.

In Feb 2019, economic survey was not presented before the interim budget.

In July 2019, Economic Survey presented before the Full General Budget.

While Budget is labelled after next financial year, the Economic survey is labelled after previous Financial Year.

E.g., The budget presented in Feb 2021 is labelled as "Budget 2021-22" while the survey presented on 29 Jan 2021 is labelled as "Economic Survey 2020-21".

Theme of Economic Survey 2020-21: **Saving Lives and Livelihoods**

Chief Economic Advisor (CEA)

- He falls under Finance ministry's Department of Economic Affairs.
- Usual tenure 3 years, re-appointment possible, but not a constitutional or statutory body. He has control over Indian Economic Service (IES) officers.
- Notable CEAs in Past: Manmohan Singh, Raghuram Rajan, Arvind Subramanian (2014-18), In Dec 2018, Krishnamurthy Subramanian became the new CEA.

Departments under Finance Ministry

❍ **Department of Economic Affairs (DEA)**

Functions:

- Fiscal policy, Preparation and presentation of Union budget including the Railway component of budget. Budget for union territories without legislature, budget for States under president rule.
- DEA announces the Interest rates of small saving schemes.
- DEA assigns infrastructure status to a particular sector, maintains a website www.pppinindia.gov.in, to provide information related to PPP.

Organizations under/related to DEA

- **Constitutional Body:** Finance Commission (Article 280), DEA liaisons with it.
- **Statutory Body**: Board for Industrial and Financial Reconstruction (BIFR) – abolished after the formation of another statutory body- Insolvency and Bankruptcy Board of India (IBBI) under Corporate Affairs Ministry.
- **Chief Economic Advisor (CEA)**.
- **Financial Stability and Development Council (FSDC):** It is neither Constitutional nor statutory body. FM is chairman. Members include the chiefs of all financial regulatory bodies such as RBI, SEBI, IRDAI, PFRDA and the chief of IBBI.
- **PSUs:** Security Printing and Minting Corporation of India Ltd. (SPMCIL). Registered under the Companies Act responsible for printing currency notes, coins, commemorative coins, cheques, postage stamps, non-judicial stamps, passports/visa and other travel documents etc.

❍ **Department of Expenditure**

- Here the Controller General of Account (CGA) from Indian Civil Accounts Service (ICAS) prepares estimate of how much money to be spent from consolidated fund of India.
- It also deals with Pay Commission reports, Pension Accounting office.
- Web Portals of Expenditure Department:
  - **Public Financial Management System (PFMS):** for disbursing money to various

Ministries and departments at Union and State level

- **Bharatkosh – Non-Tax Receipts Portal (NTRP):** For selling India yearbook, Yojana, Kurukshetra magazines etc. products and services by the government of India.

❍ Department of Revenue

Statutory Bodies/Quasi-judicial bodies:

- **Central Boards of Revenue Act 1963**
  - Central Board of Direct Taxes (CBDT): Department of Income Tax
  - Central Board of Indirect Taxes and Customs (CBIC). Before- 2018-March, it was known as Central Board of Excise and Customs (CBEC). It implements GST from 1st July 2017, under the 101st Constitutional Amendment Act, 2016.
- Authorities for Advance rulings under Acts for IT, Customs & Central Excise, GST.
- Various Tribunals and appellate bodies related to taxation.

Attached/Subordinate bodies:

- Enforcement Directorate (for enforcing PMLA and FEMA Act)
- Central Economic Intelligence Bureau
- Central Bureau of Narcotics Financial Intelligence Unit

Associated PSU

Goods and Service Tax Network (GSTN) is a non-profit company.

Originally its 51% shareholding was with HDFC, ICICI etc. but in 2018, Government decided to make it 100% owned by Union & State Governments.

❍ Department of Financial Services

Functions:

Schemes for Financial Inclusion, PSB supervision and recapitalization, Public Sector Financial Intermediaries, including their regulators (Except EPFO, ESIC etc.)

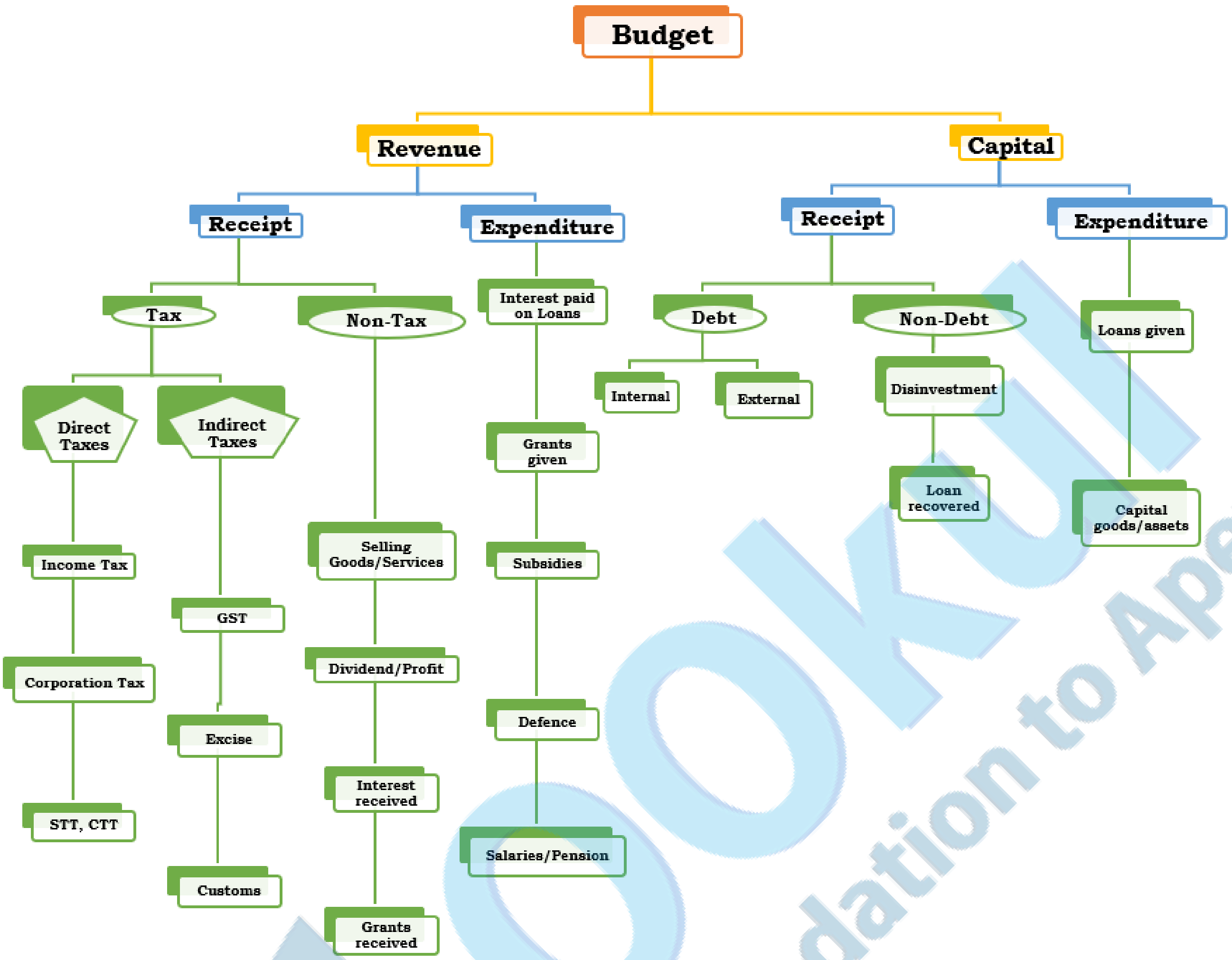
Organizations under/related to DFS:

- **Bank Board Bureau:** Neither Constitutional/statutory. It was setup through gazette notification for selection of top officials (MD, CEO, Chairman and full-time Directors) for PSBs, LIC and other public sector financial institutions.
- **PSU: National Credit Guarantee Trustee Company (NCGTC):** For providing credit guarantee for loans in Mudra, certain MSME loans, Stand up India, education-skill development related loans.

❍ DIPAM

Department of Investment and Public Asset Management (DIPAM) looks after Disinvestment of CPSE.

*The highest official in each of above 5 departments is called 'Secretary' who is usually an IAS, and among those 5 secretaries, the senior-most is designated as the **Finance Secretary**, who signs ₹ 1 note.*



Tax

Tax is defined as a mode of income redistribution.

The usual meaning of tax people think is that a tax is imposed by the government to fulfil its important obligations on the expenditure front.

Incidence of Tax: Point from where government collects the tax.

Impact of Tax: Point where the burden of tax is ultimately felt and can't be transferred elsewhere.

Types of Taxes

- **Direct and Indirect Tax**

Direct Tax

The tax which has incidence and impact, both at the same point is known as direct tax. E.g., Income Tax etc.

Indirect Tax

The tax which has the incidence and impact at the different points is known as indirect tax. E.g., GST etc.

Parameter	Direct Tax (Income Tax)	Indirect Tax (GST)
Incidence of Tax	Income Tax Assessse	Shopkeeper/Seller
Impact of Tax	Income Tax Assessee	Customer/Buyer
Incidence & Impact on	Same person	Different person

- **Progressive, Regressive and Proportional Tax**

Progressive Tax

Higher tax is charged from high income earning individuals.

E.g., Income tax slabs of 5%, 20%, 30% depending on individual's income.

Thus, richer the person, bigger proportion of his income will go into taxes. Thus, direct taxes are progressive in nature.

Regressive Tax

Same amount of money is charged as tax irrespective of individual's income.

E.g., 18% GST is charged on any food item. Then, all the persons whether he/she is rich or poor has to pay the same amount of money as tax when they purchase that item.

Indirect Taxes are regressive in nature.

Proportional Tax

If Government had a single 10% flat rate direct tax on income irrespective of whether an individual is poor, middle class, upper middle class or a rich person.

Then each taxpayers' same proportion of income (10%) will go into taxes.

Canon of Taxation

By canons of taxation, we simply mean the characteristics or qualities which a good tax system should possess.

In fact, canons of taxation are related to the administrative part of a tax. Adam Smith first devised the principles or canons of taxation in 1776.

Even in the 21st century, Smithian canons of taxation are applied by the modern governments while imposing and collecting taxes.

Adam Smith's four canons of taxation

- **Canon of Equality:** Canon of equality states that the burden of taxation must be distributed equally or equitably among the taxpayers.
  Rich people are capable of paying more taxes than poor people.
- **Canon of Certainty:** The tax which an individual has to pay should be certain and not arbitrary.
  According to A. Smith, the time of payment, the manner of payment, the quantity to be paid, i.e., tax liability, ought all to be clear and plain to the contributor and to everyone.
- **Canon of Convenience:** Taxes should be levied and collected in such a manner that it provides the greatest convenience. Tax payer shouldn't be made wait in a long queue or fill up 50 pages worth tax forms.
- **Canon of Economy:** This canon implies that the cost of collecting a tax should be as minimum as possible. Any tax that involves high administrative cost and unusual delay in assessment and high collection of taxes should be avoided altogether. To collect ₹ 100 crore tax, government shouldn't be spending ₹ 90 crores in salaries of tax officials.

Types Of Direct Taxes

Direct Taxes	Union Govt.	State Govt.
On Income	✓ Corporation Tax, Minimum Alternate Tax (MAT) ✓ Income Tax on income except agri. Income ✓ Capital Gains Tax (CGT) ~~✓ Dividend Distribution Tax (DDT)~~	✓ Agriculture Income tax ✓ Professional Tax (max ₹2500 per year)
On assets, transactions	✓ Securities Transaction Tax (STT) and Commodities Transact	✓ Land Revenue ✓ Stamp/Registration duty ✓ Property tax in urban areas

	ion Tax (CTT) ✓ ~~Wealth Tax~~ ✓ ~~Banking Cash Transaction Tax~~ ✓ ~~Estate Duty~~	
On expenditure	✓ ~~Hotel Receipt Tax~~ ✓ ~~Gift Tax~~ ✓ ~~Fringe Benefit Tax~~	✓ Road Tax

Direct Taxes: Merits and Demerits

Merits of Direct Taxes

- Progressive (richer the person higher the tax): income inequality decreases.
- Promotes civic consciousness since citizen directly feels the 'pinch of tax'.
- To increase savings and investment: Income tax deduction/exemptions on NPS/LIC etc.
- Elasticity: As public's income level increases, then tax revenue increases.
- High level of Certainty (when and how to pay IT)
- Can reduce volatility in International currency exchange rates by imposing Tobin Tax

Demerits of Direct Taxes

- Externality not counted: Academic Books Company vs Film star promoting cigars [30% Tax on both].
- Hardship not counted: Working Carpenter [5%] vs sleeping landlord [5%]
- High level of direct tax promotes laziness, less foreign investment.
- Narrow base because large staff required if we try to collect Income taxes even from poor people.
- Prone to litigation and loopholes, tax evasion, avoidance.

Union Tax, Cess and Surcharge

Union Tax

- Computed on taxable income, profit, transaction.
- Goes to Consolidated Fund of India and later divided between Union and states as per the Finance Commission formula.

Surcharge

- Computed on Tax amount. So, it is a 'tax on tax'. This money will also go to CFI.
- It is not shared with States using Finance Commission Formula.
- Usually, surcharge doesn't have any clear objective in 'prefix', so it may be used for any purpose.

Exception is 10% Social Welfare Surcharge on the customs duty on imported goods. It is specifically used for social welfare schemes of the Union.

Cess

- Computed on [(Tax) + (Surcharge, if any)]
- Clear objective is mentioned. E.g., Krishi Kalyan Cess, Swachh Bharat cess, Road & infrastructure, Health & Education, GST compensation cess etc.
- By default, cess goes to CFI and from there, to a specific fund in Public Accounts e.g., Central Road Safety Fund, Prarambhik Shiksha Kosh etc.
- Cess is not shared with States using Finance Commission Formula. (Although some of the cess money will invisibly go to states as a part of scheme implementation e.g., Pradhan Mantri Fasal Bima Premium share, etc.)
- GST Compensation Cess is shared with States, as per GST Council formula.

Corporation Tax

- It is also known as "Corporate Income Tax (CIT)"
- It is Levied on Company's profit, under the Income Tax Act, 1961.

Corporation Tax Cut in Sept, 2019

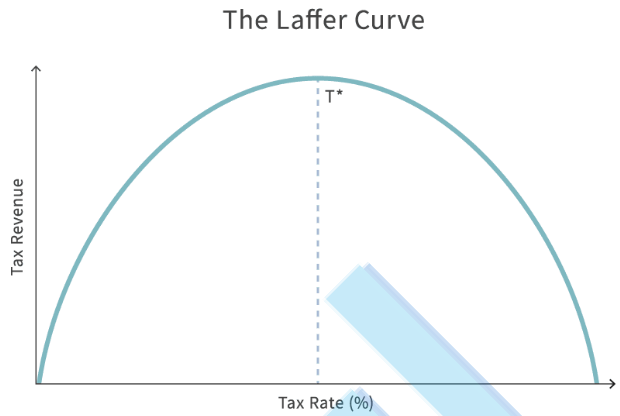
Corporation Tax	Before Sept, 2019	After Sept, 2019

- Loopholes in the tax laws which encourage tax avoidance using Domestic and Offshore channels.
- Direct taxes like wealth tax, gift tax and estate duty suffered from loopholes, lax monitoring and evasion. They didn't yield much revenue. Hence even referred as 'paper taxes', and had to be abolished ultimately.

Laffer Curve

The Laffer Curve is a theory formalized by economist Arthur Laffer to show the relationship between tax rates and the amount of tax revenue collected by governments.

The curve is used to illustrate the argument that sometimes cutting tax rates can result in increased total tax revenue.



Typically, it has an inverted-U shape.

If direct tax rates are increased above a certain level, then tax revenue collection will fall because higher tax rates discourage people from working and/or encourage them to engage in tax evasion and tax avoidance.

Tax Revenue of the Government

(₹ करोड़) (In ₹ crore)

		2019-20 वास्तविक Actuals	2020-2021 बजट अनुमान Budget Estimates	2020-2021 संशोधित अनुमान Revised Estimates	2021-22 बजट अनुमान Budget Estimates
राजस्व प्राप्तियां	**REVENUE RECEIPTS**				
1. कर राजस्व	**1. Tax Revenue**				
सकल कर-राजस्व	**Gross Tax Revenue**	**2010059**	**2423020**	**1900280**	**2217059**
क. निगम कर	a. Corporation Tax	556876	681000	446000	547000
ख. आय पर कर	b. Taxes on Income	492654	638000	459000	561000
ग. धन कर	c. Wealth Tax	20	..	..	..
घ. सीमा शुल्क	d. Customs	109283	138000	112000	136000
ड. केन्द्रीय उत्पाद शुल्क	e. Union Excise Duties	240615	267000	361000	335000
च. सेवा कर	f. Service Tax	6029	1020	1400	1000
छ. जीएसटी	g. GST	598750	690500	515100	630000
- केंद्रीय जीएसटी	- CGST	494072	580000	431000	530000
- आइजीएसटी	- IGST	9125	..	..	..
- जीएसटी क्षतिपूर्ति उपकर	- GST Compensation Cess	95553	110500	84100	100000
ज. संघ राज्य क्षेत्रों पर कर	h. Taxes of Union Territories	5835	7500	5780	7059
घटाइए -राष्ट्रीय आपदा आकस्मिकता निधि/राष्ट्रीय आपदा अनुक्रिया निधि को अंतरित एनसीसीडी	**Less - NCCD transferred to the NCCF/NDRF**	**2480**	**2930**	**5820**	**6100**
घटाइए-राज्यों का हिस्सा	**Less - State's share**	**650678**	**784181**	**549959**	**665563**
1क केंद्र का निवल कर राजस्व	**1a Centre's Net Tax Revenue**	**1356902**	**1635909**	**1344501**	**1545397**
2. कर-भिन्न राजस्व	**2. Non-Tax Revenue**	**327157**	**385017**	**210653**	**243028**
ब्याज प्राप्तियां	Interest receipts	12349	11042	14005	11541
लाभांश और लाभ	Dividends and Profits	186132	155396	96544	103538
विदेशी अनुदान	External Grants	373	812	1422	747
अन्य कर-भिन्न राजस्व	Other Non Tax Revenue	126540	215465	96602	124671
संघ राज्य क्षेत्रों की प्राप्तियां	Receipts of Union Territories	1762	2303	2081	2531
कुल राजस्व प्राप्तियां (1क+2)	**Total- Revenue Receipts (1a + 2)**	**1684059**	**2020926**	**1555153**	**1788424**

Source: Budget 2021-22

Non-Tax Receipts

Sources of Non-Tax Receipts

- **Interest receipts:** Interest received on Union's loans to states, railways, CPSE, foreign countries is a revenue receipt.

The loan-principal repaid by those borrowers would be 'Capital Receipt.

- **Dividends and profits** received from CPSE, PSBs, RBI.

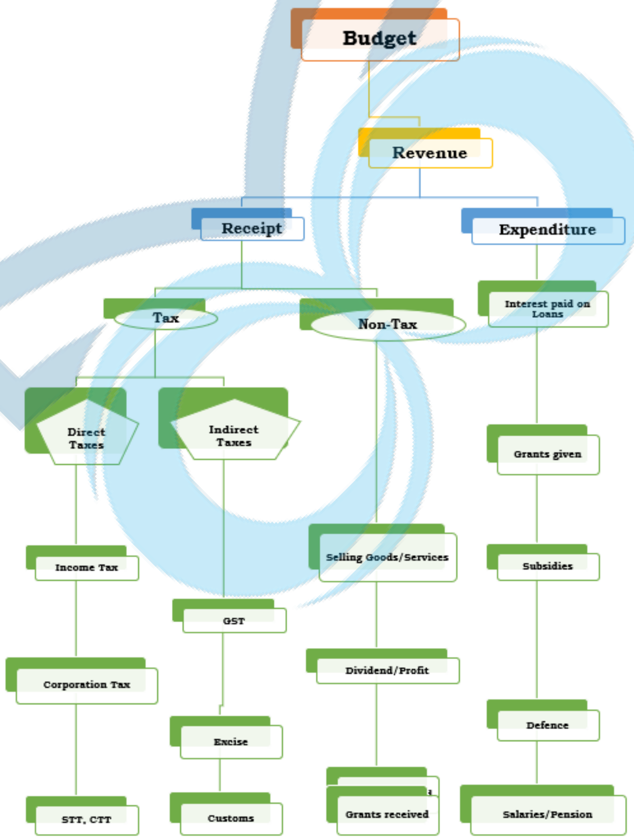
Had Union sold its shares to a third party (disinvestment/ privatization), then that will be 'Capital Receipt'.

Union's income from Dividend & Profits >> income from Interests.

- **Income from selling various goods and services** such as railways, postal services, selling of India Yearbook, Yojana-Kurukshetra magazines etc.
- **Grant in Aid/Donations** received by Union.

Had Union received 'loan', it will be 'Capital Receipt'.

- **Non-tax revenue earned by UT without Legislature**



Budget: Revenue Expenditure

Notable Revenue Expenditures

- **Interest** to be paid on previous loans is Revenue Expenditure. [Whereas Union repays loan-principal, its 'Capital Expenditure']
- **Grant-in-Aid** to States and Local Bodies for Disaster Management, Panchayati Raj Development etc. as per Finance Commission recommendations. Additionally, Govt also gives grants to foreign countries.
- **Subsidies (Budget 2020-21)**
  - Food subsidy *(4.22 lakh crore)*
  - Fertiliser subsidy *(1.34 lakh crore)*
  - Petroleum subsidy: subsidy on LPG and kerosene *(39,055 crore)*
  - Other subsidies: interest subsidies on loans given under various government schemes and subsidies for procurement of agricultural produce other than paddy and wheat *(53,116 crore)*
- **Defence revenue expenditure** (e.g., soldier salaries, fuel for tanks)
- **Pension** to retired employees
- **Economic services related revenue expenditure** (Agriculture, energy, transport, communication, Science technology)
- **Social services related revenue expenditure** (health, education, social security)
- **Expenditure on Administrative machinery** (Police, Jail, External Affairs etc.), Elections, Parliament, Judiciary:

Revenue expenditures of UT without Legislature

	Actuals 2019-20	Budgeted 2020-21	Revised 2020-21	Budgeted 2021-22
Revenue Expenditure	23,50,604	26,30,145	30,11,142	29,29,000
Revenue Receipts	16,84,059	20,20,926	15,55,153	17,88,424
Revenue Deficit	6,66,545	6,09,219	14,55,989	11,40,576
% of GDP	3.3%	2.7%	7.5%	5.1%

Source: Budget 2021-22

Revenue Deficit (7.5% of GDP)

When government spends more than its income in revenue account, it incurs Revenue deficit = Revenue expenditure – Revenue receipts.

Since a major part of revenue expenditure is committed expenditure (like Interest repayment on previous loans, staff-salaries and pensions which Govt can't 'avoid'), so it is quite difficult to reduce the revenue deficit.

So, when revenue deficit is high, government will be forced to borrow more money or cut down the expenditure in the capital part (less new schools, bridges and hospitals).

This will result in lower human development and lower economic growth (if less new bridges built, then demand of steel/cements will decrease and growth in those sectors will reduce).

Effective Revenue Deficit (6.3% OF GDP)

We have counted Grant-in-Aid to States/Local Bodies as 'Revenue Expenditure', but some portion of that money may have been spent by the States/Local Bodies for building Panchayat-Bhavans, Disaster Management Training Institutes, Cranes and Bulldozers for Disaster rescue operations etc. which are actually "Capital Assets".

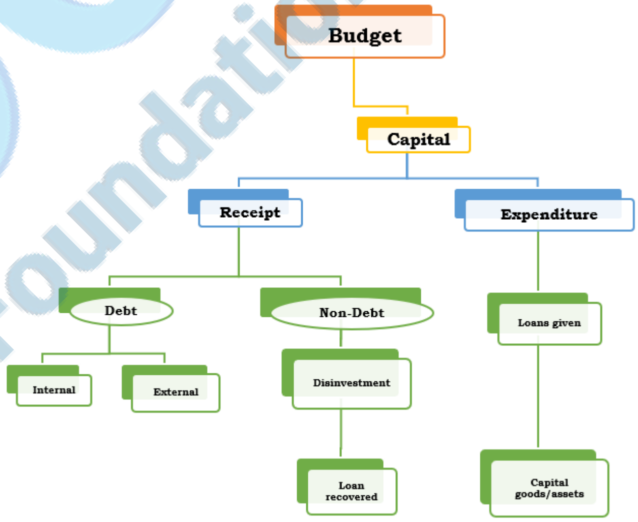
Therefore, in Budget 2011, FM P. Chidambaram introduced a new concept:

Effective Revenue Deficit = Revenue Deficit *(14.5 lakh crore)* - Grants to various bodies which were spent for creation of Capital Assets *(2.3 lakh crore)*

2. राजस्व घाटा	2. Revenue Deficit	666545 (3.3)	609219 (2.7)	1455989 (7.5)	1140576 (5.1)
3. प्रभावी राजस्व घाटा	3. Effective Revenue Deficit	480904 (2.4)	402719 (1.8)	1225613 (6.3)	921464 (4.1)

Source: Budget 2021-22

Budget: Capital Receipts



Capital Debt Receipts (18.48 lakh crore)

- ***~18 lakh crore Internal Borrowing***
- From RBI,
- From market (Banks, NBFCs)
- From small savings (Post-Office Savings Accounts, Kisan Vikas Patra, etc),
- From Provident Funds (EPFO, PPF)
- ***54522 crore External Borrowing***
- from foreign countries & international institutions like IMF World Bank, BRICS bank etc.

Capital Non-Debt Receipts (46,497 crore)

- 14,497 crore **Loan Principal recovered** (i.e., Union government would have given loans to state governments, foreign countries, public sector companies etc.) so when they return Principal amount back that is counted here.
- 32,000 crore **Disinvestment** i.e., Union selling its shares from Public Sector Undertakings (PSUs) / Central Public Sector Enterprises (CPSEs).

Capital Receipts	68,620	2,24,967	46,497	1,88,000
of which:				
Recoveries of Loans	18,316	14,967	14,497	13,000
Other receipts (including disinvestments)	50,304	2,10,000	32,000	1,75,000

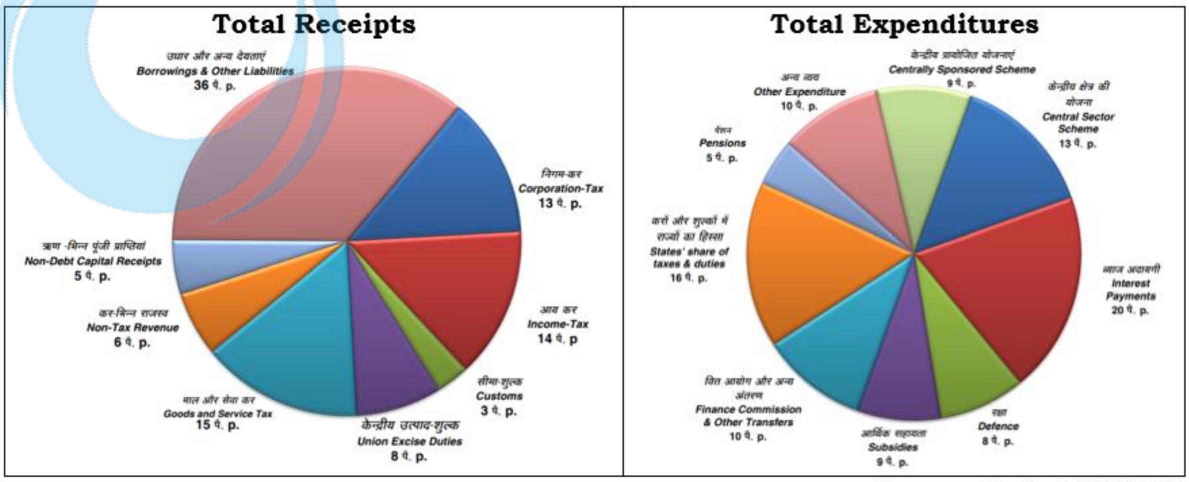
Source: Budget 2021-22

BUDGET: CAPITAL EXPENDITURE (₹ 4.39 LAKH CRORES)

- Capital assets for various schemes, ministries, departments (Building, vehicles etc.)
- Giving debt/equity finance to PSUs and foreign institutes, giving loans to State Govt and Foreign Govt.
- Union repaying loan principal for Internal Debts
- Union repaying loan principal for External Debts

Capital Expenditure	3,35,726	4,12,085	4,39,163	5,54,236
of which:				
Capital outlay	3,11,312	3,80,322	3,32,247	5,13,862
Loans	24,414	31,763	1,06,916	40,374

Source: Budget 2021-22



Source: Budget 2021-22

Types of Deficits

	>		Surplus Budget
Income	=	Expenditure	Balanced Budget
	<		Deficit Budget

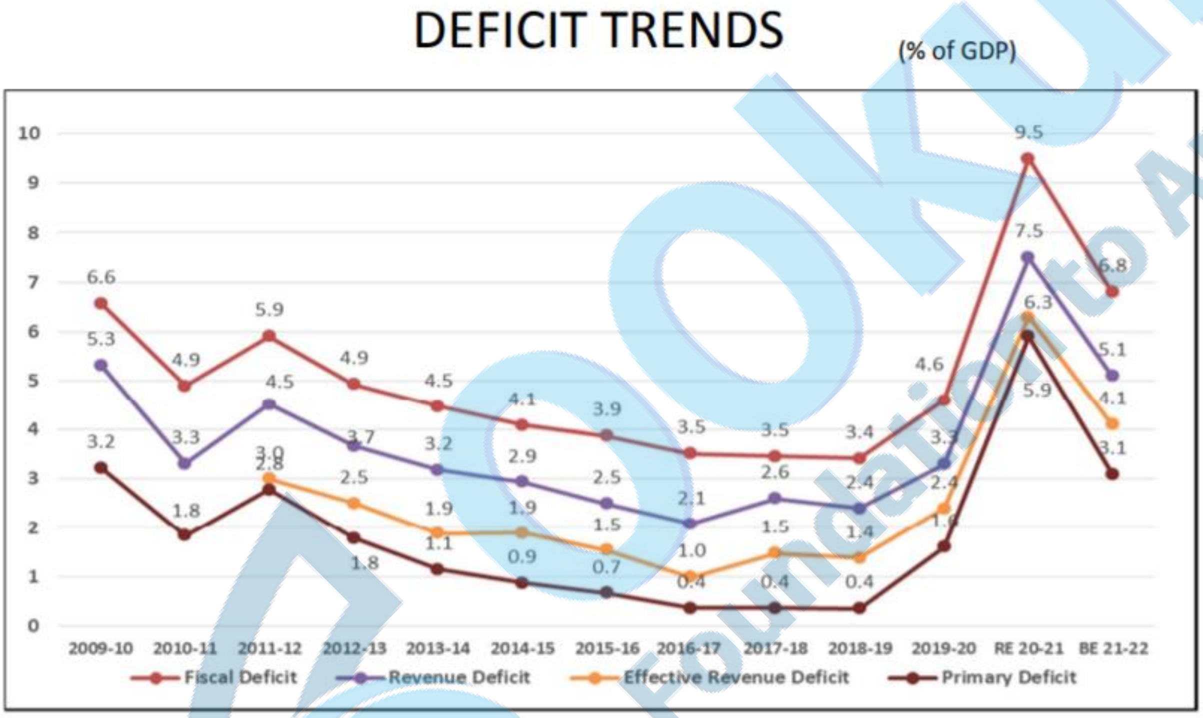
Revenue Deficit
= Revenue Expenditure
− Revenue Receipts

Effective Revenue Deficit =
Revenue Deficit − Grants for creation of capital assets

Budget Deficit
= Budget Expenditure
− Budget Receipts

Fiscal Deficit = Budget Deficit + Borrowings

Primary Deficit
= Fiscal Deficit
+ interest to be paid on previous loans



Source: Budget 2021-22

FISCAL DEFICIT

Fiscal Deficit = Budget Deficit + Borrowing. This borrowing includes internal borrowing [such as through Small Savings Scheme, and the G-Secs subscribed by Banks/NBFCs) + Borrowing from RBI] + External Borrowing.

In 1997-98, it was implemented as per Sukhmoy Chakravarti Committee report.

PRIMARY DEFICIT

In 1993, Finance Minister Manmohan Singh's budget speech mentioned:

If the government continues to borrow year after year, it leads to accumulation of debt and the government has to pay more and more interest. These interest payments themselves add more burden to borrow next year.

(₹ करोड़) (In ₹ crore)

		2019-2020 वास्तविक Actuals	2020-2021 बजट अनुमान Budget Estimates	2020-2021 संशोधित अनुमान Revised Estimates	2021-2022 बजट अनुमान Budget Estimates
1. राजकोषीय घाटा	1. Fiscal Deficit	933651 (4.6)	796337 (3.5)	1848655 (9.5)	1506812 (6.8)
2. राजस्व घाटा	2. Revenue Deficit	666545 (3.3)	609219 (2.7)	1455989 (7.5)	1140576 (5.1)
3. प्रभावी राजस्व घाटा	3. Effective Revenue Deficit	480904 (2.4)	402719 (1.8)	1225613 (6.3)	921464 (4.1)
4. प्राथमिक घाटा	4. Primary Deficit	321581 (1.6)	88134 (0.4)	1155755 (5.9)	697111 (3.1)

Source: Budget 2021-22

Financing the Deficit: Negative Consequences on Economy

- Deficit can be financed by either Taxation, Borrowing or Printing Money.
- Taxes can't be raised beyond a point because it may force people to evade taxes/discourage their motivation to work. (Laffer Curve).
- If deficit increases, Government borrows more money by issuing G-secs. Government will have to return the principal and interest to the lenders. At that time, Govt may greatly increase taxes on people to arrange that amount. So, Economist David Ricardo argued that during high deficits, people save more, because they become precautious about future hike in taxes. It is called **"Ricardian equivalence".**
  (And, if people begin to spend less and save more, then companies will face unsold inventories and creates new problems for economy)
- If government borrows more money from households and financial intermediaries (LIC, EPFO, Banks via SLR), then that much less money will be available for loans to private corporate borrowers. It will lead to **"Crowding Out Effect"** on the private borrowers which harms factory expansion and job creation.
- If Govt forces SBI, LIC, EPFO to buy its G-sec using public deposits thus, depriving households of the optimal return.
- If high level of fiscal deficit exists, then International Credit Rating Agencies will reduce the sovereign rating for India. Investors will demand higher interest from government for buying new G-Sec. Then G-sec will remain unsold and RBI will be forced to buy it (and print more money to give to Govt). It is called **"Monetizing the Deficit".** It can result in hyperinflation and decrease in the purchasing power of currency (if there is not sufficient increase in the supply of goods in the market.

Terms related to Deficit Financing

Redemption: Repay the loan principal and interest at regular interval. Also known as Terminal Annuity.

Sinking Fund: Government creates a special fund and keeps depositing money in it regularly. So, at the time of G-sec maturity, it has enough 'buffer' money to honor the loan repayment. It was first introduced in England

Conversion/Restructuring: Converting old loan into new loan with modifications in interest/tenure.

Evergreening: Taking new loan to repay the old loan.

CHAPTER 19 – INTERNATIONAL TRADE

Balance of Payment

It is a systematic record of all economic transactions made between the residents and non-residents of a country for a specific time period, usually a year.

Central Banks of each country prepare BoP records as per the format given in IMF's BPM-6 manual, all the figures are expressed in US $.

Since any country's debit (outgoing money) is a credit (incoming money) for another country, hence World's Net Balance of Payment is always Zero.

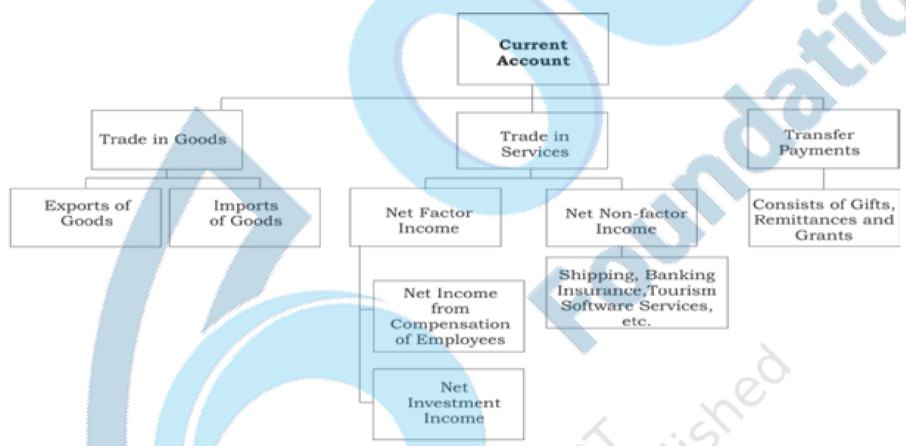
BoP is further sub classified into two parts, i.e., Current Account and Capital Account, based on the nature of transactions.

RBI's Method of classifying BoP (Actual Method)

Current Account	Capital Account
• Goods and services • **Primary Income:** wages, dividend, interest • **Secondary income:** remittance, gift, donation	• Direct Investment (FDI) • Portfolio Investment (FPI) • Loans / ECB • Non-resident's investment in Bank, Insurance, Pension schemes. • RBI's foreign exchange reserve

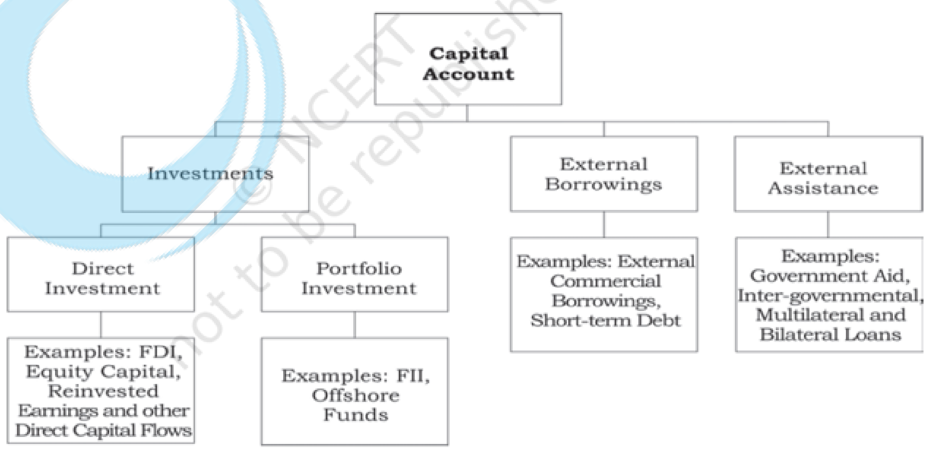
But, for our purpose, we will continue reading the traditional classification given in textbooks

Fig. 6.1: Components of Current Account



Source: NCERT Class 12

Fig. 6.2: Components of Capital Account

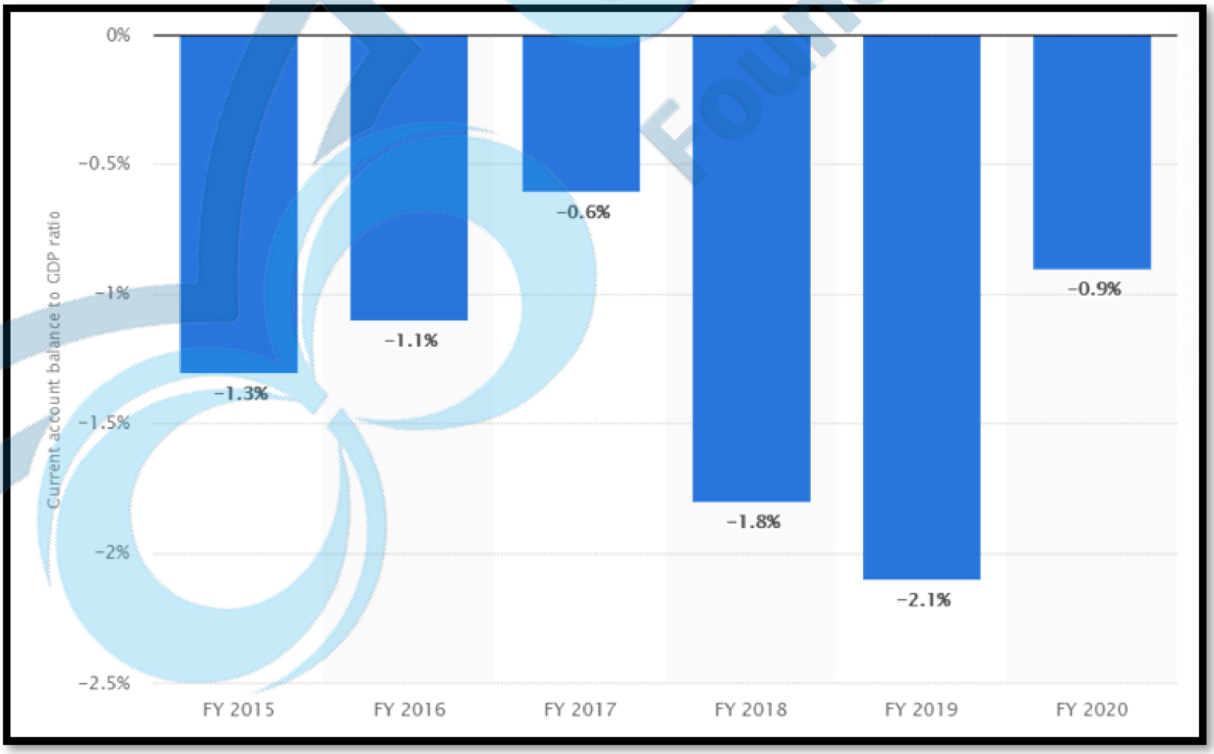


Source: NCERT Class 12

Current Account

Components	2019-20 (2018-19) [in billion US$)	Net in 2019-20 (2018-19)
Visible Components	**Trade in Goods:** $320 (330) billion worth goods exported vs $478 (514) worth imported.	-$158 billion (-$184 billion)
Invisible Components	**Trade in Services** (Highest export: Software services > Business Services > Travel > Transport). $213 (208) Export - $128 (126) Import	+$85 billion (+$82 billion)
	Primary Income: Profit, Interest, Dividend $25 (22) billion (Credit) - $52 (51) billion (Debit)	-$27 billion (-$29 billion)
	Secondary Income: Remittance, Gift, Grants, Donations $83 (77) billion (Credit) - $8 (7) billion (Debit)	+$75 billion (+$70 billion)
Net Current Account Balance		-$25 billion (-$57 billion) **NEGATIVE: DEFICIT**

Data Source: Economic Survey 2020-21



Source: statista.com

From 2001-04, we had Current Account Surplus because, it was a time before the subprime crisis when global economy was in boom (our exports were high). But then, after that we are having deficit.

The Current Account Deficit increased in the last 3 years (2016-19) due to:

- Increase in crude oil price
- US/EU protectionism, hence our exports have declined.

Balance of Trade (BoT)

It is the difference between the value of import and export of goods.

Note: Export and import of Services is not included in BoT.

Proof

Balance of Trade (BOT) is the difference between the value of exports and value of imports of goods of a country in a given period of time. Export of goods is entered as a credit item in BOT, whereas import of goods is entered as a debit item in BOT. It is also known as Trade Balance.

NCERT Class 12: Introductory Macroeconomics, Page 87, Chapter 6

- **Balance of Trade:** The balance between the values of goods exchanged between two countries. It is a trade in merchandise items or visible items only.

Tamil Nadu Board Class 12 Economics Textbook, Page 148, Chapter 7

Favourable BoT (Trade Surplus)

When the total value of commodity exports of a country exceeds the total value of commodity imports of that country, it is said that the country has a ***'favourable'*** balance of trade or ***Trade Surplus.***

Unfavourable BoT (Trade Deficit)

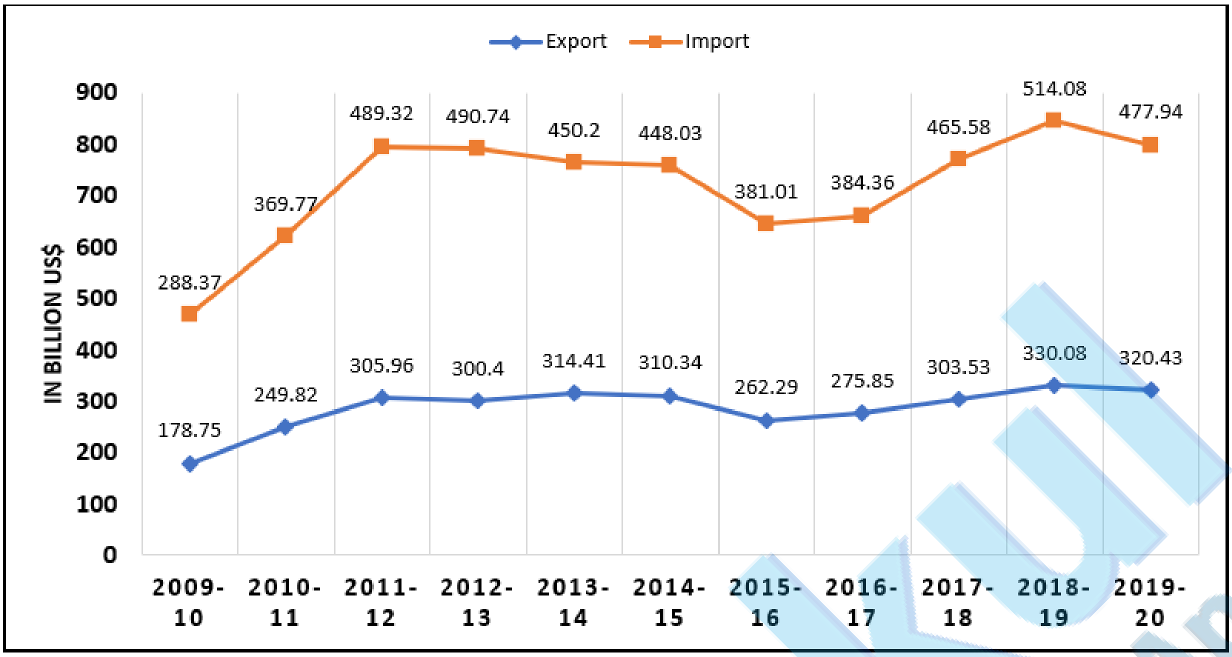
If total value of commodity exports of a country is less than the total value of commodity imports of that country, that country is said to have an ***'unfavourable'*** balance of trade or ***Trade Deficit.***

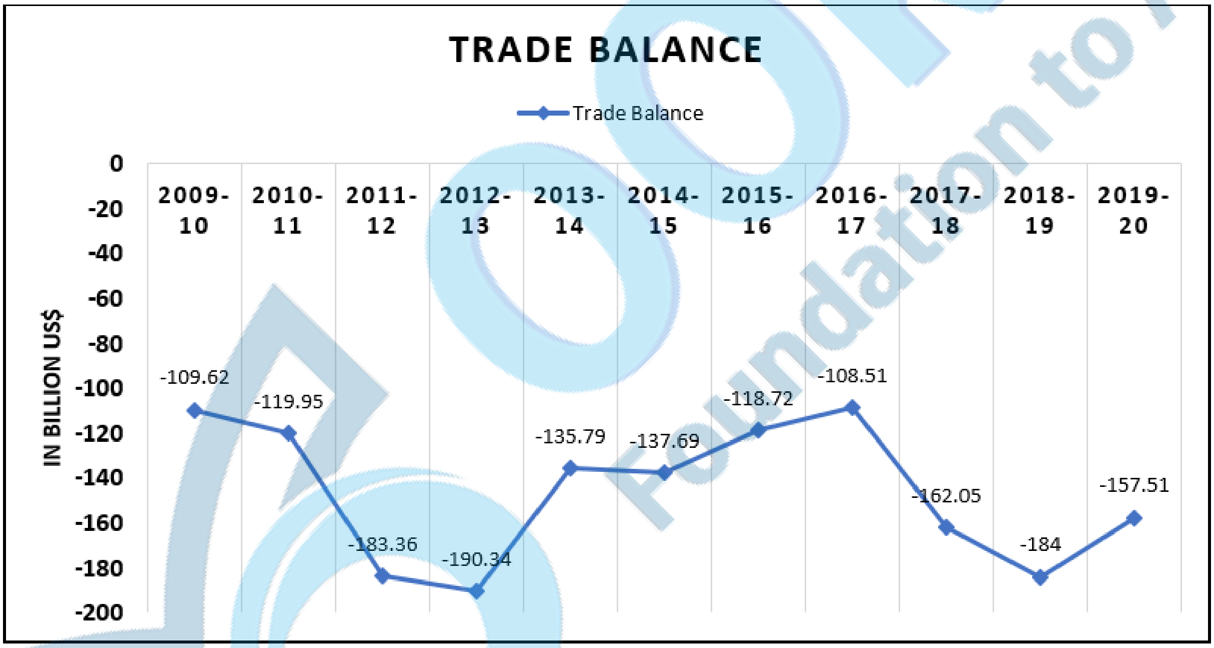
2018-19	2019-2020
Export (+$330 billion) minus Import (-$514 billion) = -$184 billion ***Trade Deficit***	Export (+$320 billion) minus Import (-$478 billion) = -$158 billion ***Trade Deficit***

Table 1: Merchandise Trade

Values in USD billion

S. No.	Year	Exports	Growth (%)	Import	Growth (%)	Trade Balance
1	2009-10	178.75	-3.53	288.37	-5.05	-109.62
2	2010-11	249.82	39.76	369.77	28.23	-119.95
3	2011-12	305.96	22.48	489.32	32.33	-183.36
4	2012-13	300.40	-1.82	490.74	0.29	-190.34
5	2013-14	314.41	4.66	450.20	-8.26	-135.80
6	2014-15	310.34	-1.29	448.03	-0.48	-137.70
7	2015-16	262.29	-15.48	381.01	-14.96	-118.72
8	2016-17	275.85	5.17	384.36	0.88	-108.51
9	2017-18	303.53	10.03	465.58	21.13	-162.06
10	2018-19	330.08	8.75	514.08	10.42	-184.00





Net Terms of Trade (NTT) or Commodity terms of trade

$$NTT = \frac{Value\ of\ Export}{Value\ of\ Import} \times 100$$

Gross (Barter) Terms of Trade (GTT)

$$GTT = \frac{quantity\ (volume)\ of\ import}{quantity\ (volume)\ of\ export} \times 100$$

Income terms of trade (ITT)

$$GTT = \frac{Value\ of\ Export}{Value\ of\ Import} \times Quantum\ Index\ of\ Exports\ (QIE)(in\ \%)$$

$$GTT = NTT \times Quantum\ Index\ of\ Exports\ (QIE)(in\ \%)$$

Table 7.6. Index Numbers of Foreign Trade

(Base : 2012-2013=100)

Year	Unit Value Index		Volume Index		Terms of Trade		
	Exports	Imports	Exports	Imports	Gross	Net	Income
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2013-14	112	108	139	94	68	103	144
2014-15	109	100	155	104	67	109	169
2015-16	104	85	186	111	60	123	228
2016-17	108	88	224	112	50	123	274
2017-18	110	92	200	123	62	120	240
2018-19	124	109	125	126	101	114	142
2019-20	125	103	145	125	86	121	176

Source: Economic Survey 2020-21

Top Import and Exports Commodities (Economic Survey 2020-21)

Top Imports: Goods	Top Exports: Goods
• Crude Petroleum • Gold • Petroleum Products • Pearl, Precious, Semi-precious Stones • Coal, Coke and Briquittes etc.	• Petroleum Products • Pearl, Precious, Semi-precious Stones • Drug Formulations, Biologicals • Gold and other precious metal jewellery • Iron and Steel
Top Imports: Services	**Top Exports: Services**
• Business services • Travel • Transport • Telecommunications, Computer, and • Information services	• Telecommunications,Computer, and Information services • Business services • Travel • Transport • Financial Services

India's top services export destinations are USA, Germany, UK, Netherlands and France.

Our Major Trading Partners

Major Export Destinations	Major Import Sources
• USA • United Arab Emirates • China • Hong Kong • Singapore	• China • USA • United Arab Emirates • Saudi Arab • Iraq

Balance of Trade with Countries

Favourable (Trade Surplus)	Unfavourable (Trade Deficit)
• USA • Bangladesh • Nepal • UK • Netherland	• China • Switzerland • Iraq • Saudi Arab • UAE

Remittance

A remittance is a non-commercial transfer of money by a foreign worker, a member of a diaspora community, or a citizen with familial ties abroad, for household income in their home country or homeland.

World Bank's Remittance Report

- India received over US$ 83 billion in remittances in 2020, a drop of just 0.2 per cent from the previous year. In 2019, India had received US$ 83.3 billion in remittances.
- China, which received US$ 59.5 billion in remittances in 2020 against US$ 68.3 billion the previous year is second in the list.

CHAPTER 21 – INFRASTRUCTURE

Infrastructure is the set of basic facilities that help an economy to function and grow such as energy, irrigation, roads, railway and telecommunication.

Infrastructure sector has following characteristics:

- Sometimes create a **natural monopoly** e.g., Railways (and once upon a time even aviation and telecom sector in India).
- **Sunk costs are high**. It is the investment that cannot be recovered even when the firm go out of business. E.g., If airport is closed down, airstrip's asphalt will have little or no resale value because very bulky to dig-off and transport.
- 'Output' is often **non-tradable**. E.g., A road/bridge/airport constructed at one place cannot be 'transferred' to another place.
- Sometimes **intangible in nature.** E.g., we can't touch spectrum or electricity.
- Consumption is often **'non-rival'** in nature e.g. One person using a road or street light it doesn't make that product 'unavailable' for others (unlike a privately owned iphone.)
- **Price Exclusion** is often difficult. A rural road or street light can't be 'denied' to a person who is not paying taxes or user-fees. (whereas, if a person cannot afford iPhone then he is excluded from buying it.)
- Usually, it creates **positive externality**. E.g., when new railway station/airport is constructed, that much more business for taxi drivers and hotel owners in the surrounding area.

Category	Sectors granted 'infra' status by FinMin Dept. of Economic Affairs
Transport and Logistics	• Roads and bridges, Ports, Shipyard, Inland Waterways, Airport, Railway, tunnels, bridges, Transport, Logistics Infrastructure. • Feb 2019: Commerce Ministry released 'Draft National Logistics Policy'
Energy	Electricity, Oil, Gas
Water & Sanitation	Water supply and treatment, Sewage/Solid Waste Management, Irrigation
Communication	Telecommunication
Social and Commercial Infrastructure	• Hospitals, Education Institutions, Sports Infrastructure, Tourism infrastructure -hotels, ropeways and cable cars etc. • Industrial Parks, food parks, textile parks, SEZ etc. • Cold storage, Soil-testing laboratories • Affordable Housing

If a sector gets infrastructure 'status', then its entrepreneurs get following benefits (as and when notified):

- Govt. could give them tax benefits, lease public land at a token price, faster environment clearance, automatic FDI approval etc.
- RBI could help them by relaxing the External Commercial Borrowing (ECB) norms, Debt restructuring (e.g. RBI's 5/25 rule), Changing PSL norms etc.
- SEBI could relax norms for REITS/InvITs etc. funds to help them mobilize capital easily for the infrastructure sector.
- IRDAI and PFRDA could oblige insurance and pension companies to invest minimum X% in infrastructure companies etc.
- They could get easier funding from World bank and other multilateral banks.

Types of Industries

- **Basic industries:** supply their products to manufacture other goods. Examples: Iron and steel, copper, aluminium, chemical etc.
- **Capital goods industries:** goods that are used in producing other goods, e.g., textile machinery, conveyor belts, mining equipment etc.
- **Heavy industries:** producing large and heavy products, e.g., Ship building, bulldozers, industrial machinery, electric transformers etc.

Ministry of Heavy Industries and Public Enterprises
Departments

- Department of Heavy Industry
- Department of Public Enterprises

It is responsible for

- Allotting Ratna Status
- conduct Public Enterprises Survey

Autonomous Bodies

- National Automotive Testing and Research and Development Infrastructure Project (NATRIP): implements FAME-India project for faster adoption of electric vehicles.

PSUs

- Heavy Engineering Corporation Limited
- Engineering Projects (India) Limited
- Bharat Heavy Electricals Limited
- Hindustan Machine Tools (HMT) Limited, etc.

PSUs under liquidation/winding up/ closure/ transfer to other Departments/Organizations

- Bharat Leather Corporation Limited
- Cycle Corporation of India Limited
- Hindustan Paper Corporation Limited
- Scooters India Limited, etc.

Ministry of Steel
PSUs

- Steel Authority of India Ltd (SAIL)
- Rashtriya Ispat Nigam Ltd (RINL)
- NMDC Ltd
- MECON Ltd, etc.

Purvodaya Initiative (2020)

- The eastern states of India (Odisha, Jharkhand, West Bengal, Chhattisgarh, and Northern Andhra Pradesh) are home to 80% of Indian iron reserves.
- **Purvodaya Initiative:** Setup new steel plants, transport infrastructure, to create an integrated steel hub in the Eastern India.
- **Nodal Ministry:** Steel Ministry will coordinate with other Central Ministries, State Governments and Private Players.

Ministry of Chemicals and Fertilizers
Departments

- Department of Chemicals and Petrochemicals
- Department of Fertilizers
- Department of Pharmaceuticals

Attached Offices

- Fertilizers Industry Coordination Committee (FICC)
- National Pharmaceutical Pricing Authority (NPPA)

Autonomous Bodies

These bodies are set up under either Societies Registration Act or Multistate Cooperative Societies Act

- Multi State Cooperative Societies: IFFCO, KRIBHCO
- Bureau of Pharma PSUs of India (BPPI) for supplying medicines to PM Jan Aushadhi Kendras
- National Institute of Pharmaceutical Education Research (NIPER)
- Central Institute of Plastics Engineering and Technology (CIPET), Ranchi

PSUs

- Hindustan Insecticide Limited (HIL): responsible for manufacturing of Dichloro-di-phenyl-tri-chloro-ethane (DDT) for mosquito control in Nation vector borne disease control program
- Hindustan Antibiotics Limited (HAL)
- Karnataka Antibiotics and Pharmaceuticals Limited (KAPL)
- Bengal Chemicals and Pharmaceuticals Ltd. (BCPL)
- Hindustan Fluorocarbon Ltd, etc.

Ministry of Petroleum and Natural Gas
Attached Office

Directorate General of Hydrocarbons: regulator for the upstream activities, i.e., oil and gas exploration and production activities.

2018: proposal to give it statutory status was rejected.

Statutory Body

2006's Act: Petroleum and Natural Gas Regulatory Board: regulator for the downstream activities, i.e., laying of pipelines and fuel marketing

PSUs

- Bharat Petroleum Corporation Limited
- Hindustan Petroleum Corporation Limited
- Engineers India Limited: consultancy services for petroleum refineries and other industrial projects
- Gas Authority of India, Indian Oil Corporation, Oil India
- Oil and Natural Gas Corporation (ONGC)
- ONGC-Videsh Ltd (OVL) - associated with foreign exploration projects like Sakhalin (Russia), Al-Furat (Syria), Greater Nile (Sudan), San Cristobal (Venezuela)

Ministry of Mines
Attached/subordinate offices

- National Mineral Exploration Trust
- Geological Survey of India
- Indian Bureau of Mines

PSUs

- National Aluminium Company Limited (NALCO), Bhubaneswar;
- Hindustan Copper Limited (HCL), Kolkata;
- Mineral Exploration Corporation Limited (MECL), Nagpur.

Autonomous Bodies

- National Institute of Rock Mechanics, Kolar
- Districts Mineral Foundations (DMF) in mining districts
- National Institute of Miners' Health (NIMH in Karnataka)
  Although in 2020, Government announced to merge it with Health Ministry's ICMR-National Institute of Occupational Health (NIOH, Ahmedabad, Gujarat)

Mineral Products in India

Hydrocarbon Energy Minerals (Coal, Lignite, Petroleum and Natural Gas) – **4**

Atomic Minerals (Ilmenite, Rutile, Zircon, Uranium, And Monazite) – **5**

Metallic Minerals – **10**

Non-Metallic Minerals – **21**

Minor Minerals – **55**

Total – **95**

Minor minerals: Their legislation, royalty, administrative work is delegated to the States' domain, e.g., Sand, Mica, Marble, Granite, Agate, Chalk, Gypsum, Shale etc.

Major minerals: Any mineral that is not in Minor mineral list is called 'Major Mineral' is delegated to Union's domain, e.g., atomic minerals, bauxite, iron, coal, petroleum, natural gas etc.

National Mineral Policy (NMP) 2019

- **Nodal Ministry:** Ministry of Mines
- It is to replace 2008's policy.
- **Target:** For non-fuel and non-coal minerals
  - Transfer of mining leases from one company to another will be allowed, they will be helped in their merger and acquisition.
  - 'industry' status will be granted to mining. (so, they become eligible for certain tax benefits / schemes meant for industry sector, if any.)
  - India's mining taxes and royalty rates will be harmonized to global benchmarks.
  - Assistance in R&D, manpower skilling, environmental conservation etc.

MMDR Act 2015

Mines and Minerals Development and Regulation Act, 2015 replaced the 1957's act for ease of doing business.

- Mining Lease (Concessions) will be granted only through auction. No discretionary allotment to any company.
- Mining Lease shall be given for 50 years, then it will be put up for auction (and not renewal unlike the earlier system).

- Establish a National Mineral Exploration Trust. Mining companies required to pay them and it will carry out exploration of minerals.
- Establish 'Not-for-Profit Trusts' District Mineral Foundations (DMF) in all districts where mining takes place. Mining company required to pay them money and DMF to use it for the welfare of people in the district who are affected by the mining related operations.
- State govt to prescribe the administrative structure and guidelines of DMFs.
- Higher penalties and jail terms for illegal mining.

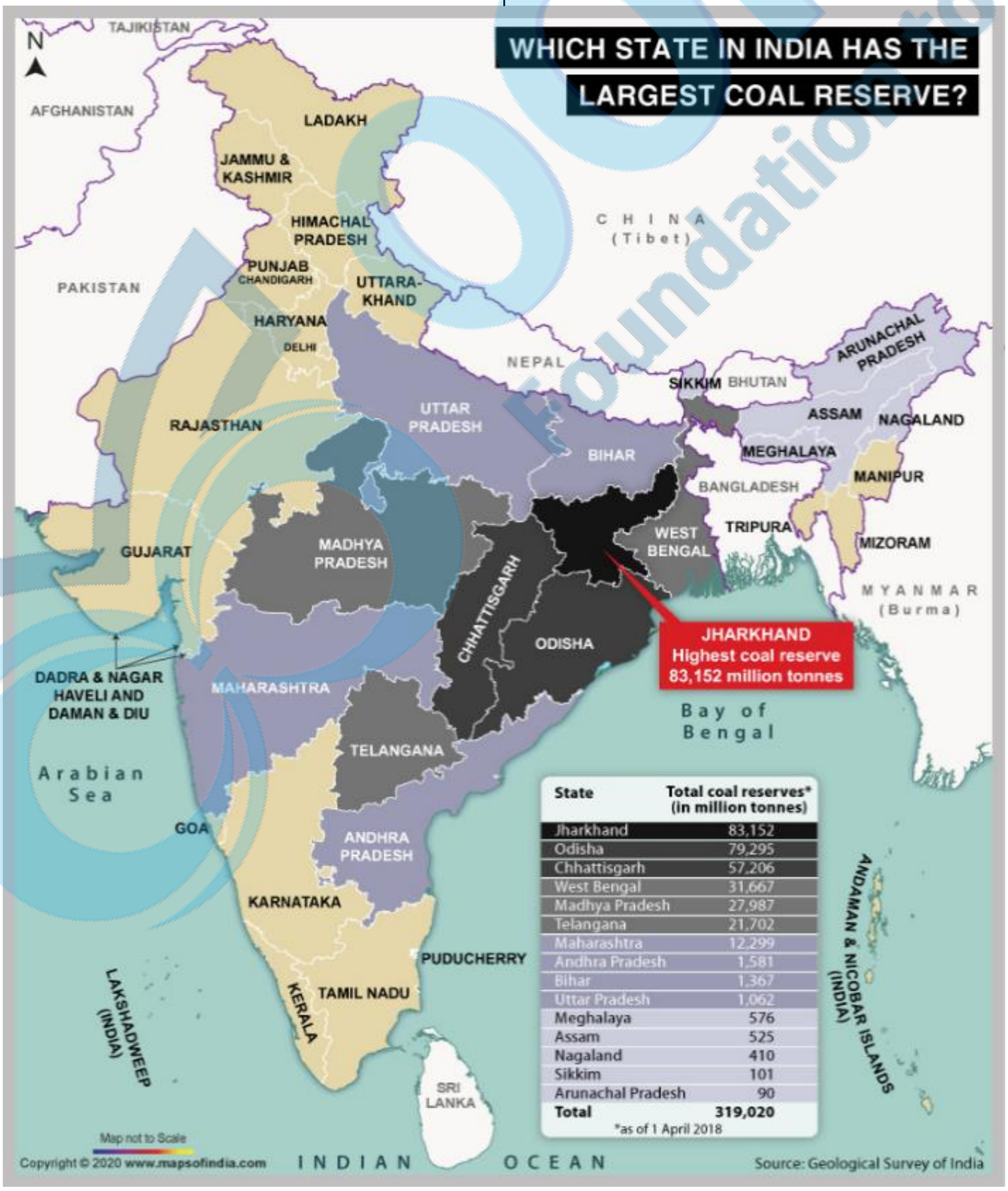
Coal

Largest coal reserves in the World

Country	World's share
USA	22.3%
Russia	15.5%
Australia	14.0%
China	13.1%
India	9.5%

Largest coal reserves in India

State	India's share
Jharkhand	26%
Odisha	24%
Chhattisgarh	17%
West Bengal	11%
Madhya Pradesh	8%



Ministry of Coal
Subordinate Office

Coal Controller's Organization, Kolkata

PSUs

- Coal India Ltd (CIL) and its subsidiaries. HQ: Kolkata, Maharatna company, single largest coal producing company.
- Neyveli Lignite Corporation, Tamil Nadu.
- Singareni Collieries Company Limited, Telangana Govt 51%: Union: 49%

Statutory Body

Coal Mines Provident Fund Organization

Mineral Laws (Amendment) Ordinance 2020
It amends the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act) and Coal Mines (Special Provisions) Act, 2015 (CMSP Act).

	Before ordinance	After ordinance
Bidder	Only companies related to iron and steel, power and coal sectors.	Any India-registered company. So, it will also encourage competition and attract FDI in such Indian companies.
Prior experience required	Yes	No
type of license granted	Separate licenses for • prospecting (survey) • actual mining	Single/Composite license called ***'prospecting license cum-mining lease'***

SHAKTI Coal Policy

- Scheme for Harnessing and Allocating Koyala (Coal) Transparently in India (SHAKTI).
- Nodal Ministry: Ministry of Coal.
- Previously, which thermal power plant company will get how much coal from Coal India, that depended on discretion of Government. Shakti Policy replaces that discretion with an online centralised bidding process.

Apps related to Coal

- **Coal Mitra** App by Power Ministry to help companies in buying/selling coal.
- **UTTAM** App by coal ministry to monitor coal quality coming from a particular mine.

Carbon Imperialism
It is a modern-day type of imperialism wherein the 1st world nations are trying to enforce their views about energy-consumption upon the 3rd nations with hidden agenda to

- sell their nuclear fuel and technology.
- portray the third world in bad light for using coal power and thereby reducing their own culpability for global warming.

But for India, coal-based electricity is a necessary evil because

- Wind and solar power are non-dispatchable, meaning electricity can be generated only when there is fast wind blowing or there is appropriate sunshine
- Land requirement for solar based powerplant is 10 times that of thermal power plant
- Bottlenecks in acquiring nuclear fuel and nuclear Technology
- unemployment if we shut down coal mining and thermal plants.

Budget-2020: *Some of Indian thermal power plants that are old and their carbon emission levels are high. We will close them and use their vacated land for alternative use.*

Miscellaneous Schemes, Apps, Portals, Issues related to mining
Pradhan Mantri Khanij Kshetra Kalyan Yojana (2015)

- **Nodal Ministry:** Ministry of Mines.
- It aims to use the funds of the DMFs to complement the ongoing union and state schemes in that area, related to like drinking water supply, health care, sanitation,

education, skill development, women and child care etc.

Star Rating of Mines, 2016

Indian Bureau of Mines under Ministry of Mines gives 0-5 Star to a mine depending on whether the mining company is working without adversely affecting the social, economic and environmental well-being of present and future generation.

Illegal mining

It is bad for environment and Govt deprived of royalty.

- **Mining Surveillance System (MSS):** satellite-based system by Indian Bureau of Mines under Mining ministry.
- **Khan Prahari App:** Ministry's app for reporting illegal coal mining.

TAMRA App/portal

To do 'legal' mining, entrepreneur has to obtain approvals and participate in the mining block auctions, so, Ministry of Mines launched TAMRA App/portal in 2017.

PRAKASH Portal (2019)

PRAKASH (Power Rail Koyla Availability through Supply Harmony) portal launched jointly by Power Ministry and Coal Ministry

To connect the Coal mining companies, Railways and Thermal Power Plants on a single platform for better supply chain management.

Satyabhama Portal (2020)

Ministry of Mine's portal for mining related research, science and technology.

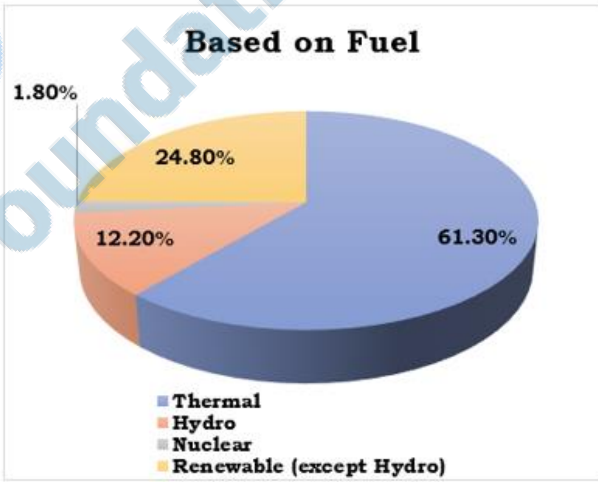
Pollution

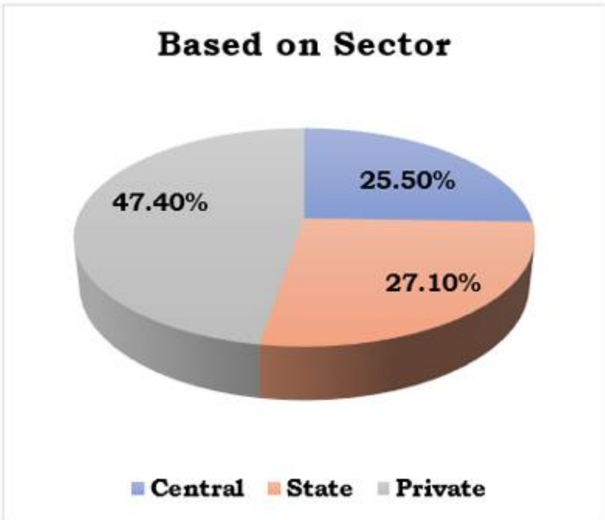
- **Red Mud** is a solid waste generated during the Bauxite to aluminum production process. Ministry of Mines making efforts to utilize red mud in cement and ceramic etc industries.
- **Fly Ash** is the pollutant generated by Thermal Power Plants while burning coal. It can be used in making cement, Bricks, Tiles, roads.
- Power ministry launched **ASH TRACK** Mobile App to monitor fly ash generation and utilization.

Energy

Electricity

- Electricity is a key element in modern day life. Right from running irrigation pumps to charging mobile phones, electricity is a prerequisite for agricultural growth and digital connectivity.
- Greater access to energy improves both economic growth and human development of a country. If India wants to improve its Human Development Index (HDI) from ~0.64 to ~0.80, it must increase its per capita energy consumption by four times.
- India's per-capita energy consumption of only about 1/3rd of the global average.
- Though India accounts for around18 percent of world's population, it uses only around 6 per cent of the world's primary energy.





Ministry of Power
Statutory Bodies

- Central Electricity Authority (CEA): prescribes the standards for construction of electrical plants, electric lines etc.
- Central and State Electricity Regulatory Commissions for fixing the electricity tariff (prices).
- Appellate Tribunal for Electricity (APTEL)
- Bureau of Energy Efficiency (BEE);
- Damodar Valley Corporation (DVC);
- Bhakra Beas Management Board
- Joint Electricity Regulatory Commission (JERC) for Goa and UTs
- JERC for Manipur and Mizoram

Autonomous Bodies

- Central Power Research Institute
- National Power Training Institute

PSUs

- National Thermal Power Corporation (NTPC)
- National Hydroelectric Power Corporation (NHPC)
- SJVN Ltd - Satluj Jal Vidhyut (GoI 62%, Himachal 27%, rest with FI/Public)
- Power Finance Corporation (PFC)
- Power Grid Corporation of India (POWER GRID)
- Power System Operation Corporation Limited (POSOCO)
- EESL - Energy Efficiency Services Limited - joint venture of NTPC Limited, PFC, REC and POWERGRID - known for its subsidized UJALA LED bulbs
- THDC India Limited: Tehri Hydro (GoI: 75%, UP State:25%)
- Rural Electrification Corporation (REC) - known for DD Gram Jyoti Yojana.
- North Eastern Electric Power Corporation (NEEPCO)

National Electricity Distribution Company

- PM Modi had announced 24x7 power to all by 2022. But, since private and State-Government owned electricity distribution companies are suffering NPA/debt issues, the electricity distribution sector is not expanding fast enough to achieve this target.
- So, in June 2019, NTPC and Power Grid Corporation of India have formed a 50:50 joint venture company, National Electricity Distribution Company.
- **Objective:** electricity distribution business on a pan-India basis.

One Nation-One Grid

- Initially, individual states' electricity grids were interconnected to form 5 regional grid regions namely Northern, Eastern, Western, North Eastern and Southern region. If a state had surplus electricity, it could sell only to other states in that region.
- So, One Nation-One Grid concept aims to connect all 5 regional grids into one national grid so, electricity can be transferred from surplus region to deficient region.
- Here buying-selling of surplus electricity is done through power exchanges like Power Exchange of India (PXIL) and India Energy Exchange (IEX).
- **Nodal Ministry:** Ministry of Power → Power Grid Corporation of India Limited.

Green Energy Corridor Project
Nodal Ministry: Ministry of Power → Power Grid Corporation of India Limited + loan support from Asian Development Bank.

The project will enable the flow of renewable energy into this National Grid Network. So that renewable energy rich States like Rajasthan (solar), Tamil Nadu (wind) can sell the electricity to other states.

Power Ministry's Apps

- **Garv** and **Garv-II** apps to monitor progress of how many villages electrified under DD Gram Jyoti Yojana.
- **DEEP** portal to help DISCOM companies buy electricity from thermal plants through auction.
- **Vidyut PRAVAH** and **MERIT** app to let people know how much electricity is generated in India, vs. current price, demand and shortages, inter-state purchase of electricity etc.
- **Urja Mitra** App to notify users about upcoming electricity outages.
- **TARANG** App to monitor upcoming power projects and stalled projects.
- **National Power Portal (NPP)** where above Apps' data can be displayed.

Integrated Power Development Scheme (2014)

- Originally UPA Govt had Restructured Accelerated Power Development and Reforms Programme (RAPDRP), but NDA Govt. repacked it as IPDS.
- **Nodal Ministry:** Ministry of Power
- It is a Central Sector Scheme, i.e., 100% funded by Union.
- **Target:** to strengthen power infrastructure, especially in urban areas.
- All Electricity Distribution Companies (Discoms) are given financial assistance for improving distribution network, installing ICT enabled smart meters for billing and collection. Install solar panels if not possible to join an area with grid.

Prepaid Smart Meters for Electricity

- A smart prepaid meter has an internet modem.
- Electricity companies can remotely connect with them, supplying the electricity as per the amount of balance left in the device (similar to a prepaid mobile talktime).
- Electricity usage data collected in a server, hence lesser scope of electricity theft by tempering with the meter box.

Budget-2020: *We will try to replace conventional energy meters by prepaid smart meters in the next 3 years.*

UDAY (2015)
During UPA Govt, DISCOMs were suffering losses because:

- Floods and cyclones, environmental activism by NGT/SC, scams in coal allocation → coal mining declined → Coal became expensive → Thermal electricity production became expensive.

Under the Electricity Act 2003, Central Electricity Regulatory Commission regulate the price of Inter-State sale of electricity. While State Electricity Regulatory Commissions regulate the price of intra-state sale. The electricity price slabs are kept different for industrial use, household use and agriculture use.

And to keep the farmers happy, agriculture electricity will be subjected to lower tariffs.

Electricity thefts rampant but State Govts ignore it for vote bank politics.

While electricity production has become more expensive, but Electricity commissions will not increase the prices in a corresponding manner. Hence, DISCOMs were making huge losses. So, Govt launched a scheme to help them called, 'Ujwal Discom Assurance Yojana' (UDAY).

- **Nodal Ministry:** Ministry of Power
- **Target:** Financial revival of DISCOMs via following method:
- Whatever was the debt of a DISCOM on 30/9/2015: State government will take over 75% of the debt in a phased manner. [It is optional for States to do this.]
- To repay this debt, State govt. will mobilize money issuing bonds in the market. These bonds will be non-SLR in nature (So although it's a 'G-Sec' but if banks are buying them, it will be not counted in their SLR quota).

If States do above thing, Union will give them extra funding for Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), and other such schemes of Ministry of Power and Ministry of New and Renewable Energy.

Pariwartan (2018)

Power Asset Revival Through Warehousing and Rehabilitation (PARIWARTAN): Rural Electrification Corporation (REC) and other public sector entities will create an Asset Management Company (AMC) to take over the NPA-assets of power sector companies.

Deen Dayal Gram Jyoti Yojana (2015)

Lack of rural lighting leads to increased use of kerosene lamps, hence, rise in pollution, import bill, subsidy bill.

So, UPA Govt launched Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), NDA Govt restructured as DDUGJY.

- **Nodal Ministry:** Ministry of Power → Rural Electrification Corporation-REC
- It is a Central Sector Scheme, i.e., 100% funded by Union.
- **Target:** 24×7 uninterrupted 'metered' electricity supply to each rural household by 2022, by doing following
    - Separate feeder lines for rural households and agricultural use.
    - Strengthen sub-transmission and distribution network to reduce power losses.
    - Install electricity meters.

PM Sahaj Bijli Har Ghar Yojana (Saubhagya)

- **Nodal Ministry:** Ministry of Power→ Rural Electrification Corporation-REC (2017)
- **Target**
    - To give electricity connections to all remaining un-electrified households in rural and urban areas.
    - Provide 24×7 power supply for all by 2019.
- Based on SECC-2011 data, they will identify beneficiaries, give them free electricity connection with meter.
- If a household is in remote area and not possible to join with grid connected electricity lines, then solar cell, DC battery pack, LED lights will be given.
- **Funding**
    - REC gives 75-90% of project cost as grants to DISCOMs (public and private), state electricity departments etc.
    - Grant % depends on whether General/Special Category state, and how much progress achieved.
    - It is a Central Sector Scheme, i.e., 100% funded by Union. (State government is not required to contribute money, although for the remainder project cost, Discom etc. will borrow from Bank/NBFC.)

As of 31/3/2019: All the States have reported 100% electrification of all households except few households in Naxal affected Bastar region of Chhattisgarh.

Energy Efficiency

The term energy efficiency means using lesser amount of energy to produce a given amount of output. For example, a light-emitting diode (LED) light bulb requires less energy than an incandescent light. Thus, LED is more energy efficient than incandescent lights.

PAT Mechanism

- **2008:** Environment Ministry's National Action Plan on Climate Change (NAPCC). One of its 8 components is National Mission for Enhanced Energy Efficiency (NMEEE) → PAT.
- **Nodal Ministry:** Ministry of Power → Bureau of Energy Efficiency (BEE).
- Under Perform Achieve and Trade (PAT) mechanism: 8 energy intensive industries are given 'quotas' viz. Thermal Power, Aluminium, Cement, Fertilizer, Iron-steel, Pulp-paper, Textiles and Chlor-alkali.
- They have to cut their energy consumption according to the quotas, else face penalties.
- Overachieving firm can obtain Energy Saving Certificates (ESCerts) from BEE's PATNET portal and sell it to the underachieving firm (similar to PSLC certificates).
- Central Electricity Regulatory Commission (a statutory body) regulates the prices and purchase procedure.

National LED Programme
Nodal Ministry: Ministry of Power gives funds to Energy Efficiency Services Ltd (EESL) for:

Unnat Jeevan by Affordable LEDs and Appliances for All (UJALA) for subsidized home Light-emitting Diode (LEDs) bulbs. Previously called DELP (Domestic Efficient Lighting Program, renamed in 2015).

Street Lighting National Program: whereas EESL replaces conventional halogen street bulbs with LED street bulbs, free of cost.

Miscellaneous Schemes and Topics
AJAY

Atal Jyoti Yojana (Ajay): Free Solar Street Light with LED in

- Special category states
- 5 states - Assam, Bihar, Jharkhand, Odisha and Uttar Pradesh.
- NITI Aayog's Aspirational districts in other states
- Andaman and Nicobar and Lakshadweep

Funding: MNRE 75% + 25% from MPLADS of given constituency.

SAATHI

Ministry of Power and Ministry of Textiles give money to Energy Efficiency Services Limited (EESL). EESL give energy efficient instruments to small and medium Powerlooms to reduce their energy consumption.

Star Labelling

To help the customer to use energy efficient appliances, BEE mandates the use of star labelling in electrical appliances.

Methanol Economy Fund

To use 'less' petrol and diesel in transport and electricity generators:

Methanol can be generated from bio waste. It is the simplest alcohol (CH_3OH) and does not emit particulate matter (PM)/Sulphur or nitrogen pollution.

In 2017, NITI Aayog proposed to setup a Methanol Economy Fund to finance R&D in this area.

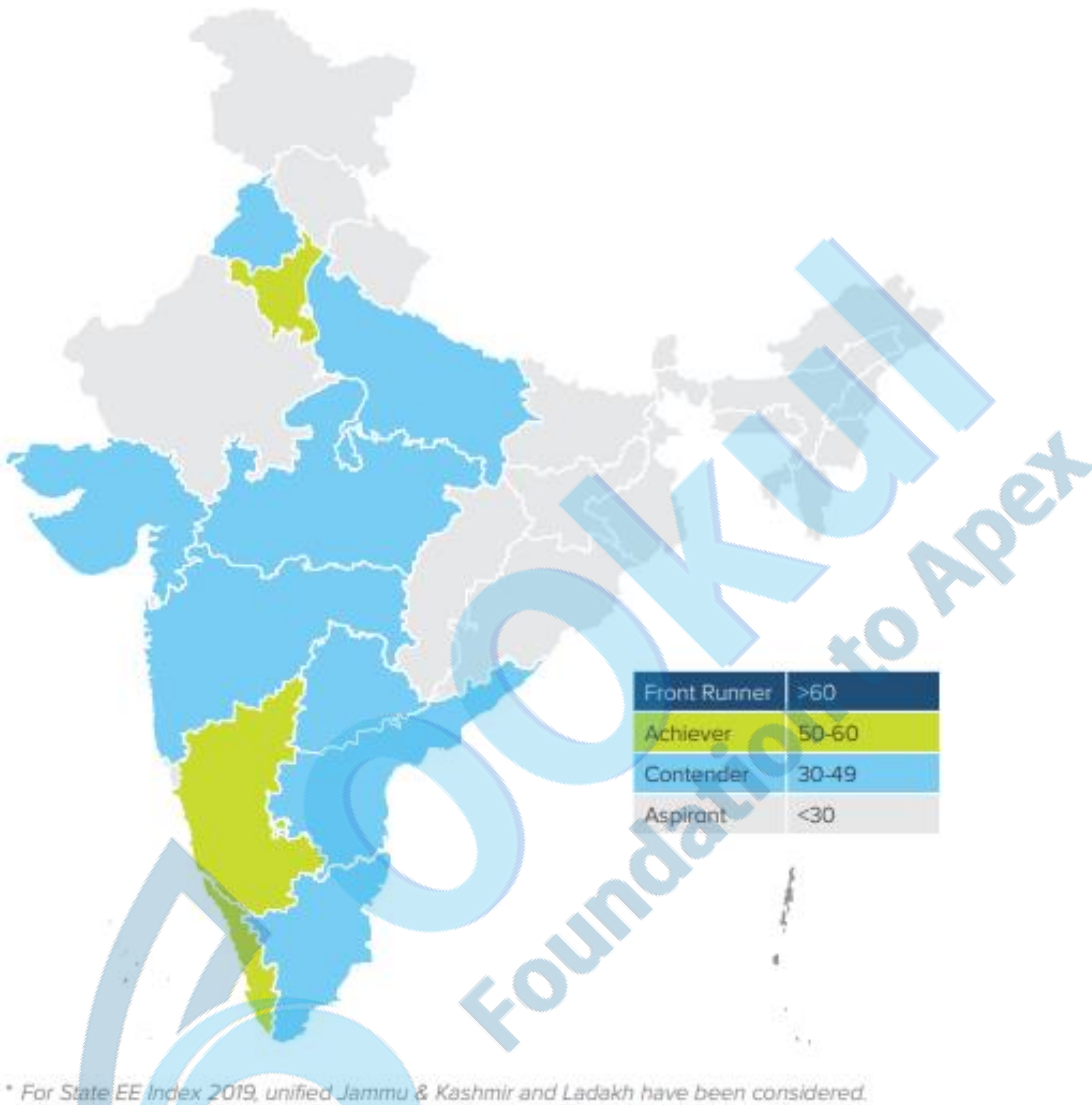
Electricity Indices
Energy Transition Index

World Economic Forum's index to measure countries on how much CO_2/pollution is generated while producing energy, and whether the country is serious about reducing it.

Ranking 2020-May: Top 3 - Sweden, Switzerland, Finland. Then India: 74 (previous years 76) Haiti - 115 (lowest).

State Energy Efficiency Index 2019

- Developed by Power Ministry's Bureau of Energy Efficiency (BEE) in association with a non-profit body called Alliance for an Energy Efficient Economy (AEEE).
- The index categorises states as **'Front Runner'**, **'Achiever'**, **'Contender'** and **'Aspirant'** based on their efforts and achievements towards energy efficiency implementation.



- The top-performing states for 2019 are Haryana, Kerala and Karnataka, are in the 'Achiever' category.
- Manipur, Jammu & Kashmir, Jharkhand and Rajasthan performed the worst in the Aspirant groups.

Renewable Energy

United Nations Framework Convention on Climate Change (UNFCCC)'s Paris Accord (2015) requires nations to submit their Intended Nationally Determined Contribution (INDC or NDC) about their global warming mitigation commitments. India's Major NDCs are as following:

- by 2030, we will reduce emission intensity of GDP by 33-35 % from 2005 level.
- by 2030, 40% of our installed power generation capacity shall be from non-fossil fuel sources

In this regard, NDA Govt has set a target of installing:

Type	Solar	Wind	Bio mass	Small Hydro	By 2022
Giga watts (GW)	100	60	10	5	Total 175 GW

Ministry of New and Renewable Energy Autonomous Bodies

- National Institute of Solar Energy (NISE) – Gurugram employment/residence; National Council for Transgender (NCT) for their welfare. While SC earlier directed Govt to give reservation to TG but bill did not have it.

NCTP is a statutory body under Transgender Persons Protection of Rights Act, 2019

Chairman: Union Minister for Social Justice & Empowerment

Vice Chairman: Union Minister of state for Social Justice & Empowerment

representatives of various Ministries/Departments, NHRC and NCW, State Govt/UT, NGOs.

Five representatives of transgender community.

Non ex-officio members will have 3 years tenure.

Sustainable Development

- 1980s: UN's Brundtland Commission on Environment and Development published "Our Common Future" Report. It defined "Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs."
- 2000: UN General Assembly approved 8 Millennium Development Goals (MDG) with 18 associated targets, to be achieved by 2015.
- 1992: Earth Summit in Rio, Brazil. 2012: Rio+20 summit: leaders announced to prepare "Sustainable Development Goals" (SDG) for post-2015 era when MDG goals expired.
- 2015: United Nations General Assembly approved 17 goals with 169 associated targets. They became effective from 1/1/2016 and to be achieved by 2030.

SDG: India's Implementation / Monitoring

India has tasked NITI Aayog to monitor the SDG implementation in India, tie up with Union ministries, State governments, academia, civil society and other stakeholders.

In Dec 2018, NITI Aayog prepared 'Baseline Report of the SDG India Index', which contains baseline vs targets to be achieved for each goal & how much progress has been made by the States.

Accordingly, NITI assigns "SDG Goal Score (0-100)" to each State and UT and classifies them into following categories:

Baseline report – 2018	V2.0 report – 2019-20	V3.0 report – 2020-21
13 goals	16 goals + qualitative analysis on goal 17	16 goals + qualitative analysis on Goal 17
39 targets	54 targets	70 targets
62 indicators	100 indicators	115 indicators
Goal-wise ranking on States/ UTs	Goal-wise ranking on States/ UTs + State/ UT profiles	Goal-wise ranking on States/ UTs + State/ UT profiles
Preceded National Indicator Framework (NIF)	Aligned with NIF: 68 indicators completely aligned, 20 refined, 12 new to cover goals 12, 13, and 14	Aligned with NIF: 76 indicators completely aligned, 31 refined, 8 in consultation with the line ministries

Top-5 States	75	Kerala
	74	Himachal Pradesh, Tamil Nadu
	72	Andhra Pradesh, Goa, Karnataka, Uttarakhand
	71	Sikkim
	70	Maharashtra
Bottom-5 States	61	Chhattisgarh, Nagaland, Odisha
	60	Arunachal Pradesh, Meghalaya, Rajasthan, Uttar Pradesh
	57	Assam
	56	Jharkhand
	52	Bihar

OVERALL	Aspirant (0-49)	Nil
	Performer (50-64)	Manipur, Madhya Pradesh, West Bengal, Chhattisgarh, Nagaland, Odisha, Arunachal Pradesh, Meghalaya, Rajasthan, Uttar Pradesh, Assam, Jharkhand, Bihar Dadra and Nagar Haveli and Daman and Diu
	Front Runner (65-99)	Kerala, Himachal Pradesh, Tamil Nadu, Andhra Pradesh, Goa, Karnataka, Uttarakhand, Sikkim, Maharashtra, Gujarat, Telangana, Mizoram, Punjab, Haryana, Tripura Chandigarh, Delhi, Lakshadweep, Puducherry, Andaman and Nicobar Islands, Jammu and Kashmir, Ladakh
	Achiever (100)	Nil

SDG Goals Vs India's Notable Schemes

SDG	THE GLOBAL GOALS For Sustainable Development	India's Notable Schemes
Goal 1	 *End poverty in all its forms everywhere*	• MGNREGA and the National Livelihood Missions • Pradhan Mantri Jeevan Jyoti Beema Yojana (PMJJBY) and Pradhan Mantri Jeevan Suraksha Beema Yojana (PMJSBY), National Social Assistance Programmes (NSAP) which provides pension to the elderly, widows, PH in BPL category. • PMJAY ₹ 5 lakh health insurance that reduces healthcare burden on poor people.
Goal 2	 *End hunger, achieve food security and improved nutrition and promote sustainable agriculture*	• Green Revolution — Krishonnati Yojana and its 11 subschemes, especially National Mission for Sustainable Agriculture, National Food Security Mission • Food Security Act, Mid-day Meal (MDM), POSHAN Abhiyaan.
Goal 3	 *Ensure healthy lives and promote well-being for all at all ages*	• National Health Mission and its rural, urban • components, various schemes for Communicable and non-communicable diseases • Ayushman Bharat: 1) transform PHC 2) PMJAY ₹ 5 lakh health insurance that reduces healthcare burden on poor people. • Intensified Mission Indradhanush vaccination. • PM Matru Vandana Yojana (₹ 5,000+₹ 1,000), Janani Suraksha Yojana (₹ 1,000 to BPL) Janani Shishu Suraksha Karyakram (Free delivery) etc.
Goal 4	 *Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*	• Samagra Shiksha by merging 1) Sarva Shiksha Abhiyan (SSA) 2) Rashtriya Madhyamik Shiksha Abhiyan (RMSA) 3) Teacher Education (TE). • SWAYAM online portal for free learning etc.
Goal 5	 *Achieve gender equality and empower all women and girls*	• Gender Budget Statement from 2005 onwards • Beti Bachao, Beti Padhao, Sukanya Samridhi (Bank Savings) Yojana • Pradhan Mantri Ujjwala Yojana (LPG connection to BPL women), • Procurement quota for MSME owned by Women, Standup India loan scheme