

International economics: trade, institutions and growth

Free study notes · 5 notes · 25 Oct 2026

Free study material from Medha AI. For notes, practice, mock tests and previous papers for your exam, start free at **app.medhaai.in**.

1. Trade theories: absolute and comparative advantage, Heckscher-Ohlin, terms of trade; free trade versus protection
2. Bretton Woods system and the IMF: par values, quotas, SDRs and lending facilities
3. World Bank Group (IBRD, IDA, IFC, MIGA, ICSID) and regional banks (ADB, AIIB, NDB)
4. GATT to WTO: the world trading order, MFN, national treatment, agreements and dispute settlement
5. Sources of economic growth: capital, human capital, productivity, trade and aid, non-economic factors

1 Trade theories: absolute and comparative advantage, Heckscher-Ohlin, terms of trade; free trade versus protection

Countries gain from trade by specialising in goods they make at a lower opportunity cost (Ricardo), and they tend to export goods that use their abundant factor intensively (Heckscher-Ohlin); free trade maximises world output, while protection is defended for infant industries, jobs, balance of payments and security.

Core facts

- **Mercantilism** (16th–18th century): wealth = gold and silver; export more, import less.
- **Absolute advantage: Adam Smith**, *Wealth of Nations* (1776). A country exports a good it makes with **less labour** than the other country.
- **Comparative advantage: David Ricardo**, *Principles of Political Economy and Taxation* (1817). Trade pays even if one country is better at both goods; each exports the good in which its advantage is **greater** (or disadvantage **smaller**).
- Ricardo's example: **England and Portugal, cloth and wine**; based on the **labour theory of value**.
- **Opportunity cost theory: Gottfried Haberler** (1936) restated comparative advantage without the labour theory of value.
- **Reciprocal demand: J.S. Mill**; the actual terms of trade between the two cost ratios depend on each country's demand for the other's good.
- **Heckscher-Ohlin (H-O) theory: Eli Heckscher** (1919) and Bertil **Ohlin** (1933). A country exports goods that use its **abundant factor** intensively.
 - Capital-abundant country → exports capital-intensive goods; labour-abundant country → labour-intensive goods.
- **Factor price equalisation theorem: Heckscher-Ohlin-Samuelson**; free trade tends to equalise factor prices across countries.
- **Leontief paradox (1953)**: the USA, the most capital-abundant country, was found to export **labour-intensive** goods and import capital-intensive ones (1947 data).
- **Terms of trade (ToT)**: the rate at which exports exchange for imports.
 - **Net barter (commodity) ToT** = $(P_x \div P_m) \times 100$ (export price index over import price index).
 - A rise = **improvement** (favourable); a fall = **deterioration**.
- **Prebisch-Singer hypothesis (1950)**: the ToT of primary-product exporters **decline** over the long run.
- **Free trade**: no tariffs or quotas. **Protection**: tariffs, quotas, subsidies and other barriers to imports.
- **Infant industry argument: Alexander Hamilton** (USA) and **Friedrich List** (Germany).

- **Tariff types:** **specific** (per unit), **ad valorem** (per cent of value), **compound** (both).

Explained

Absolute advantage: a worked example

One day of labour produces:

Country	Cloth	Wheat
A	10	5
B	4	8

- A is better at cloth ($10 > 4$); B is better at wheat ($8 > 5$).
- Without trade, each country spends 1 day on each good (2 days each): A makes 10 cloth + 5 wheat, B makes 4 cloth + 8 wheat. Total = **14 cloth + 13 wheat**.
- With specialisation, A spends 2 days on cloth (**20 cloth**) and B 2 days on wheat (**16 wheat**).
- Gain to the world = $20 - 14 = \mathbf{6 \text{ cloth}}$ and $16 - 13 = \mathbf{3 \text{ wheat}}$, with the same labour.

Comparative advantage: Ricardo's example

Labour (man-years) needed for one unit:

Country	Wine	Cloth
Portugal	80	90
England	120	100

- Portugal has an **absolute advantage in both** goods.
- Cost ratios (opportunity cost of 1 wine in cloth):
 - Portugal: $80 \div 90 = \mathbf{0.889 \text{ cloth}}$
 - England: $120 \div 100 = \mathbf{1.2 \text{ cloth}}$
- Wine is relatively cheaper in Portugal, so **Portugal exports wine**; cloth is relatively cheaper in England ($1 \text{ cloth} = 100 \div 120 = 0.833 \text{ wine}$, against $90 \div 80 = 1.125 \text{ wine}$ in Portugal), so **England exports cloth**.
- **Limits of the terms of trade:** 1 wine must exchange for **between 0.889 and 1.2 cloth**. Outside these limits one country would not gain.
- At 1 wine = 1 cloth, Portugal gets a unit of cloth for 80 man-years instead of 90 (saves 10); England gets a unit of wine for 100 man-years instead of 120 (saves 20).

Heckscher-Ohlin theory

- Assumptions: two countries, two goods, two factors (labour, capital); same technology everywhere; goods differ in factor intensity; countries differ in factor endowment; perfect competition; no transport costs.
- **Factor abundance** can be defined by **physical quantity** (higher K/L ratio) or by **factor prices** (lower r/w ratio means capital-abundant).

- Cause of trade: different **factor endowments** lead to different factor prices, which lead to different commodity prices.
- Ricardo explains trade by **labour productivity differences**; H-O by **factor endowment differences**.
- Example: India (labour-abundant) exports textiles, garments, leather goods; imports capital-intensive machinery.

Kinds of terms of trade

Concept	Formula	Associated with
Net barter (commodity)	$(P_x \div P_m) \times 100$	F.W. Taussig
Gross barter	$(Q_m \div Q_x) \times 100$	F.W. Taussig
Income ToT	$(P_x \div P_m) \times Q_x$	G.S. Dorrance
Single factorial	$(P_x \div P_m) \times Z_x$	Jacob Viner
Double factorial	$(P_x \div P_m) \times (Z_x \div Z_m)$	Jacob Viner

(Z_x , Z_m = productivity indices in export and import industries.)

Worked example: terms of trade

- Base year = 100. Current year: export price index **120**, import price index **150**, export volume index **140**.
- Net barter ToT = $120 \div 150 \times 100 = 80$: the ToT have **deteriorated by 20%**.
- Income ToT = $80 \times 140 \div 100 = 112$: the **capacity to import** has risen 12%, because export volume grew faster than the ToT fell.
- Gross barter: if import volume index = 130 and export volume index = 110, gross barter ToT = $130 \div 110 \times 100 = 118.2$.

Free trade versus protection

Free trade (for)	Protection (for)
Specialisation, higher world output	Infant industry needs time to grow
Cheaper goods, more choice for consumers	Protects jobs and domestic industry
Competition, efficiency, technology flow	Corrects balance of payments deficits
Wider markets, economies of scale	Defence and strategic self-reliance
Curbs monopoly power	Counters dumping; raises revenue; diversification

Instruments of protection

- **Tariff** (customs duty): import duty, export duty.
- **Quota**: fixed limit on import quantity or value.
- **Voluntary export restraint (VER)**: the exporter "agrees" to limit exports.
- **Subsidies** to domestic producers or exporters.
- **Non-tariff barriers**: licensing, standards, foreign exchange controls, state trading.
- **Anti-dumping duty**: against goods sold abroad below their home price (dumping).

Deeper

Effects of a tariff (small country, partial equilibrium)

- Demand: $Q_d = 100 - 4P$. Supply: $Q_s = -20 + 4P$. World price = **10**. Tariff = **2 per unit**.
- Free trade ($P = 10$): $Q_d = 60$, $Q_s = 20$, imports = **40**.
- With tariff ($P = 12$): $Q_d = 52$, $Q_s = 28$, imports = **24**.

Effect	Calculation	Value
Loss of consumer surplus	$2 \times (60 + 52) \div 2$	112
Gain in producer surplus	$2 \times (20 + 28) \div 2$	48
Tariff revenue	2×24	48
Deadweight loss	$112 - 48 - 48$	16

- The deadweight loss of 16 = **production loss** ($\frac{1}{2} \times 2 \times 8 = 8$) + **consumption loss** ($\frac{1}{2} \times 2 \times 8 = 8$).
- Named effects: price effect, protective (production) effect, consumption effect, revenue effect, redistribution effect, balance of payments effect.
- A **large** country can gain from a tariff if it lowers the world price (the **optimum tariff** argument), but this invites retaliation.

Effective rate of protection (ERP)

- Nominal tariff protects the **price**; ERP measures protection of **value added**.
- $ERP = (t - a \times t_i) \div (1 - a)$, where t = tariff on the final good, t_i = tariff on the input, a = share of the input in the final good's free-trade value.
- Example: $t = 20\%$, $t_i = 10\%$, $a = 0.5 \rightarrow ERP = (0.20 - 0.05) \div 0.5 = \mathbf{30\%}$.
- $ERP >$ nominal tariff when inputs are taxed less than outputs (**tariff escalation**).

More theory

- **Offer curves** (Marshall and Edgeworth) show reciprocal demand; their intersection fixes the equilibrium ToT.
- **Stolper-Samuelson theorem**: a rise in the price of a good raises the real return of the factor used intensively in it and lowers the other's.
- **Rybczynski theorem**: at constant prices, an increase in one factor raises output of the good using it intensively and **reduces** output of the other good.
- **Explanations of the Leontief paradox**: US labour is highly skilled (human capital); natural resources; demand bias; factor intensity reversal.
- **New trade theory** (Krugman): economies of scale and product differentiation explain **intra-industry trade** between similar countries.
- **Gains from trade** split into gains from **exchange** and gains from **specialisation**.
- **Quota versus tariff**: a quota fixes import quantity, so higher demand raises the price, not imports; the revenue goes to licence holders (quota rent) unless licences are auctioned.

Common traps

✗ "Comparative advantage was given by Adam Smith." ✓ **Ricardo (1817)**; Smith gave **absolute** advantage (1776).

✗ "No trade is possible if one country is better at both goods." ✓ Trade still pays when **comparative** costs differ.

✗ "Opportunity cost theory is Ricardo's." ✓ It is **Haberler's (1936)**.

✗ "H-O says trade arises from different technologies." ✓ From different **factor endowments**; technology is assumed the same.

✗ "Leontief found that the USA exports capital-intensive goods." ✓ He found **labour-intensive** exports: the **paradox**.

✗ "A fall in the net barter ToT index is favourable." ✓ A fall is a **deterioration**.

✗ "Gross barter ToT = $Q_x \div Q_m$." ✓ **$Q_m \div Q_x \times 100$** .

✗ "Specific duty is a percentage of value." ✓ That is **ad valorem**; specific is **per unit**.

✗ "ERP equals the nominal tariff." ✓ ERP measures protection of **value added** and can be higher or lower.

Quick revision

- Smith 1776: absolute advantage; Ricardo 1817: comparative advantage.
- Haberler 1936: opportunity cost; Mill: reciprocal demand.
- H-O: export the good using your abundant factor.
- Leontief paradox 1953: US exports labour-intensive goods.
- Net barter ToT = $P_x \div P_m \times 100$; income ToT = $(P_x \div P_m) \times Q_x$.
- Prebisch-Singer: primary exporters' ToT decline.
- Infant industry: Hamilton and List.
- $ERP = (t - at_i) \div (1 - a)$.
- Tariff deadweight loss = production loss + consumption loss.

2 Bretton Woods system and the IMF: par values, quotas, SDRs and lending facilities

The Bretton Woods system (1944–1971/73) fixed every currency to the US dollar and the dollar to gold at US\$ 35 an ounce, with the IMF policing the adjustable peg and lending to members in balance of payments trouble; the system broke down in the early 1970s, but the IMF survives with quotas, SDRs and a range of lending facilities.

Core facts

- **Bretton Woods Conference: 1–22 July 1944**, Bretton Woods, **New Hampshire, USA**; **44** Allied countries.
- It created the **IMF** and the **IBRD** (World Bank): the "Bretton Woods twins".
- Rival plans: **Keynes plan** (UK): an International Clearing Union with a world currency, **bancor**; **White plan** (USA, Harry Dexter White): a stabilisation fund. The final design was closer to the **White plan**.
- **Gold exchange standard**: the **US dollar** was convertible into gold at **US\$ 35 per fine ounce**; other currencies had a **par value** in gold or US dollars.
- Market rates had to stay within **±1%** of par.
- **Adjustable peg**: par values could be changed to correct a "**fundamental disequilibrium**" (never defined in the Articles).
- **IMF** began operations on **1 March 1947**; headquarters **Washington, D.C.** India is a **founding member**.
- **Members: 191** (Liechtenstein joined in 2024).
- **Quota**: decides a member's **subscription, votes, access to loans and SDR allocation**.
- **SDR (Special Drawing Right)**: reserve asset created by the **First Amendment (1969)**; first allocation **1970**. Also called "**paper gold**".
- **SDR basket (from August 2022)**: US dollar, euro, Chinese renminbi, Japanese yen, pound sterling.
- **End of Bretton Woods: 15 August 1971**, US President **Nixon** closed the "gold window" (the **Nixon shock**). Generalised floating from **March 1973**.
- **Jamaica Accord (January 1976)**, given effect by the **Second Amendment (1978)**: legalised floating; gold lost its official role.
- **Managing Director**: Kristalina Georgieva (since 2019; second term from October 2024). First MD: **Camille Gutt** (Belgium).

Explained

How the par value system worked

- Each member declared a par value. The US kept the dollar convertible into gold for foreign official holders at US\$ 35 an ounce.
- Central banks intervened in the foreign exchange market to keep their currency within $\pm 1\%$ of par.
- A member could change its par value by up to **10%** of the initial par value (in total) after consulting the Fund, which could not object; larger changes needed the **Fund's concurrence**.
- **Scarce currency clause (Article VII)**: if a currency became scarce in the Fund, members could restrict payments in it.
- Examples: sterling was devalued in **1949** (US\$ 4.03 → 2.80) and in **1967**; India devalued with sterling in **1949**, and on its own in **June 1966**.

India's 1966 devaluation: a worked example

- Old rate: **Rs 4.76** = 1 US dollar. New rate: **Rs 7.50** = 1 US dollar.
- Fall in the rupee's dollar value = $(7.50 - 4.76) \div 7.50 \approx \mathbf{36.5\%}$ (one rupee fell from about 21 US cents to about 13.3 cents).
- Rise in the rupee price of a dollar = $(7.50 \div 4.76 - 1) \approx \mathbf{57.5\%}$.
- Both figures describe the same change; textbooks quote the **36.5%** figure as the extent of devaluation.

Why Bretton Woods broke down

- **Triffin dilemma** (Robert Triffin, 1960): the world needed more dollars for reserves, which required US deficits; but growing deficits destroyed confidence in the dollar's gold convertibility.
- US deficits (Vietnam war, social spending) and falling US gold stocks.
- Rigid pegs invited speculation; surplus countries (Germany, Japan) did not revalue enough.
- **Smithsonian Agreement (December 1971)**: gold raised to **US\$ 38** an ounce (dollar devalued about 7.9% against gold); bands widened to $\pm 2.25\%$. It collapsed by **1973**.

IMF quotas

- Paid **25%** in reserve assets (SDRs or major currencies) and **75%** in the member's own currency.
- **Votes**: one vote per SDR 100,000 of quota, plus **basic votes** shared equally by all members.
- **Quota formula** weights: GDP **50%**, openness **30%**, variability **15%**, reserves **5%**.
- **India**: about **2.75%** of quotas (eighth largest) and about **2.63%** of votes.
- Major decisions need **85%** of votes, so the **USA** (about 16.5%) has a veto.

Tranches (the classical scheme)

Tranche	Share of quota	Condition
Reserve (gold) tranche	25%	None; the member's own reserve
First credit tranche	next 25%	Light conditions
Upper credit tranches	beyond 50%	Strict policy conditions, phased

- Example: a quota of SDR 1,000 million gives a reserve tranche of **SDR 250 million**; each credit tranche is another **SDR 250 million**.

SDR basket weights (2022 review)

Currency	Weight (%)
US dollar	43.38
Euro	29.31
Chinese renminbi	12.28
Japanese yen	7.59
Pound sterling	7.44

- Weights add to 100. The renminbi joined the basket on **1 October 2016**.
- The SDR is **not a currency** and **not a claim on the IMF**; it is a potential claim on the freely usable currencies of members.
- The **SDR interest rate** is set weekly from short-term rates on the basket currencies.

Main lending facilities

Facility	Use
Stand-By Arrangement (SBA)	Short-term balance of payments problems
Extended Fund Facility (EFF)	Medium-term, structural problems
Flexible Credit Line (FCL)	Precautionary; for very strong policy records
Precautionary and Liquidity Line (PLL)	Sound economies with some weaknesses
Rapid Financing Instrument / Rapid Credit Facility	Fast emergency finance (RCF: low-income)
Extended Credit Facility (ECF)	Concessional, low-income countries
Resilience and Sustainability Facility (RSF)	Climate and pandemic resilience (2022)

Deeper

- **Purposes of the IMF (Article I):** monetary cooperation, balanced growth of trade, exchange stability, a multilateral payments system, temporary resources to correct BoP imbalances, and shorter, less severe disequilibria.
- **Article IV:** annual surveillance consultations with each member. **Article VIII:** current account convertibility; **India accepted Article VIII in August 1994**. **Article XIV:** transitional arrangements for members not yet convertible.
- **Two departments:** the **General Department** (General Resources Account: quota-funded lending) and the **SDR Department**. Concessional loans run through the **Poverty Reduction and Growth Trust (PRGT)**.
- **Borrowed resources:** the **New Arrangements to Borrow (NAB)** and bilateral borrowing supplement quotas.
- **SDR mechanics:**
 - Valued at **0.888671 gram of gold** (= US\$ 1) in 1969; a 16-currency basket from 1974; a 5-currency basket from 1981.

- Allocations: 1970–72, 1979–81, 2009 and **August 2021** (about SDR 456 billion, roughly US\$ 650 billion, the largest ever).
- Allocated **in proportion to quotas**. A member earns interest on **holdings** and pays interest on **allocations**.
- The basket is reviewed every five years.
- **Quota reviews**: the **14th review** (2010) doubled quotas and took effect in **2016**; the **16th review** (December 2023) approved a **50% increase** with no change in shares, effective only after members consent.
- **Conditionality**: prior actions, quantitative performance criteria (for example, ceilings on deficits or credit), structural benchmarks. Funds are released in **phases** after reviews.
- **India and the IMF**:
 - **1981**: an EFF of SDR 5 billion, then the largest in IMF history; India drew SDR 3.9 billion and ended it early.
 - **1991**: stand-by arrangement and compensatory financing during the BoP crisis; all repaid by **2000**.
 - India now contributes to IMF lending (for example, buying IMF notes in 2009).
- **After Bretton Woods**: a "non-system" of managed floats, pegs and currency unions; the dollar remains the main reserve currency.

Common traps

✗ "Bretton Woods is in Switzerland." ✓ **New Hampshire, USA.**

✗ "The IMF began work in 1944." ✓ Conference **1944**; operations from **1 March 1947**.

✗ "Under Bretton Woods every currency was convertible into gold." ✓ Only the **US dollar**, at US\$ 35 an ounce; other currencies were pegged to the dollar.

✗ "The bancor was adopted at Bretton Woods." ✓ It was **Keynes's proposal**; the **White plan** prevailed.

✗ "The Smithsonian Agreement started floating." ✓ It **re-pegged** at US\$ 38 with $\pm 2.25\%$ bands; floating came in **1973** and was legalised by the **Jamaica Accord (1976)**.

✗ "SDRs were created in 1944." ✓ In **1969** (First Amendment); first allocated **1970**.

✗ "The SDR basket has the Swiss franc." ✓ **Dollar, euro, renminbi, yen, pound.**

✗ "The reserve tranche carries conditions." ✓ It is drawn **without** conditions.

✗ "India devalued by 57.5% in 1966." ✓ The rupee's value fell **36.5%**; 57.5% is the rise in the rupee price of a dollar.

Quick revision

- Bretton Woods, July 1944, New Hampshire, 44 countries; IMF + IBRD.
- US\$ 35 an ounce; par values $\pm 1\%$; adjustable peg for "fundamental disequilibrium".
- Keynes: bancor; White plan won.
- IMF from 1 March 1947; 191 members.
- Nixon shock 15 Aug 1971; Smithsonian Dec 1971 (US\$ 38, $\pm 2.25\%$); floating 1973; Jamaica 1976.
- Triffin dilemma: reserve currency needs deficits that erode confidence.
- SDR 1969; basket: USD 43.38, EUR 29.31, CNY 12.28, JPY 7.59, GBP 7.44.
- Reserve tranche 25% of quota, no conditions.
- India: 2.75% quota; Article VIII in 1994; 1966 devaluation 36.5%.

3 World Bank Group (IBRD, IDA, IFC, MIGA, ICSID) and regional banks (ADB, AIIB, NDB)

The World Bank Group's five institutions give long-term development finance (IBRD to middle-income countries, IDA to the poorest), back private investment (IFC), insure it (MIGA) and settle investment disputes (ICSID); regional and newer banks such as the ADB, AIIB and NDB add finance, mostly for infrastructure.

Core facts

- **World Bank Group (WBG):** five institutions; headquarters **Washington, D.C.**

Institution	Year	Main role
IBRD	1944 (operations 1946)	Loans to middle-income and creditworthy countries
IFC	1956	Investment in the private sector
IDA	1960	Interest-free or low-interest credits and grants to the poorest
ICSID	1966	Settles investor-State disputes
MIGA	1988	Political risk insurance (guarantees)

- **"World Bank"** in the strict sense = **IBRD + IDA**.
- Only **IMF members** can join the IBRD.
- **India:** member of **IBRD, IDA, IFC and MIGA; not a member of ICSID**.
- **IDA** is the **"soft loan window"** of the World Bank. **IBRD** lends on near-market terms ("hard loans").
- **President: Ajay Banga** (since June 2023). By convention, an **American** heads the World Bank and a **European** heads the IMF.
- **Asian Development Bank (ADB): 1966**, headquarters **Manila** (Philippines). Largest shareholders: **Japan** and the **USA**. Its president is by convention Japanese. India is a founding member.
- **Asian Infrastructure Investment Bank (AIIB):** proposed by China (2013); began operations **January 2016**; headquarters **Beijing**. **China** is the largest shareholder, **India the second-largest**.
- **New Development Bank (NDB, "BRICS Bank"):** agreement signed at **Fortaleza, Brazil (July 2014)**; headquarters **Shanghai**; began work in **2015**. First president: **K.V. Kamath** (India).
- **BRICS Contingent Reserve Arrangement (CRA):** US\$ 100 billion pool for balance of payments support (China 41, Brazil 18, India 18, Russia 18, South Africa 5).

Explained

The five institutions

- **IBRD**: set up at Bretton Woods to rebuild war-torn Europe; first loan to **France (1947, US\$ 250 million)**. It raises money mainly by selling **bonds** on world capital markets, backed by members' capital. Lends to governments, or with a **government guarantee**.
- **IDA**: set up in **1960** because the poorest countries could not afford IBRD terms. Funded mainly by **donor contributions**, renewed every **three years** ("replenishments"); IDA21 (December 2024) is a **US\$ 100 billion** package. Credits carry zero or very low interest, long maturities and grace periods.
- **IFC**: lends to and takes **equity** in private firms in developing countries, **without government guarantee**; mobilises other investors. IFC issued the first rupee-denominated bonds in London in 2014, called "**Masala bonds**".
- **MIGA**: guarantees foreign investors against **non-commercial risks**: currency transfer restrictions, expropriation, war and civil disturbance, breach of contract.
- **ICSID**: provides conciliation and arbitration for disputes between foreign investors and host States.

IBRD and IDA compared

Point	IBRD	IDA
Borrowers	Middle-income, creditworthy	Poorest countries
Funds from	Bond markets, capital	Donor replenishments
Terms	Near-market interest	Zero or low interest, long maturity
Nickname	Hard loan window	Soft loan window

India and the World Bank

- India has been one of the largest borrowers of both IBRD and IDA.
- India **graduated from IDA** after **2014** (end of IDA16) and now borrows mainly from the **IBRD**, with IFC investing in Indian firms.
- Lending types: **investment project financing**, **development policy financing** (budget support for reforms) and **Program-for-Results**.

Regional and new development banks

Bank	Founded	HQ	Note
ADB	1966	Manila	Japan, USA largest shareholders
AIIB	2016 (operations)	Beijing	China first, India second
NDB	2014 (agreement)	Shanghai	Five BRICS founders, equal shares
AfDB	1964	Abidjan	Africa

- Other regional banks: **Inter-American Development Bank** (1959, Washington), **European Bank for Reconstruction and Development** (1991, London; India joined in **2018**), **Islamic Development Bank** (Jeddah).
- **ADB** has a concessional window, the **Asian Development Fund**.
- **NDB**: the five founders subscribed **equal** capital, so each has an equal vote; new members include **Bangladesh, the UAE, Egypt and Algeria**. India has an NDB regional office at **GIFT City**, Gujarat.

Deeper

- **Voting:** WBG votes depend on capital shares plus basic votes; the **USA** holds a veto over decisions needing **85%**. In the AIIB, China's vote share (about a quarter) gives it a veto over supermajority decisions (75%).
- **Why new banks came:** slow quota and voice reforms at the IMF and World Bank, a huge infrastructure gap in Asia, and the wish of emerging economies to set their own rules. AIIB and NDB co-finance many projects with the World Bank and ADB.
- **Classification of countries:** the World Bank groups economies as **low, lower-middle, upper-middle and high income** by **GNI per capita (Atlas method)**, revised every 1 July; India is **lower-middle income**.
- **Graduation:** as income rises, a country moves from IDA to "blend" (IDA + IBRD) to IBRD-only terms.
- **Safeguards:** the World Bank's **Environmental and Social Framework (2018)** governs resettlement, environment and indigenous peoples. The **Inspection Panel** (1993) hears complaints from affected people.
- **Criticism:** past structural adjustment loans (1980s–90s) attached market reforms; large dams and resettlement (for example the Sardar Sarovar (Narmada) project, where India cancelled the rest of the Bank loan in 1993 after an independent review).
- **Reports:** *World Development Report* (annual, since 1978), *Human Capital Index*, *Logistics Performance Index*; *Doing Business* was discontinued in **2021**.
- **Evolution agenda:** since 2023 the multilateral banks are stretching their capital to lend more for climate and global public goods.

AP angle

- **Amaravati capital city:** in **December 2024** the **World Bank** approved about **US\$ 800 million** and the **ADB** about **US\$ 789 million** for the Amaravati capital city development programme.
- **Visakhapatnam-Chennai Industrial Corridor (VCIC):** the first phase of the East Coast Economic Corridor, supported by **ADB** loans since 2016.
- **Power:** the **AP 24x7 Power for All** project was co-financed by the **World Bank** and the **AIIB** (AIIB approval 2017, among its earliest India loans).

Common traps

X "India is a member of all five WBG institutions." ✓ India is **not** in **ICSID**.

X "IFC lends to governments." ✓ **IFC** invests in the **private sector**, without government guarantee.

X "IDA is the hard loan window." ✓ IDA is the **soft** loan window; IBRD lends on near-market terms.

X "IDA was set up at Bretton Woods." ✓ IDA dates from **1960**; IBRD from **1944**.

X "MIGA settles investment disputes." ✓ **ICSID** settles disputes; **MIGA** insures political risk.

✗ "ADB is in Beijing." ✓ ADB is in **Manila**; **AIIB** is in Beijing.

✗ "NDB headquarters is in New Delhi." ✓ **Shanghai**; India's K.V. Kamath was its first president.

✗ "India is the largest AIIB shareholder." ✓ **Second**, after China.

✗ "India's CRA share is the largest." ✓ China **41**; India, Brazil, Russia **18** each; South Africa **5**.

Quick revision

- WBG: IBRD 1944, IFC 1956, IDA 1960, ICSID 1966, MIGA 1988.
- World Bank = IBRD + IDA; IDA = soft loan window.
- India not in ICSID; graduated from IDA after 2014.
- IFC: private sector; Masala bonds 2014. MIGA: political risk insurance.
- President Ajay Banga (2023).
- ADB 1966 Manila; AIIB Beijing 2016; NDB Shanghai (Fortaleza 2014).
- CRA US\$ 100 billion: China 41, India 18.
- India second-largest AIIB shareholder.
- Amaravati: World Bank and ADB loans, December 2024.

4 GATT to WTO: the world trading order, MFN, national treatment, agreements and dispute settlement

The world trading order moved from GATT (1947), a provisional tariff agreement for goods, to the WTO (1995), a permanent organisation covering goods, services and intellectual property, built on non-discrimination (MFN and national treatment) and a binding dispute settlement system.

Core facts

- **GATT:** General Agreement on Tariffs and Trade, signed at **Geneva, 30 October 1947** by **23** countries; in force **1 January 1948**. **India was a founding member.**
- GATT was an **agreement**, not an organisation; the planned **International Trade Organization (ITO)** (Havana Charter, 1948) never came into being.
- **Eight GATT rounds:** Geneva (1947), Annecy (1949), Torquay (1950–51), Geneva (1956), Dillon (1960–61), Kennedy (1964–67), Tokyo (1973–79), **Uruguay (1986–94).**
- **Marrakesh Agreement** establishing the WTO signed **15 April 1994** (Marrakesh, Morocco).
- **WTO established 1 January 1995**, headquarters **Geneva**. India a member from day one.
- **Members:** 166 (since 2024, when Comoros and Timor-Leste joined).
- **Director-General: Ngozi Okonjo-Iweala** (Nigeria), first woman and first African DG, since March 2021; second term from September 2025.
- **Highest body: Ministerial Conference**, meets at least once every **two years**; day-to-day: **General Council** (also sits as Dispute Settlement Body and Trade Policy Review Body).
- **MFN (most-favoured-nation):** GATT **Article I**; a concession to one member must be given to all.
- **National treatment:** GATT **Article III**; imported goods, once inside, treated no worse than domestic goods.
- **Main agreements:** GATT 1994 (goods), **GATS** (services), **TRIPS** (intellectual property), **TRIMs** (investment measures), **Agreement on Agriculture (AoA)**, SPS, TBT, anti-dumping, subsidies and countervailing measures, safeguards.
- **Dispute settlement: Dispute Settlement Understanding (DSU);** panels, then the **Appellate Body** (7 members).
- **Doha Development Round** launched in **2001** (4th Ministerial, Doha); not concluded.

Explained

GATT and WTO compared

Point	GATT	WTO
Nature	Provisional agreement	Permanent organisation
Members called	Contracting parties	Members
Coverage	Goods only	Goods, services, IPR

Point	GATT	WTO
Disputes	Slow; one party could block	Binding, time-bound

Principles of the trading system

- **Non-discrimination:** MFN between members and national treatment inside the border.
- **Freer trade:** gradual lowering of tariffs through negotiation.
- **Predictability through binding:** members "bind" tariffs at a ceiling (**bound rate**); the **applied rate** can be lower but not higher.
- **Fair competition:** rules on dumping and subsidies.
- **Special and differential treatment** for developing countries: longer time limits, lower commitments.

Exceptions to MFN

- **Free trade areas and customs unions** (GATT Article XXIV).
- **Enabling Clause (1979)** for preferences to developing countries, e.g. the **Generalised System of Preferences (GSP)**.
- **Anti-dumping and countervailing duties** against unfair trade from a particular source.
- **General exceptions** (Article XX: health, conservation) and **security exceptions** (Article XXI).

Agreement on Agriculture: the boxes

Box	What it covers	Limit
Amber	Trade-distorting support (price support, input subsidies)	Capped; de minimis 5% (developed), 10% (developing) of production value
Blue	Support tied to production-limiting programmes	No cap
Green	Minimal distortion: research, extension, food security stocks, direct income support	No cap

Development box (Article 6.2) exempts investment and input subsidies to low-income farmers in developing countries.

Other agreements in brief

- **TRIPS:** minimum standards for patents, copyright, trademarks, geographical indications; India amended its Patents Act (2005) to allow **product patents** in pharmaceuticals.
- **GATS:** four modes of supply: (1) cross-border, (2) consumption abroad, (3) commercial presence, (4) movement of natural persons (India's interest).
- **TRIMs:** bans investment conditions that discriminate against imports, such as local content requirements.
- **SPS / TBT:** food safety, animal and plant health; technical standards and labelling.
- **Trade Policy Review Mechanism:** regular review of each member's trade policies.

Dispute settlement steps

1. **Consultations** (60 days).
2. **Panel** of three (normally reports within about 6 months).

3. **Appeal** to the Appellate Body, on points of law only.
4. Report adopted by the Dispute Settlement Body unless **all members agree to reject it (negative or reverse consensus)**.
5. Compliance; if not, compensation or **authorised retaliation**.

Deeper

- **Uruguay Round results:** created the WTO; brought agriculture and textiles under rules (the Multi-Fibre Arrangement was phased out by **1 January 2005**); added services, IPR and investment measures.
- **Single undertaking:** members accept nearly all agreements as one package. Exceptions are **plurilateral** agreements, such as the **Government Procurement Agreement** (India is an **observer**, not a party) and Civil Aircraft.
- **Appellate Body crisis:** since **11 December 2019** it has lacked the minimum three members, because the United States blocks new appointments. Appeals "into the void" leave panel reports unadopted. A group led by the EU formed the **Multi-Party Interim Appeal Arbitration Arrangement (MPIA, 2020)**; India has not joined.
- **India's cases:** the **quantitative restrictions** case (US complaint) went against India in 1999; India removed balance-of-payments QRs by **April 2001**. India also faced challenges on sugar subsidies and export incentive schemes (MEIS was replaced by RoDTEP in 2021).
- **Ministerial milestones**

Year	Place	Outcome
2001	Doha	Doha Development Agenda; TRIPS and public health declaration
2013	Bali	Trade Facilitation Agreement (in force 22 Feb 2017); interim peace clause on public stockholding
2015	Nairobi	End of agricultural export subsidies
2022	Geneva (MC12)	Fisheries subsidies agreement; TRIPS waiver for COVID-19 vaccines
2024	Abu Dhabi (MC13)	E-commerce duty moratorium extended; accessions of Comoros and Timor-Leste approved (members from August 2024)

- **Peace clause:** India's public stockholding for food security (MSP procurement) is protected from disputes even if it breaches the amber box limit; made indefinite in November 2014 until a permanent solution.
- **Fisheries subsidies agreement** (first phase: illegal, unreported and unregulated fishing, overfished stocks) entered into force on **15 September 2025**.

Common traps

✗ "GATT was an organisation like the IMF." ✓ It was an **agreement**; the ITO failed. The WTO is the organisation.

X "The WTO was set up in 1994." ✓ Agreement signed **15 April 1994**; WTO began **1 January 1995**.

X "The Uruguay Round was the first round." ✓ It was the **eighth**; the first was **Geneva 1947**.

X "MFN means special favours to one country." ✓ It means **equal treatment of all members**.

X "National treatment applies at the border to tariffs." ✓ It applies **after goods enter** (internal taxes and rules); tariffs at the border are allowed.

X "Green box subsidies are capped." ✓ **Amber box** support is capped; green box is not.

X "India is a party to the Government Procurement Agreement." ✓ India is an **observer**.

X "WTO headquarters is in New York." ✓ **Geneva**.

Quick revision

- GATT: 30 Oct 1947, Geneva, 23 countries, in force 1 Jan 1948.
- Eight rounds; last = Uruguay (1986–94).
- Marrakesh 15 Apr 1994; WTO from 1 Jan 1995, Geneva.
- MFN = Art. I; national treatment = Art. III; FTAs = Art. XXIV.
- Agreements: GATT 1994, GATS, TRIPS, TRIMs, AoA, SPS, TBT.
- AoA boxes: amber capped (de minimis 10% developing), blue and green not.
- DSU: consultations, panel, Appellate Body; reverse consensus.
- Appellate Body non-functional since Dec 2019.
- Doha Round 2001; Bali TFA 2013 (in force 2017).
- DG Ngozi Okonjo-Iweala; 166 members.

5 Sources of economic growth: capital, human capital, productivity, trade and aid, non-economic factors

Output grows when an economy adds capital, improves the skills and health of its workers, uses all inputs more productively (technology and efficiency), gains from trade and aid, and has the institutions, attitudes and stability that let these work.

Core facts

- **Economic growth:** a sustained rise in real national output (real GDP), often measured per head.
- **Capital formation:** investment in machines, buildings and infrastructure; financed by **savings**.
- **Harrod-Domar model:** growth rate $g = s / v$, where s = saving ratio, v = **capital-output ratio** (ICOR).
- **ICOR (incremental capital-output ratio):** extra capital needed per extra unit of output; **lower ICOR = more efficient** use of capital.
- **Solow model (1956):** capital alone cannot give lasting growth because of **diminishing returns**; long-run per capita growth comes from **technical progress**.
- **Total factor productivity (TFP):** the part of growth not explained by more capital and labour; the "Solow residual".
- **Human capital:** skills, education and health of workers; idea developed by **T.W. Schultz** and **Gary Becker**.
- **Endogenous growth theory:** **Paul Romer** (ideas and R&D) and **Robert Lucas** (human capital); growth comes from inside the economy.
- **Trade as an "engine of growth":** phrase of **D.H. Robertson**; export-led growth of the East Asian economies.
- **Two-gap model (Chenery and Strout):** foreign aid fills the **saving-investment gap** and the **foreign exchange gap**.
- **Rostow's stages:** take-off needs investment to rise from about **5% to over 10%** of national income.
- **Vicious circle of poverty:** **Ragnar Nurkse**; "a country is poor because it is poor".
- **Schumpeter:** the **innovating entrepreneur** drives development.

Explained

The sources at a glance

Source	How it raises growth	Example
Physical capital	More machines and infrastructure per worker	Roads, power, factories
Human capital	Workers produce more with skill and health	Schooling, training, nutrition

Source	How it raises growth	Example
Productivity (TFP)	Same inputs give more output	New technology, better management
Trade	Specialisation, larger markets, imported technology	Export-led growth
Aid and foreign capital	Adds to savings and foreign exchange	World Bank loans, FDI
Non-economic	Rules and attitudes that let inputs work	Rule of law, stability, enterprise

Worked example 1: Harrod-Domar

- Saving ratio $s = 24\% = 0.24$, capital-output ratio $v = 4$.
- $g = s / v = 0.24 / 4 = \mathbf{0.06}$, i.e. **6% growth**.
- To reach 8% with the same v , the saving ratio must be $0.08 \times 4 = \mathbf{32\%}$.

Worked example 2: ICOR from data

- Investment = 30% of GDP, GDP growth = 7.5%.
- ICOR = investment rate / growth rate = $30 / 7.5 = \mathbf{4}$.

Worked example 3: per capita growth

- GDP grows 6%, population grows 2%.
- Per capita income grows by about $6 - 2 = \mathbf{4\%}$ a year.

Capital. Savings must be turned into productive investment through banks and markets. Poor countries save little because incomes are low: Nurkse's vicious circle runs from low income → low saving → low capital → low productivity → low income.

Human capital. Education raises skills; health raises working days and effort. Unlike machines, knowledge spreads to others (a positive externality).

Trade. Comparative advantage, economies of scale in a bigger market, competition, and access to imported machines and ideas. Contrast **import substitution** (India before 1991) with **export promotion** (South Korea, Taiwan).

Aid. Official development assistance (grants and soft loans), and multilateral loans such as the World Bank's. Helps when domestic saving and foreign exchange are short.

Non-economic factors. Political stability, rule of law and property rights, honest administration, social attitudes to work and saving, entrepreneurship, social mobility, and family size.

Deeper

Growth accounting (Solow). With output $Y = A \cdot K^\alpha \cdot L^{(1-\alpha)}$:

- $g_Y = g_A + \alpha g_K + (1 - \alpha) g_L$, where g_A is TFP growth.

Worked example 4: finding TFP growth

- GDP growth $g_Y = 7\%$, capital share $\alpha = 0.4$, capital growth $g_K = 8\%$, labour growth $g_L = 1.5\%$.

- Capital contribution = $0.4 \times 8 = 3.2$ points.
- Labour contribution = $0.6 \times 1.5 = 0.9$ points.
- TFP growth = $7 - 3.2 - 0.9 = \mathbf{2.9\%}$, about **41%** of total growth.

Worked example 5: rule of 70

- Years to double $\approx 70 / \text{growth rate}$. At 7%: $70 / 7 = \mathbf{10 \text{ years}}$ (exact: $\ln 2 / \ln 1.07 \approx 10.2$).
- At 3.5% it takes about **20 years**.

Theories compared

Model	Engine of growth	Weakness
Harrod-Domar	Saving and capital	Fixed v ; "knife-edge" instability
Solow (neo-classical)	Exogenous technical progress	Does not explain where technology comes from
Endogenous (Romer, Lucas)	R&D, ideas, human capital	Hard to measure ideas

- **Convergence:** Solow predicts poorer countries grow faster if they share the same savings and technology (**conditional convergence**).
- **Diminishing returns** mean that piling up capital alone ends in a steady state; only rising TFP lifts per capita income for good.
- **Aid debates:** aid can crowd out domestic saving, carry tied-purchase conditions, or build dependence; it works best with good policies and institutions.
- **Trade pessimism:** the **Prebisch-Singer thesis** says the terms of trade of primary-goods exporters tend to fall over time; this supported import substitution in the 1950s–60s.
- **Big push (Rosenstein-Rodan):** many industries must be started together to break the poverty trap; **balanced growth** (Nurkse) vs **unbalanced growth** (Hirschman).
- **Institutions:** Douglass North and later Acemoglu and Robinson argue that inclusive institutions explain lasting growth differences.
- **Max Weber:** linked the "Protestant ethic" to the rise of capitalism; an example of a cultural (non-economic) factor.

Common traps

✗ "In Harrod-Domar, a higher capital-output ratio raises growth." ✓ $g = s / v$; a **higher v lowers** growth.

✗ "Solow says capital accumulation sustains long-run growth." ✓ Diminishing returns stop it; **technical progress** sustains per capita growth.

✗ "TFP growth is measured directly." ✓ It is a **residual**: growth minus the weighted growth of capital and labour.

✗ "Endogenous growth theory was given by Solow." ✓ **Romer** and **Lucas**.

✗ "The vicious circle of poverty is Rostow's idea." ✓ It is **Nurkse's**; Rostow gave the **stages of growth**.

✗ "The two-gap model is about the fiscal and revenue deficits." ✓ It is about the **saving gap** and the **foreign exchange gap**.

✗ "Engine of growth phrase is from Adam Smith." ✓ **D.H. Robertson** (trade as an engine of growth).

Quick revision

- Harrod-Domar: $g = s / v$ ($s = 24\%$, $v = 4 \rightarrow 6\%$).
- ICOR = investment rate / growth rate; lower is better.
- Solow: diminishing returns; technology drives long-run growth.
- $g_Y = TFP + \alpha g_K + (1 - \alpha)g_L$; TFP is the residual.
- Human capital: Schultz, Becker; endogenous: Romer, Lucas.
- Trade: engine of growth (Robertson); Prebisch-Singer pessimism.
- Aid: two-gap model (Chenery-Strout).
- Nurkse: vicious circle; Rostow: take-off at 10%+ investment.
- Schumpeter: innovating entrepreneur.
- Rule of 70: doubling time $\approx 70 / \text{growth rate}$.