

## Econ 2203 | International Trade and Policy in Agriculture

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Department of Development Economics

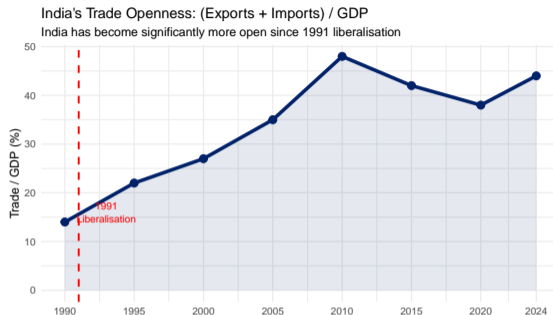
### Three things to remember from last week

1. **International trade** = cross-border exchange of goods, services, and capital; driven by differences in resource endowments, technology, and opportunity costs
2. **India's position:** 18th-largest merchandise exporter; agricultural exports ~\$43.7B (FY2024); structural trade surplus in agriculture of ~\$15.5B
3. **Agricultural trade is special** — food security concerns, perishability, seasonality, and powerful political economy shape how governments intervene

### Today's agenda

- What distinguishes international trade from *domestic* trade?
- How open is India to global trade — and how has this changed over time?
- Advantages and risks of participating in global markets

# India's Growing Trade Openness



**Figure 1:** India: Trade Openness (Exports + Imports as % of GDP) Source: World Bank, World Development Indicators (WDI).

Trade/GDP rose from **14% (1990)** to **44% (2024)** – India is significantly more integrated into the global economy post-liberalisation.

## Features That Make International Trade Distinct

International trade is not simply domestic trade “at a larger scale.” Six features create unique challenges:

- (a) **Geographical separation** — Long distances → higher transport costs, insurance, cold-chain requirements, longer lead times
- (b) **Different currencies** — Each transaction requires currency conversion; exchange rate fluctuations create financial risk
- (c) **Factor immobility** — Labour and capital cannot move freely across borders — immigration controls, capital account restrictions
- (d) **Multiple political jurisdictions** — Each country sets its own trade policy — tariffs, quotas, export bans; no single governing authority
- (e) **Different legal systems & culture** — Food labelling laws, packaging standards, contract enforcement vary widely

### Why factors don't move freely

- **Labour:** Visa restrictions, language barriers, immigration quotas
  - India sends ~8 million workers to Gulf countries — under strict bilateral agreements, not free movement
- **Capital:** FDI restrictions, capital account controls, regulatory hurdles
  - India maintains partial capital account convertibility (RBI-regulated)
- **Land:** Completely immobile by definition

**India case: Gulf remittances** — Indian workers (largely from Kerala, UP, Bihar) work in UAE, Saudi Arabia, Kuwait — sending back **~\$120 billion in remittances (FY2024)**, making India the world's largest remittance recipient.

### Why this matters for trade theory

- Classical models (Ricardo, H-O) assume *factor immobility* across borders
- This is what makes trade in goods a *substitute* for factor flows
- If labour moved freely, there would be less need to trade goods

## Feature 2: Currency and Exchange Risk

### The exchange rate problem

- Indian exporters price in **USD** (world standard for commodities)
- Their costs are in **Indian Rupees (INR)**
- If INR appreciates (e.g., ₹80 → ₹75 per USD), the same USD revenue converts to *fewer rupees* → profit squeezed
- If INR depreciates (₹80 → ₹85), exporters gain; importers lose

Year	INR/USD	Year	INR/USD
2000	45	2020	75
2010	46	2024	83–84
2015	65		

**Agricultural export example:** A Punjab wheat exporter quotes **\$250/tonne** FOB Mumbai. At ₹80/USD → realises ₹20,000/tonne; at ₹75/USD → only ₹18,750/tonne. A **5% INR appreciation = 6.25% reduction** in rupee revenue — potentially wiping out margins. **Hedging tools:** Forward contracts, futures on NSE/BSE, ECGC insurance.

## Internal vs International Trade: Key Differences

Dimension	Internal (Domestic) Trade	International Trade
<b>Factor mobility</b>	Labour and capital move freely	Highly restricted – visas, FDI rules
<b>Currency</b>	Single national currency	Multiple currencies; exchange rate risk
<b>Political jurisdiction</b>	One government, one legal system	Multiple governments, international law
<b>Trade barriers</b>	None within India (post-GST)	Tariffs, quotas, SPS, NTBs
<b>Transport costs</b>	Relatively low	Higher – ocean freight, insurance, customs
<b>Documentation</b>	Invoice, transport document	B/L, L/C, Certificate of Origin, SPS certificate
<b>Market size</b>	Limited to one country	Global – 195 countries
<b>Dispute resolution</b>	Domestic courts	WTO DSM, bilateral/regional bodies

**Key insight:** India's internal trade was itself *fragmented* before GST (2017) – state-level taxes created internal barriers. International trade faces all these barriers *and more*.

# The Gravity Model of Trade

Inspired by Newton's law of gravitation:

$$T_{ij} = G \cdot \frac{Y_i \cdot Y_j}{D_{ij}^2}$$

Where  $T_{ij}$  = trade between  $i$  and  $j$ ;  $Y_i, Y_j$  = GDP;  $D_{ij}$  = distance.

**Interpretation:** Trade is **proportional to economic size** and **inversely proportional to distance**.

Partner	GDP	Distance	Trade rank
USA	Very large	Far	#1 export dest.
China	Very large	Medium	#1 import source
UAE	Medium	Close	#2 export dest.
Bangladesh	Small	Very close	#5 export dest.

UAE ranks highly despite moderate GDP: it is a regional trade hub + large Indian diaspora creates demand for Indian food products.

## For producers and the economy

1. **Wider market** — Indian basmati rice sold in 150+ countries; domestic market alone could not absorb export volumes
2. **Access to unavailable inputs** — India imports potash fertiliser (not produced domestically in sufficient quantity)
3. **Technology transfer** — FDI brings modern food processing technology
4. **Employment generation** — Marine product sector employs ~1.5 million workers, mostly coastal women
5. **Foreign exchange earnings** — Agricultural exports earn \$43.7B; crucial for financing oil imports

**Rice example:** India is the world's largest rice exporter (~22 million tonnes in 2022). Exports earn ~\$10B forex and support 30 million paddy farmers.

## Economic risks

1. **Import dependence** — India's edible oil dependence (60–65% imported) exposes inflation to global price shocks
2. **Dumping risk** — China dumped cheap steel and tomato paste in India; domestic industries harmed
3. **BoP strain** — India's merchandise deficit ~\$241B (FY2024); requires large capital inflows to finance
4. **Domestic industry harm** — Cheap palm oil lowered demand for domestic groundnut oil

**Policy lesson:** The goal is not to maximise trade at all costs, but to *manage* trade so its gains exceed its disruption costs.

# Case Study: India's Edible Oil Import Dependence

## The structural problem

- India consumes ~24–25 million tonnes of edible oil per year
- Domestic production: ~9–10 million tonnes
- Import requirement: ~14–15 million tonnes (60–65% of need)
- Cost: ~\$12–14 billion per year (FY2024)

Oil type	Source	Share
Palm oil	Indonesia, Malaysia	~65%
Soybean oil	Argentina, Brazil	~15%
Sunflower oil	Ukraine, Russia	~15%

**Lesson:** Import dependence in a strategic food commodity creates price transmission vulnerability. PM KISAN Oilseeds Mission (2023) aims to double domestic production by 2030.

## Case Study: India's Rice Export Ban (2023)

### What happened:

- India banned non-basmati white rice exports in August 2023
- Rationale: control domestic food inflation, protect consumers
- India is the world's largest rice exporter — ~22 million tonnes/year

**Who gained:** Urban consumers (domestic prices stabilised); RBI's CPI inflation target

**Who lost:** Paddy farmers (domestic price fell); rice millers and exporters (contracts cancelled); Bangladesh and West Africa (supply shortage; global prices rose +20%)

The ban caused a **global rice price spike of ~20%** — demonstrating India's market power as the world's dominant rice exporter. India partially reversed the ban for specific grades in early 2024 under WTO member pressure.

**This is a classic domestic policy vs. trade commitment conflict** — a recurring theme in agricultural trade policy.

## Price support and export competitiveness

- **MSP:** Raises domestic price above world price → may make exports uncompetitive without subsidy
- **Export bans:** Rice ban (non-basmati) August 2023; wheat ban (May 2022) — protect domestic prices, hurt exporters
- **Import duties on pulses and oilseeds:** Reduced to zero during 2021–22 price shock; raised again when harvest recovered
- **TRQs:** Limited quantities at low duty; higher duty beyond the quota

**Core tension:** India's domestic farm support policies often conflict with WTO commitments on export subsidies and import duties — the AoA bindings create real constraints (Lecture 12).

## Key trade documents

- **Bill of Lading (B/L):** Shipping company's receipt; title document for goods
- **Letter of Credit (L/C):** Bank's guarantee of payment; protects both parties
- **Certificate of Origin:** Proves provenance; needed for preferential duty under FTAs
- **Phytosanitary Certificate:** Certifies plants/plant products are pest-free
- **SPS Compliance Certificate:** Confirms pesticide residues, aflatoxin levels meet standards

## What we covered today

- International trade has **6 key features** distinguishing it from domestic trade: geographic separation, currency risk, factor immobility, multiple jurisdictions, cultural/legal differences, and greater uncertainty
- **India's trade openness** rose from 14% of GDP (1990) to 44% (2024) — driven by 1991 liberalisation
- **Factor immobility** is the fundamental reason countries trade goods rather than simply moving workers
- **Currency risk** directly affects agricultural export profitability — a 5% INR appreciation can wipe out export margins
- **Edible oil dependence** is India's most significant agricultural import vulnerability: \$12–14B/year

“India has a comparative advantage in rice. Bangladesh also exports rice. How can both export the same commodity?”

Think through:

- Is India's advantage in *all* varieties of rice?
- Can a country export *and* import the same good? (Intra-industry trade)
- How do quality differentiation, variety, and destination markets matter?
- What does the rice export ban tell us about the limits of comparative advantage as a policy guide?

**Answer preview:** Intra-industry trade, quality segmentation (basmati vs parboiled), and market access geography all allow two countries to simultaneously export similar products. We formalise this in Lecture 6.

### Theories of International Trade I — Mercantilism and Absolute Advantage *(May 12, 2026)*

We will cover:

- **Mercantilism** (1500–1750): wealth = gold, maximise exports, minimise imports — and why it is fundamentally flawed
- **Colonial trade**: India's experience under British mercantilism — the “drain of wealth” thesis (Dadabhai Naoroji)
- **Adam Smith (1776)**: Absolute advantage — trade based on genuine productivity differences
- **Numerical example**: India vs Bangladesh in rice and jute
- **Limitations** of absolute advantage — setting up for Ricardo

### Further Reading

- *International Economics* — Salvatore (Ch. 1)
- *International Economics* — Appleyard & Field (Ch. 1)
- RBI/DGCI&S/APEDA databases for latest data

### Key Data Sources

- DGCI&S: India's merchandise trade
- RBI: Balance of payments data
- APEDA: Agricultural export statistics
- WTO: Tariff and trade databases