Terms of Trade

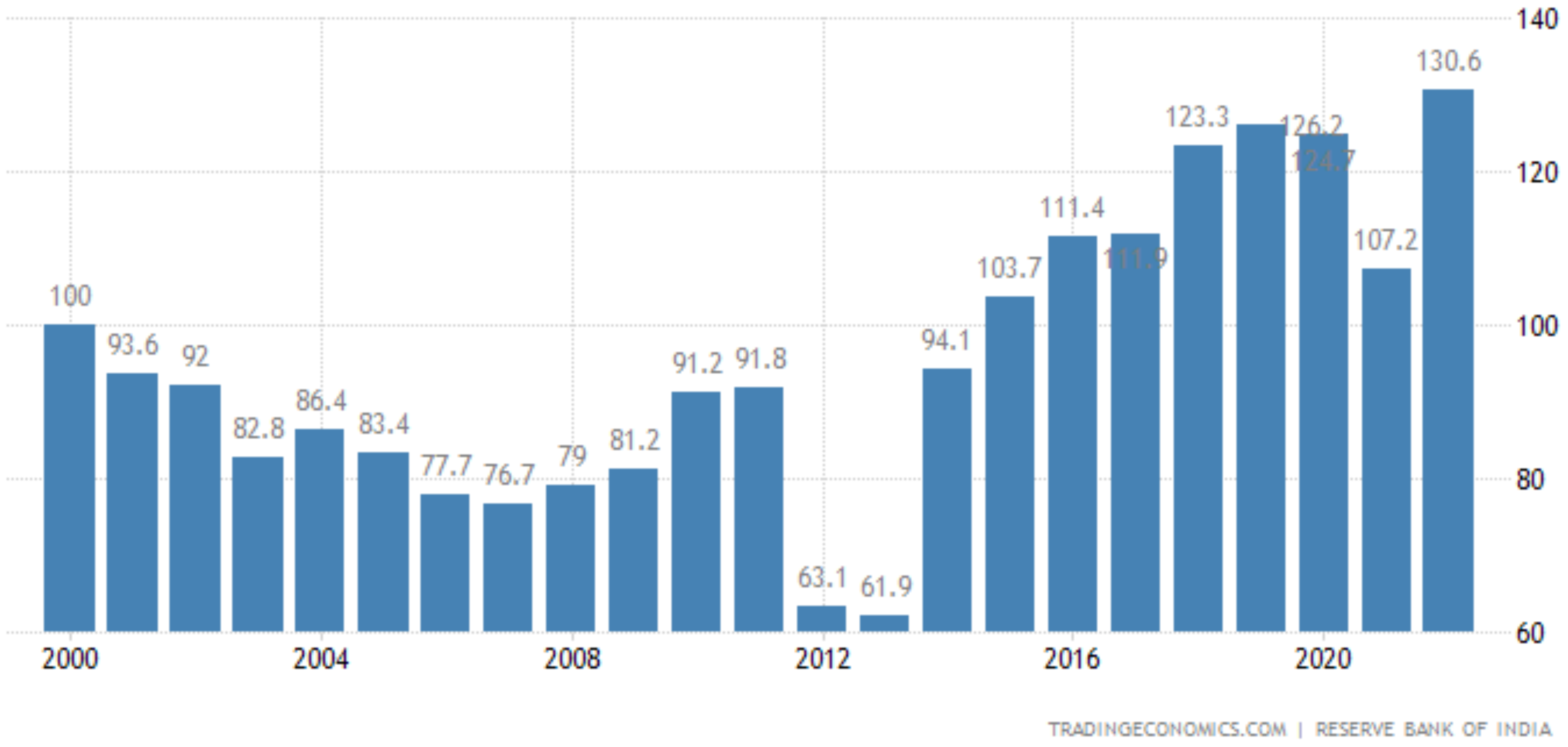
Distribution of Gain from Tarde

- The extent of gain from trade depends on the difference between the domestic cost ratio of trading countries.
- The greater the difference greater will be the gain from trade.
- But the distribution of gain from trade is not evenly distributed across the trading countries.
- The distribution of gain from trade depends upon the terms of Trade.
- The terms of trade (TOT) explains the rate at which a country's export is exchange with import.
- The closer the terms of trade to the domestic exchange ratio of a country, the lesser will be the gain for that country.

Terms of Trade (TOT)

- TOT is the ratio of the average price of export and the average price of import.
- If the price of imports raises faster than the price of export then the TOT became unfavourable for the country.
- When the import price raises faster than the export price, a greater volume of export needs to be sold to get the same amount of Import.
- If a country's terms of trade improve, it means that the prices of its exports are rising relative to the prices of its imports, which can be beneficial for its economy.
- Conversely, if a country's terms of trade deteriorate, it means that the prices of its exports are falling relative to the prices of its imports, which can have negative economic implications.

India Term of Trade



Different Type of Terms of Trade

- **1. Net Barter Terms of Trade (NBTOT) / Commodity Terms of Trade (CTOT):** CTOT focuses on the price relationship between a country's exports and its imports. It compares the price index of a country's exports to the price index of its imports. A rise in the CTOT indicates an improvement in a country's ability to purchase imports.

CTOT = (Export Price Index) / (Import Price Index) * 100

- Let's say Country A is a major exporter of agricultural products (its primary exports) and a major importer of machinery (its primary imports). We will use hypothetical price index values for simplicity:
- Export Price Index for Agricultural Products: 150
- Import Price Index for Machinery: 120
- Calculating CTOT: CTOT = (150) / (120) * 100 = 125
- In this example, the CTOT for Country A is 125, indicating that the relative prices of its export goods (agricultural products) are 125% of the relative prices of its import goods (machinery).

- **2. Gross Barter Terms of Trade (GBTOT):** GBTOT measures the ratio of total quantity of Import to total quantity of export of a nation in physical terms.

GBTOT = (total quantity of Imports (Q_m)) / (total quantity of Exports (Q_x)) / * 100

- A raise in current year GBTOT means favorable change, which suggest more import can obtain from a given amount of export.
- Example: -
- Country A exports 100 units of agricultural products and imports 50 units of machinery.
- Country B exports 150 units of agricultural product and import 200 units of machinery.
- For Country A: GBTOT = (50 / 100) * 100 = 0.5
- For Country B: GBTOT = (150 / 200) * 100 ≈ 0.66
- In this example, Country A's GBTOT indicates that it needs to export 1 units of agricultural products to import 0.5 unit of machinery. Country B, on the other hand, needs to export 1 units of agricultural goods to import 0.66 unit of machinery.

- **3. Income Terms of Trade (ITOT):** ITOT takes into account changes in a country's export and import prices as well as changes in the volume of exports. It is the ration between value of export and price of import. It is also NBTOT multiple with volume of export.

ITOT = (Value of Exports in Current Year) * (Price Index of Exports in Current Year) / (Price Index of Imports in Current Year)

$$\text{ITOT} = \frac{P_x Q_x}{P_m}$$

- The ITOT indicates only export base capacity to import price not the country's total capacity to Import.
- The changes in ITOT need not necessarily reflect gains from trade.

- **4. Single Factoral Terms of Trade (SFTOT)**: This concept considers the relative prices of goods based on a single factor of production, such as labor. It's particularly relevant when comparing the terms of trade between developed and developing countries.
- It measures how much quantity of import can be obtained per unit of factor input used in the production of exportable.

SFTOT = NBTOT * Z_x (Where Z_x is export productivity index)

A rise in SFTOT indicates that a greater quantity of import can be obtained per unit of factor-input used in the production of epotable.

- **5. Double Factoral Terms of Trade (DFTOT):** DFTOT is the NBTOT adjusted for changes in the productivity in producing both import and export. It's a more comprehensive measure than SFTOT and provides insights into the distribution of gains from trade.
- DFTOT = NBTOT * $\frac{Z_x}{Z_m}$. (Where Z_x is export productivity index and Z_m is import productivity index)
- A rise in DFTOT implies that one unit of home factor embodied in export can now be exchange for more unit of foreign factor embodied in import.

- Real Cost Term of Trade: - it measures the TOT in utility terms. It can be calculated by multiplying single factorial terms of trade by the reciprocal of the index of disutility per unit of productivity resource used in the production of export.
- $RCTOT = SFTOT * R_x = NBTOT * Z_x * R_x$ (Where R_x is the index of disutility per unit of productive factor used in the export sector)
- A rise in RCTOT indicates that the amount of imports obtain per unit of real cost is greater.

- Utility Terms of Trade: It is calculated by multiplying the real cost terms of trade index with an index of the relative average utility of imports and of domestic commodities foregone.

$UTOT = RCTOT * U_m$ (where U_m = Index of the relative utility of imports and domestically foregone commodities.)

- the idea of Utility Terms of Trade could involve comparing the utility levels gained from consuming exported goods to those gained from consuming imported goods.
- This might consider factors such as changes in consumer preferences, changes in product quality, and changes in the variety of goods available due to trade.