

ECONOMY

PRE-CONTEXT

EXCHANGE RATE

THE HINDU, PG.NO: 1.

News: "Amid global tumult, rupee breaches 87 against dollar."

One of the most important determinants of the supply of a currency in the market is the monetary policy of a country's central bank.

About Exchange Rate:

Evolution:

- **Par Value System till 1971:** Govt. Fixes external value.
- **Pegged Regime 1971-1992:** Rupee was pegged to US dollar.
- **LERMS (1991- 1993):** Partial Convertibility.
- **Floating Exchange Rate since 1993:**
 - India delinked itself from Fixed exchange Rate system & made it **floating exchange rate**.
 - Although exchange rate is **market determined**, **RBI can intervene as stabiliser**.
 - Mr. Manmohan Singh was then Finance Minister.

Types:

• **Nominal Exchange Rate (NER):**

- Refers to the price of one country's currency in terms of another country's currency. It indicates how much of one currency can be exchanged for another. Eg. 1 USD = 86.5 INR.

• **Real Exchange Rate (RER):**

- Adjusts the nominal exchange rate for inflation.
- Indicating how much goods and services can be exchanged between countries after accounting for price differences.
- It reflects the relative purchasing power of two currencies.

• **Nominal Effective Exchange Rate (REER):**

- NEER **measures the strength of a country's currency against a weighted average of several other currencies.**
- **If India's NEER increases**, it means the Indian Rupee has strengthened against the basket of other currencies, **making imports cheaper and exports more expensive.**
- **Increase in NEER indicates appreciation** of country's currency.

• **Real Effective Exchange Rate (REER):**

- Values of NEER is **adjusted to inflation**. This provides a more accurate picture of a country's currency competitiveness.
- **Increase in REER indicates real appreciation** of country's currency.

Convergence and Divergence of NEER and REER graphs:

• **Convergence:**

- **If the inflation rates of the home country and its trading partners are similar**, then REER and NEER graphs tend to move in tandem, showing convergence.
- **If exchange rate fluctuations are proportionate to changes in relative price levels**, NEER and REER will align closely, leading to convergence.

• **Divergence:**

- If the home country experiences **significantly different inflation rates compared to its trading partners**, the REER will diverge from the NEER.
- Volatile exchange rate movements that are **not matched by corresponding changes in price levels** can cause REER and NEER to diverge.

Factors influencing Exchange Rate:

- **Interest Rates:** The RBI's interest rate decisions (Monetary Policy) significantly influence the INR. Higher rates tend to attract foreign portfolio investment (FPI), strengthening the INR.
- **Inflation:** Persistent inflation in India can erode the INR's value.
- **Economic Growth:** India's robust GDP growth has generally supported the INR, making it attractive for foreign investors.
- **Political Stability:** Relative political stability in India has been conducive to foreign investment,
- **FDI & FPI:** High levels of FDI and FPI inflows have appreciated the INR, while any capital flight can exert downward pressure.
- **Demand for Indian Goods and Services** in international market.
- **Decisions of Central Bank:** under current scenario of falling Rupee, RBI announced following Measures:
 - **Cross-border transactions in rupees.** MoUs signed with Central Bank of UAE, Indonesia, Maldives.
 - **Special Rupee Vostro Accounts** was introduced to encourage greater use of Indian Rupee.
 - **Indian exporters will be able to open accounts in any foreign currency overseas** for settlement of trade transactions.

Note:

- **Appreciation of the Indian Rupee:** An increase in the value of the Indian rupee relative to other foreign currencies.
 - Eg: If the Indian rupee appreciates against the US dollar from ₹75 to ₹70 per USD, making imports cheaper.
- **Depreciation of the Indian Rupee:** A decrease in the value of the Indian rupee relative to other foreign currencies.
 - Eg: If the Indian rupee depreciates against the Euro from ₹80 to ₹85 per EUR, making European goods more expensive for Indian consumers.

4 FEB 2025

Chart 2: Chart shows the index values for the nominal effective exchange rate (NEER) and the real effective exchange rate (REER)





INTERNATIONAL BODIES

PRE-CONTEXT

WHO

THE HINDU, PG.NO: 7.

News: "The cause and effects of the U.S.'s withdrawal from WHO."

About WHO:

- WHO's Constitution came into force on **7 April 1948**—observed annually as **World Health Day**.
- **Specialised agency of the United Nations (UN)** responsible for international public health.
- **Headquarters:** Geneva, Switzerland.

Key focus areas:

- Combatting communicable and non-communicable diseases.
- Setting international health standards.
- Coordinating global responses to health emergencies (e.g., pandemics).

Membership and withdrawal:

- **Only sovereign states recognized by the UN** can become members of the WHO.
- **Withdrawal of membership:** Written notice to Director-General → One-year notice period → Fulfilment of obligation.

Funding:

- Assessed contributions (membership dues from countries).
 - The U.S. is its largest contributor (15%).
- Voluntary contributions (from member states, philanthropic organizations, private sector, etc.).
 - Eg. Melinda Gates Foundation (12.9%).

Governance of WHO:

- **World Health Assembly (WHA):** Highest decision-making body of the WHO.
- **Secretariat:** Headed by the Director-General, Responsible for implementing decisions taken by the WHA and Executive Board.

WHO & India recent developments:

Traditional medicine:

- In 2023, India signed a **five-year agreement** to support the WHO's Traditional, Complementary and Integrative Medicine (TCI) unit.
- **WHO global centre for traditional medicine in Jamnagar,** Gujarat will be established.
- Aligning with its **National AYUSH Mission** and the Ministry of AYUSH.

Traditional Medicine as inspiration:

- **Discovery of aspirin** drew on traditional medicine formulations using the **bark of the willow tree**.
- **Contraceptive pill** was developed from the **roots of wild yam plants**.
- **Child cancer treatments** have been based on the **rosy periwinkle**.
- **Artemisinin for malaria control** started with a review of **ancient Chinese medicine texts**.

- **Major Campaigns by WHO:** Eradication of smallpox, polio, and campaigns against TB, malaria, etc.

- **Important Publications:** World Health Report, World Health Statistics, Global Tuberculosis Report.

4 FEB 2025

GS III

SYLLABUS: ENVIRONMENTAL POLLUTION

ETHANOL BLENDING PROGRAMME

THE HINDU, PG.NO: 8

News: "How will the govt. produce the required fuel ethanol?"

About Ethanol Blending Programme(EBP):

- 15% ethanol blending achieved & targets 20% ethanol blending of petrol 2025-26".
- **Raw materials:** **sugarcane molasses, rice, broken rice, wheat, maize and other grains with starch content**.
- **Uttar Pradesh** is the largest contributed to ethanol blending program.

Benefits:

- Reduction in GHG emissions.
- Estimated EPB will **cut approx 4 billion USD** annually.
- **Bolsters the rural economy** by promoting **crop diversification**.
- Byproduct of ethanol, can be used for poultry.

Issues:

- **Food vs Fuel Equation:** Eg. Maize imports has increased in 1st quarter of 2024 financial year.
- For production of one-litre of Ethanol requires 2kgs of rice, 2.5kg of maize or 50kg of sugarcane—**NITI Aayog**.
- **Unsustainable water usage:** Sugarcane is highly water intensive, this would redirect irrigation water from essential food grain crops.
- **Negative impact on livestock feed:** Eg. Poultry majorly depends on maize and rapid diversion can lead inflate prices.

Steps taken to increase indigenous production of Ethanol:

- Re-introduction of **administered price mechanism**.
- **Amendment to Industries Act 1951:** brings **exclusive control of Denatured Ethanol under central govt.** for smooth movement of ethanol across the country.
- **Reduction of GST** on Ethanol meant for EBP.
- **Differential Ethanol price** based on raw materials utilised for ethanol production.
- **Interest subvention scheme** for enhancement and argumentation of ethanol production.
- Publication of **long term policy by** on ethanol Procurement.

Other:

- **E85:** Blend of 85% of ethanol and 15% of other hydrocarbons.
- **Extra Neutral Alcohol(ENA):** used for making liquor for Human consumption.

Crop Production and States (2024):

- **Major Maize producing States:** Karnataka, Madhya Pradesh, Maharashtra, Andhra Pradesh, Rajasthan.
- **Major Sugarcane producing States:** UP, Maharashtra, and Karnataka.
- **Major Rice producing States:** West Bengal, UP, Punjab, Andhra Pradesh.
- **Major Wheat producing States:** UP, Madhya Pradesh, Punjab, Haryana.

4 FEB 2025



SCHEMES

PRE-CONTEXT

PM KUSUM

THE HINDU, PG.NO: 6.

News: "Green and clean."

About PM KUSUM:

- Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan. Launched in 2019 by the **Ministry of New and Renewable Energy** (MNRE).
- The scheme envisaged having **off-grid solar irrigation pumps and grid-connected solar plants** on **fallow farmlands**.
- Cuts India's CO₂ emissions; supports **India's 500 GW non-fossil energy target by 2030**.
- Promotes Sustainable agriculture, Income support for farmers, **SDG 7 (Affordable & Clean Energy)**, climate resilience.
- **Key components of Scheme:**
 - **Component A:**
 - Install 10,000 MW of decentralized **solar power plants** (individual plants up to 2 MW).
 - **Implementation:** On barren/fallow land of farmers.
 - **Component B:**
 - **Target:** Install 20 lakh standalone **solar agricultural pumps** (off-grid).
 - **Mechanism:** Replace diesel/electric pumps with solar; excess power sold to DISCOMs.
 - **Subsidy:** 30% central + 30% state subsidy; farmer pays 40%.
 - **Component C:**
 - **Target:** **Solarise 15 lakh 'existing' grid-connected agricultural pumps**.
 - **Mechanism:** Replace diesel/electric pumps with solar; excess power sold to DISCOMs.
 - **Subsidy:** 30% central + 30% state subsidy; farmer pays 40%.

Current Status:

- Scheme extended till 2025–26.
- As of 2023:
 - **Over 3 lakh solar pumps installed;**
 - **1,500 MW capacity** added under Component A.

4 FEB 2025

ENVIRONMENT

PRE-CONTEXT

PLASTIC & BACTERIA

THE HINDU, PG.NO: 18.

News: "The promises and problems of using bacteria against plastic."

Bioremediation: a branch of biotechnology that employs the use of living organisms such as microbes and bacteria to decontaminate affected areas.

About Plastic eating Bacteria:

- **Bacterium Ideonella sakaiensis:** which **breaks PET** (polyethylene terephthalate (PET), a polyester found in many kinds of plastic items.) down using two enzymes.
- **Bacterium X-32:** **degrades PET as well as polyolefin's** (Polyolefin's have one of the toughest carbon-carbon bonds to break).
- **Bacteria Vibrio natriegens:** only way it can survive is to break down plastic.
- **Bacillus subtilis:** Breaks down **polystyrene and polyethylene**.

Initiatives

Global:

- **Basel Convention:** Regulates transboundary plastic waste (amended 2019).
- **Project REPLAQUE (EU):** Engineering super-enzymes for faster PET breakdown.
- **Great Pacific Garbage Patch:** Research on marine bacteria adapting to consume plastic.
- **EU Single-Use Plastics Directive:** Bans specific items, promotes recycling.

India:

- Plastic Waste Management Rules (2016, amended).
- Phasing out single-use plastics (2022 ban).
- Extended Producer Responsibility (EPR).
- **Swachh Bharat Mission:** Includes plastic waste management.

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Thank you!