



Human Brain Implant by Neuralink

[Source: HT](#)

Elon Musk announced that a **3rd person** has received an implant from his [brain-computer interface company, Neuralink](#), to connect the nervous system to machines.

- Neuralink plans to expand its trials with the **goal** of implanting the experimental devices in **20 to 30 more people in 2025**.
- **Brain-Computer Interface (BCI):** BCI is a technology that allows **direct communication** between the **brain and external devices**, such as **computers or prosthetics**, bypassing traditional neuromuscular pathways like **nerves and muscles**.
 - BCIs use sensors to **detect brain activity**, translating it into commands that allow individuals to control **devices or interact** with the world using their thoughts.
- **Potential Applications:** Brain interfacing for conditions like [epilepsy](#), [Parkinson's](#), and **neurodegenerative diseases**.
 - Enabling control of **prosthetics and wheelchairs** through thought.
 - Restoring communication for **paralyzed individuals**.
 - Enhancing [VR/AR](#) experiences using thoughts.
- It is different from [brainware](#) that uses **brain organoids and microelectrodes** to create an "**organoid neural network (ONN)**" integrating **living brain tissue into computing**.
 - Brain organoids are **3D stem-cell-derived tissues** that **mimic human brain structure**.

Read More: [Neuralink's Blindsight Implant](#)

Data Embassies

[Source: LM](#)

- India is in advanced talks to set up **UAE's first data embassy** in India, with the **first** potential data embassy expected in **Andhra Pradesh**.
- It will enable nations to **store a copy of their sovereign data** while **retaining control over it**.
 - It will **ensure data continuity** in cases of **natural disasters or geopolitical unrest**.
- India plans to create **special strategic zones** for data centres that will house **sovereign data storage for multiple countries**.
- They will operate like **consular divisions**, with the embassy managing **privacy, access, and data handling**, while India hosts the infrastructure.
- **Estonia** was the **1st country** to store a digitized copy of its citizens' data in **Luxembourg**, after a **cyberattack** in **2007**.
- Countries can use these embassies to **localize data without** adhering to **foreign data regulations**.
- Setting up data embassies will boost India's **geopolitical credibility** as a stable region for data storage amid global instability.

Nag Mark 2 Anti-Tank Guided Missile

[Source: HT](#)

India successfully conducted field trials of the indigenously developed **Nag Mk 2 Anti-Tank Guided Missile (ATGM)** at **Pokhran Field Firing Range** in Rajasthan.

Nag Mk 2 Anti-Tank Guided Missile (ATGM)

Developed By	Defence Research and Development Organisation (DRDO)
Type and Functionality	It is a third-generation, all-weather, fire-and-forget anti-tank guided missile with lock-on after launch capability , allowing it to autonomously track and engage targets .
Effectiveness	It is designed to neutralize modern armoured vehicles , including those with Explosive Reactive Armour (ERA) , using a tandem high-explosive anti-tank (HEAT) warhead for enhanced destructive power.
Range	7 to 10 kilometres . Its predecessor was the Nag Mark 1 (4 km range).
Attack Modes	It features a top-attack capability , targeting the vulnerable upper surface of armoured vehicles.
Launch Platform	The Nag Mk-2 is launched from the NAMICA (Nag Missile Carrier) Version 2 . <ul style="list-style-type: none">• NAMICA is an anti-tank armored vehicle or tank destroyer vehicle used by the Indian Army to launch anti-tank missiles.



TANK KILLERS

➤ Anti-tank guided missiles (ATGMs) are meant to destroy advancing enemy armoured units

➤ Range from shoulder-launched to larger tripod-mounted systems for infantry soldiers

➤ Army has a shocking 60% shortage in its 'authorised holding' of ATGMs

➤ Big operational gap, especially on the western front with Pakistan

➤ Army demanding 3rd-generation ATGMs with

night-fighting capabilities & higher range for a decade

➤ Defence Acquisitions Council in June 2009 gave nod for 8,356 ATGMs, 321 launchers & 15 simulators for ₹3,200 crore

➤ This included transfer of

technology to Bharat Dynamics for mass production

➤ Israeli company Rafael's Spike ATGM underwent trials in a single-vendor situation. Tender scrapped in late-2017

➤ Separate process to acquire Javelin ATGMs from US also didn't materialise



Infantry battalions making do with 2nd-Generation Milan (2 km) & Konkurs (4 km) ATGMs



Read More: [Anti-Tank Guided Missiles \(ATGM\)](#)

Gangasagar Mela

Source: TH

The annual [Gangasagar Mela](#) is being organised in **West Bengal** and the state government has introduced several initiatives to enhance the Gangasagar Mela experience, including:

- **Bandhan Initiative:** Pilgrims receive a **certificate in three languages**.
- **e-Anushandhan:** System for **accessing mela facilities**.
- **e-Parichay:** **QR code-enabled identity bands** to prevent missing persons.

Additionally, the state has been advocating for "**national mela**" status for the Gangasagar Mela for several years.

About Gangasagar Mela:

- Gangasagar Mela is an annual religious festival held on **Sagar Island, West Bengal**, at the confluence of the **Ganga and Bay of Bengal**.
- The **Ganga river**, originating from Gangotri, **completes its journey and merges with the Bay of Bengal**.
- The festival, which coincides with **Makar Sankranti**, involves rituals like taking a holy dip in the Ganga, offering "**Arghya**" to the Sun God, and performing "**Deepdan**" (lighting lamps) to seek liberation and spiritual upliftment.
- It is considered the **second-largest religious gathering in India after the Kumbh Mela**.
- The fair is historically mentioned in the **Mahabharata's Vana Parva** and **Raghuvamsa (by Kalidasa)**, with evidence of the pilgrimage dating back to **1500-2000 BC**, and is associated with the sage **Kapilmuni** and the **Pala dynasty's King Devapala**.



Read More: [Bangla for Classical Language, GangaSagar Mela for National Status](#)

National Turmeric Board

Source: [PIB](#)

Why in News?

The **Ministry of Commerce & Industry** launched the [National Turmeric Board \(NTB\)](#) with its headquarters at **Nizamabad, Telangana**.

What are Key Facts About the National Turmeric Board?

- **About:** It has been established to promote the **cultivation, production, processing, and marketing** of turmeric in India and enhancing the income of turmeric farmers.
 - The Ministry of Commerce & Industry has increased its **product-dedicated boards to six**, after **tea, coffee, rubber, spices, and tobacco**.
- **Board Representation:** The Board will consist of a **Chairperson** appointed by the Central Government with representatives of the **Ministry of AYUSH, Department of Pharmaceuticals, Department of Agriculture & Farmers Welfare and Department of Commerce**, along with **rotating senior representatives from three states**.
- **Key Objectives:** Farmer welfare **across 20 states**, including **Maharashtra, Tamil Nadu**, and others.
 - Promoting research, new products, and **value addition** for domestic and international markets.
 - Raising awareness about turmeric's **medical benefits**.

What are Key Facts About Turmeric?

- **About:** **Turmeric** is an **underground stem** of the ***Curcuma longa*** plant, which is part of the **ginger family (Zingiberaceae)**.
 - **Curcumin**, the **active compound** in turmeric, gives it its **yellow color** and is known for

its **anti-inflammatory, antioxidant, and antimicrobial** benefits.

- **Cultivation:** India grows **over 30 varieties** of turmeric across **20+ states**, with major production in **Maharashtra, Telangana, Karnataka, and Tamil Nadu**.
- **Global Position:** India is the **largest producer, consumer, and exporter** of turmeric globally.
 - In 2022-23, India produced **over 75% of the world's turmeric** and holds **62%** of the **global export market**.
- **Export Performance:** In 2022-23, India exported **1,53,400 tonnes** of turmeric and turmeric products valued at **USD 207.45 million**.
 - Key export markets include **Bangladesh, UAE, the US, and Malaysia**.
- **GI Tag:** **Lakadong turmeric (Meghalaya), Kandhamal turmeric (Odisha), Erode turmeric (Tamil Nadu), Armoor turmeric (Nizamabad, Telanagan)** among others have got **GI tag**.
 - A **GI tag** is a label given to a product linked to a **specific region**, with qualities or characteristics unique to that area.
- **Medical Benefits:** Turmeric, with its active compound **curcumin**, helps reduce **inflammation, neutralize free radicals, and support digestive health** by promoting bile production.

Note: India ranked the world's **8th largest agricultural exporter** in 2023 despite a decline in exports from **USD 51.12 billion in FY23 to USD 48.77 billion in FY24**.

- India is targeting a significant boost in its **organic produce exports**, aiming to **triple the value to Rs 20,000 crore** within the **next three years**.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. Consider the following: (2018)

1. Areca nut
2. Barley
3. Coffee
4. Finger millet
5. Groundnut
6. Sesamum
7. Turmeric

The Cabinet Committee on Economic Affairs has announced the Minimum Support Price for which of the above?

- (a) 1, 2, 3 and 7 only
- (b) 2, 4, 5 and 6 only
- (c) 1, 3, 4, 5 and 6 only
- (d) 1, 2, 3, 4, 5, 6 and 7

Ans: (b)

Q. Match List-I with List-II and select the correct answer using the code given below the Lists: (2008)

List-I	List-II
(Board)	(Headquarters)

A. Coffee Board	1. Bengaluru
B. Rubber Board	2. Guntur
C. Tea Board	3. Kottayam
D. Tobacco Board	4. Kolkata

Code:

A B C D

(a) 2 4 3 1

(b) 1 3 4 2

(c) 2 3 4 1

(d) 1 4 3 2

Ans: (b)

Key Trends and Challenges in Retail Inflation

For Prelims: [Retail inflation](#), [Consumer Price Index \(CPI\)](#), [Food Inflation](#), [Consumer Food Price Index \(CFPI\)](#), [Kharif](#), [Rabi](#), [Core Inflation](#), [Rupee Depreciation](#), [Imported Inflation](#), [Foreign Investment](#), [National Statistical Office \(NSO\)](#), [Purchasing Power](#), [CPI for Industrial Workers \(CPI-IW\)](#), [CPI for Agricultural Laborers \(CPI-AL\)](#), [CPI for Rural Labourer \(CPI-RL\)](#), [CPI for Urban Non-Manual Employees \(CPI-UNME\)](#), [Food and Agriculture Organization](#).

For Mains: Easing of inflation and related concerns, Monetary policy and Inflation management.

Source: [BS](#)

Why in News?

[Retail inflation](#), based on the [consumer price index \(CPI\)](#), fell to **5.22%** in **December 2024** from **5.48%** in November 2024, driven by **easing food inflation**.

- Retail inflation measures the **rate at which the prices of goods and services purchased by consumers rise over time**, reflecting changes in the cost of living.

What are the Reasons for Easing of Retail Inflation?

- **Low Food Inflation:** Food inflation, as measured by the [Consumer Food Price Index \(CFPI\)](#), fell to **8.39%** in December 2024 from 9.04% in November 2024.
- **Positive Agricultural Output:** A strong [kharif harvest](#), favorable [rabi sowing](#) conditions, and **sufficient reservoir levels** eased food inflation.
- **Decline in Fuel Prices:** Inflation in **fuel prices** remained in **contraction at -1.39%**, while

for **transport (2.64%)** and **education (3.89%)** it remained unchanged, contributing to reduced overall inflationary pressures.

- **Core inflation**, which excludes volatile food and fuel items, fell to **3.5%** in December 2024.
- **Stability in Non-Food Categories:** Housing (2.71%), clothing and footwear (2.74%), and household goods (2.75%) inflation **remained stable with minor changes**.

What are the Concerns Related to Inflation?

- **Inflation Above RBI's Target: Seven states** recorded inflation above RBI's **6% threshold**, while **ten states** exceeded the **national average**.
 - **Chhattisgarh** reported the highest inflation at **7.63%**, followed by **Bihar (7.4%)** and **Odisha (7%)**, reflecting **localized inflation challenges**.
- **Imported Inflation: Rupee depreciation** increases the cost of **imported crude oil and global commodities**, raising **domestic prices** and making it **harder to control inflation**.
 - The reliance on imported commodities, such as **edible oils**, exposes India to global price volatility.
 - A **weaker rupee** makes **imports more expensive** because more rupees are needed to buy the same amount of foreign commodities.
- **High Global Interest Rates:** High global interest rates could **deter foreign investment** in India, impacting financial stability and worsening **currency depreciation**.
 - It could lead investors to **shift capital to countries like the US and Europe**, offering **higher yields**, which reduces foreign investment inflows into emerging markets like India.

What is the Consumer Price Index?

- **About:** CPI measures the **overall change** in consumer prices based on a **representative basket of goods and services** over time, with **2012** as the base year.
 - The basket of goods includes **food, clothing, transportation, medical care, electricity, education**, and more.
 - The CPI is published **monthly** by the **National Statistical Office (NSO)** under the **Ministry of Statistics and Program Implementation (MoSPI)**.
- **Objective:** CPI is used for targeting **price stability**, adjusting **dearness allowance**, and understanding **cost of living, purchasing power**, and the expensiveness of goods and services.
- **Calculation:** CPI is calculated by **dividing the cost of a fixed basket in the current year** by the cost in the base year, then multiplying by **100**.
- **Types:** There are **4 different types of CPI** measured.
 - **CPI for Industrial Workers (CPI-IW):** It tracks price changes in a fixed basket of goods and services used by **industrial workers** over time. The **Labour Bureau**, under the **Ministry of Labour and Employment**, compiles **CPI-IW**.
 - **CPI for Agricultural Laborers (CPI-AL):** The **Labour Bureau** compiles **CPI-AL** to assist in **revising minimum wages** for agricultural workers across different states.
 - **CPI for Rural Labourer (CPI-RL):** It measures changes in the retail prices of goods and services consumed by **agricultural and rural laborers**.
 - The **Labour Bureau** compiles **CPI-RL**.
 - **CPI for Urban Non-Manual Employees (CPI-UNME):** **CPI-UNME** is compiled by **NSO**. An urban non-manual employee **earns 50% or more** of their income from **non-manual work** in the urban non-agricultural sector.
- **Components:** The following are the **primary components** of CPI (along with their weightage).
 - **Food and Beverage (45.86%)**
 - **Housing (10.07%)**
 - **Fuel and Light (6.84%)**
 - Clothing and Footwear (6.53%)
 - Pan, tobacco, and intoxicants (2.38%)
 - Miscellaneous (28.32%)

Consumer Food Price Index

- **About: Consumer Food Price Index (CFPI)** is a measure of **change in retail prices of food products** consumed by a defined population group in a given area with reference to a base year.
 - The base year presently used is **2012**.
- **Releasing Body: NSO, MoSPI** started releasing CFPI for three categories i.e., **rural, urban and combined** separately on an **all India basis** with effect from **May, 2014**.
 - Like CPI, the CFPI is also calculated on a **monthly basis**.
- **Note: FAO Food Price Index:** Globally, **food price index** is being released by the **Food and Agriculture Organization** of the **United Nations** on a **monthly basis**.
- The basket of food commodities consists of the average of **5 commodity group** price indices (**Cereal, Vegetable Oil, Dairy, Meat and Sugar**) weighted with the average export shares of each of the groups for 2002-2004.

INFLATION AND RELATED TERMS

INFLATION

- ◆ Rise in goods/services prices; corresponding decline in purchasing power
 - **Creeping Inflation:** Mild/moderate inflation where price level persistently rises over a period of time at a mild rate (single digit inflation rate)
 - **Galloping Inflation:** Occurs when mild inflation is not checked/controlled (inflation in double/triple digits - 20/100/ 200% annually)
 - **Hyperinflation:** Prices rise a million or even a trillion percent annually (witnessed by Germany in 1920s)

CORE INFLATION

- ◆ Change in costs of goods/services but **excluding those from food/energy sectors** (due to price volatility)

HEADLINE INFLATION

- ◆ **Headline Inflation** - Change in value of all goods in the basket (including food and energy)

Core = Headline - Food & fuel items

STAGFLATION

- ◆ When **Inflation, unemployment and economic stagnation** /recession occur simultaneously; **most difficult type of inflation** to manage
 - Witnessed by developed countries in the **1970s** (US, UK) when world oil prices rose dramatically

DEFLATION

- ◆ **Reverse of inflation** - a sustained decline in price of goods/services
 - Here, **annual inflation rate falls below 0%** resulting in an increase in the real value of money (Japan suffered for almost a decade in **1990s**)
 - **Can worsen into recession/depression**; hence, more dangerous than inflation

DISINFLATION

- ◆ When inflation rate decelerates
 - Implies that prices are rising (**inflation is happening**) but at a **slower rate** each passing month

Deflation is decline in prices, whereas disinflation is a decline in inflation rate



REFLATION

- ◆ Typically **follows deflation**
 - Policymakers try to **stimulate economic activity by producing inflation** (more govt spending, reduced interest rates etc.)

SKREWFLATION

- ◆ **Skewness of inflation** among different sectors of the economy - **some sectors facing huge inflation while some none and some even deflation**

GREEDFLATION

- ◆ Where (corporate) **greed is fuelling inflation**; **companies increasing their prices beyond just covering costs** to maximise profits

SHRINKFLATION

- ◆ **Hidden form of inflation**; often leads to **customer frustration/dissatisfaction**
 - Practice of **reducing the size of a product while maintaining its sticker price**



Monetary Policy Committee



Monetary Policy

- It is formed and managed by **Reserve Bank of India** to control a nation's overall money supply and achieve economic growth
- It is **different from Fiscal Policy** which is managed by the **Ministry of Finance** that measures the spending and taxation in Indian Economy

Monetary Policy Committee (MPC):

- **Ex-officio Chairperson:** RBI Governor
- **Objective:** To determine the policy rate required to achieve the inflation target ($4 \pm 2\%$, Urjit Patel Committee)

- **Legal Framework:** Under Section 452B of the amended RBI Act, 1934, the Central Government is empowered to constitute a six-member Monetary Policy Committee (MPC)
 - The MPC is required to meet at least four times in a year. Each member of the MPC has one vote, and in the event of an equality of votes, the Governor has a second or casting vote.
- **Monetary Policy Report:** RBI once in every six months, releases Monetary Policy Report to explain the sources of inflation and the forecast of inflation for 6-18 months ahead



Conclusion

Retail inflation in India eased to 5.22% in December 2024, driven by reduced food inflation and stable non-food categories. However, concerns remain due to **localized inflation, rupee depreciation, and high global interest rates**, which may affect **domestic inflation control and foreign investment**.

Drishti Mains Question:

Analyze the role of the Consumer Price Index (CPI) in shaping monetary policy and its impact on the Indian economy.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. Consider the following statements: (2020)

1. The weightage of food in Consumer Price Index (CPI) is higher than that in Wholesale Price Index (WPI).
2. The WPI does not capture changes in the prices of services, which CPI does.
3. Reserve Bank of India has now adopted WPI as its key measure of inflation and to decide on changing the key policy rates.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
(b) 2 only
(c) 3 only
(d) 1, 2 and 3

Ans: (a)

Q. If the RBI decides to adopt an expansionist monetary policy, which of the following would it not do?(2020)

1. Cut and optimize the Statutory Liquidity Ratio
2. Increase the Marginal Standing Facility Rate
3. Cut the Bank Rate and Repo Rate

Select the correct answer using the code given below:

- (a) 1 and 2 only
(b) 2 only
(c) 1 and 3 only

(d) 1, 2 and 3

Ans: (b)

Mains

Q. Define potential GDP and explain its determinants. What are the factors that have been inhibiting India from realizing its potential GDP? (2020)

Q. Do you agree with the view that steady GDP growth and low inflation have left the Indian economy in good shape? Give reasons in support of your arguments (2019)

India's Demographic Transition

For Prelims: [Demographic dividend](#), [United Nations Population Fund](#), [Support ratio](#), [Demographic transition](#), Replacement rate

For Mains: Demographic Dividend and its economic implications, India's demographic transition, Silver economy

[Source: BS](#)

Why in News?

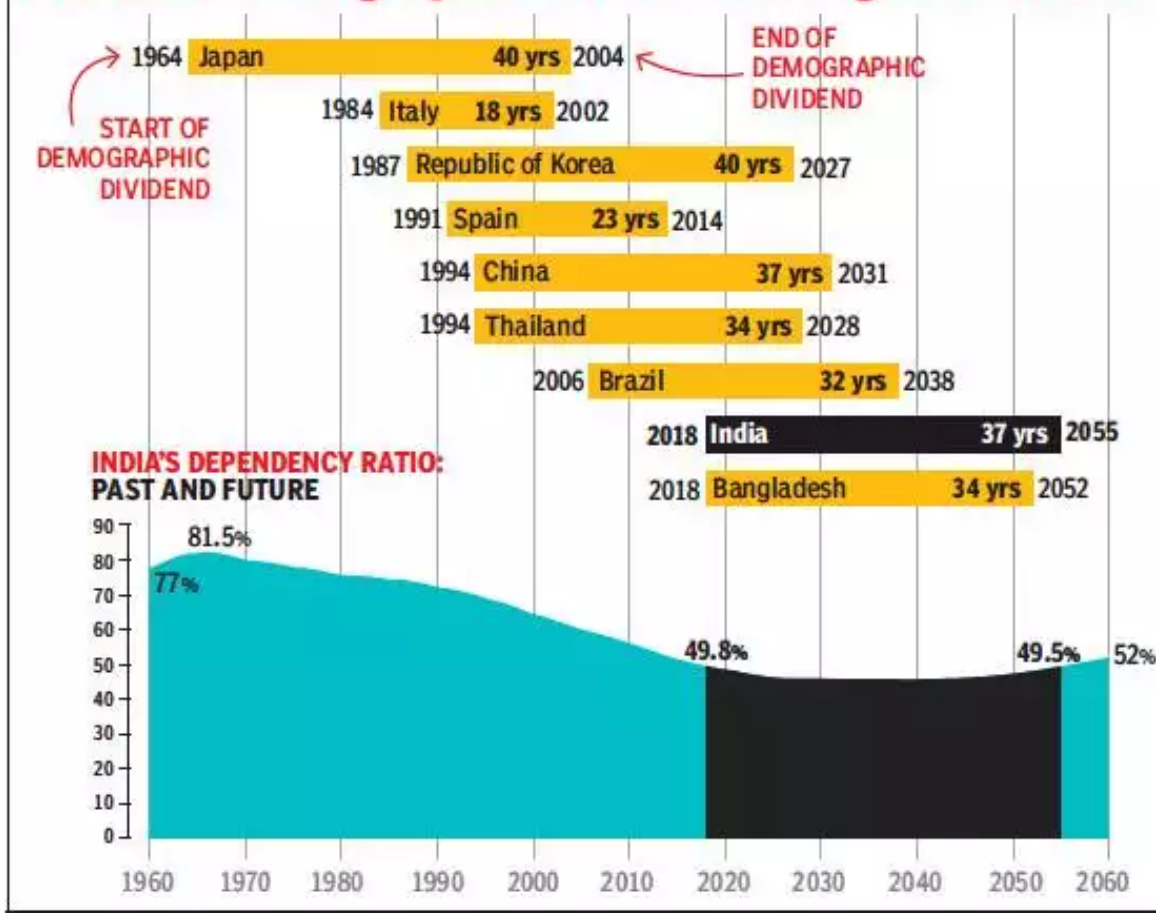
A report by McKinsey & Company highlights that **India has only 33 years left to leverage its [demographic dividend](#)** before transitioning into an **["aged" economy](#)** (silver economy) **akin to developed nations by the 2050s.**

- The report also highlights slower growth, rising dependency, and fiscal pressures as India's working-age population declines relative to its elderly.

Note: According to the [United Nations Population Fund](#), Demographic dividend is the **economic growth potential** when a country's **working-age population (15-64 years) exceeds the dependent population (children and elderly)**, creating a **"window of opportunity"** for increased productivity and economic output.

- India entered the demographic **dividend opportunity window in 2005-06** and will **remain there until 2055-56**, according to the [Economic Survey 2018-19](#).

Period of demographic dividend in large economies



What are the Key Highlights of the Report on India's Demographic Transition?

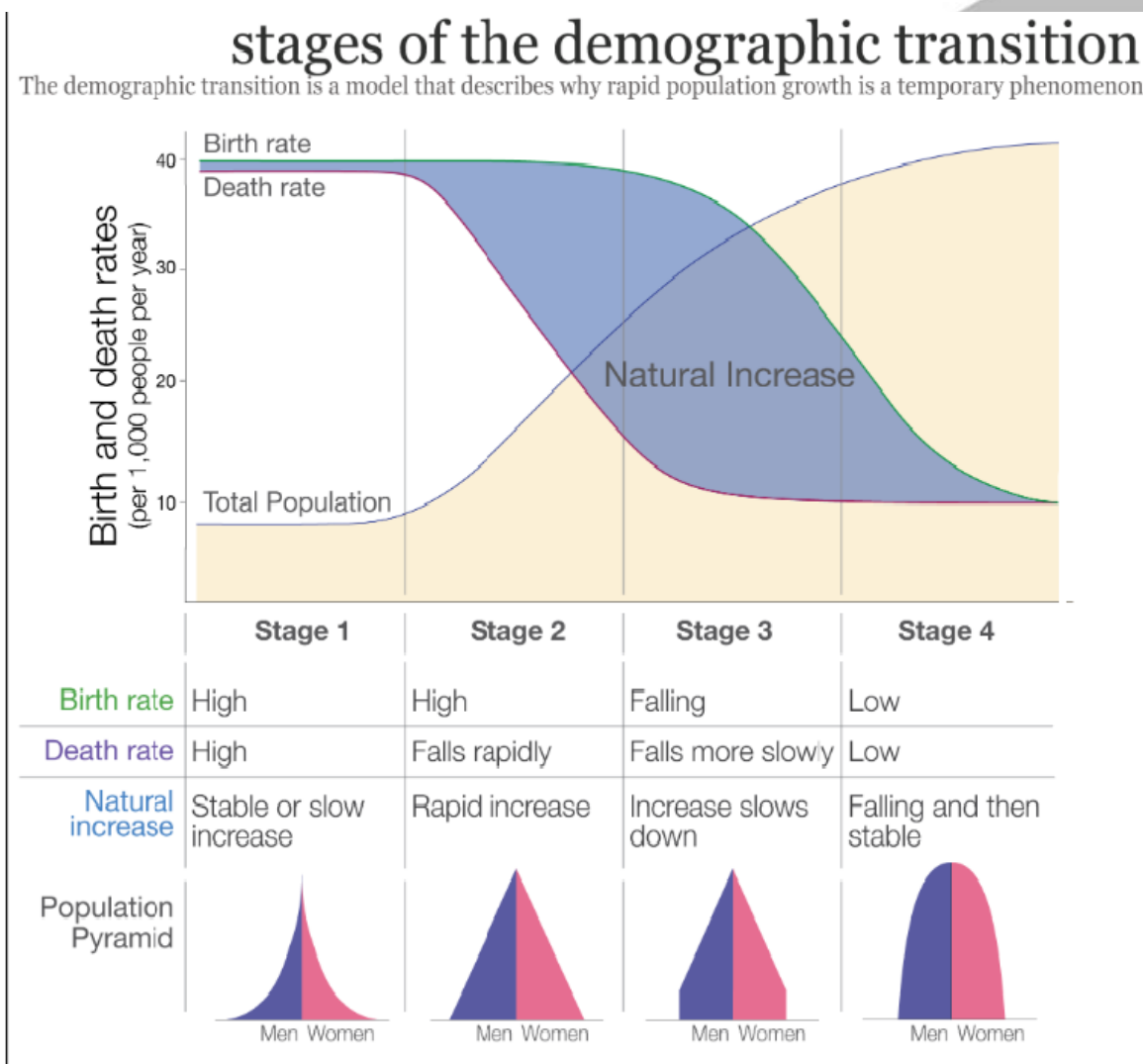
- **Declining Support Ratio:** India has 33 years until it reaches the same aging status as advanced economies by the 2050s.
 - India's **support ratio** (working-age individuals per senior aged 65 or older) has declined from **14:1 in 1997 to 10:1 in 2023** and is projected to drop further to **4.6:1 by 2050** and **1.9:1 by 2100**, reaching levels seen in advanced economies like Japan.
- **Rising Pressure on Public Finances:** By 2050, seniors will account for **15% of total consumption, up from 8% today**.
 - An increasing elderly population will **strain pensions, public healthcare, and family resources**.
 - India's share in global consumption is projected to rise from **9% today to 16% by 2050**.
- **Low Labour Market and Productivity:** India's labor force participation, particularly among women, remains **low and is a major area for improvement**.
 - Worker productivity in India is USD 9 per hour, significantly lower than the USD 60 per hour average in high-income countries.
- **Birth Rate Decline:** The **global decline in birth rates is severe**, affecting both emerging like **India** and advanced economies.
 - This demographic trend will have wide-ranging impacts on **Gross Domestic Product (GDP) growth**, labor markets, pension systems, and consumer behavior.
- **Recommendations: Increase labor force participation, particularly for women**, to maximize the demographic dividend.
 - To boost worker productivity, **India must focus on technological adoption, foster innovation**, and make strategic investments in infrastructure, education, and skill

development.

- Prepare for a **demographic shift by strengthening public finances** and social support systems to address the needs of a growing elderly population.

What is Demographic Transition?

- **About:** **Demographic transition** is a model that describes the changes in **birth and death rates, along with shifts in population age structure**, as societies develop economically and technologically. It typically involves several stages.
 - **Stage 1: High birth and death rates** result in a stable population.
 - **Stage 2:** Death rates decline due to improvements in healthcare, sanitation, and food production, while birth rates remain high. This leads to **rapid population growth**.
 - **Stage 3:** Birth rates begin to fall, slowing population growth. Factors include urbanization, lower child mortality, access to contraception, and societal shifts favoring smaller families.
 - **Stage 4: Both birth and death rates are low**, leading to a stable or aging population. This stage reflects higher living standards, **advanced technology, and societal development**.



- **India's Demography:** As per the **2011 Census**, **India is in stage three of the four stage model of demographic transition**, moving from high to low mortality and fertility rates.
 - India's **Total Fertility Rate (TFR)** stands at **2.0** as per **National Family Health Survey-5 (2019-21)**, below the **replacement rate of 2.1**.
 - TFR is the **average number of children a woman would have** based on current fertility patterns throughout her reproductive years (15-49).
 - The replacement rate of fertility is the average number of children per woman

needed to keep a population stable, in the absence of migration.

- The [World Population Prospects 2024](#) report by the [United Nations Department of Economic and Social Affairs \(DESA\)](#), projects India's population to peak at **1.7 billion in the early 2060s** and decline by **12% thereafter**, while remaining the world's most populous country.

Malthusian Theory of Population

- The Malthusian Theory of Population, proposed by **Thomas Malthus**, English economist in 1798, suggests that **population grows exponentially, while food production increases arithmetically**.
 - This imbalance leads to overpopulation, resulting in famine, disease, and mortality, which would eventually reduce the population.
 - Malthus identified "preventive checks" (e.g., delayed marriage) and "positive checks" (e.g., famine and disease) as ways to control population growth.
 - While influential, the theory has been criticized for underestimating technological advancements and human adaptability.

What are the Challenges of the Aging population in India?

- **Declining Workforce Participation:** With a decreasing proportion of working-age individuals, **India's economic growth could slow significantly**.
 - For example, **Japan, with 27% of its population over 65**, faces labor shortages and strained social security. Sluggish growth and stagnating wages have led to **reduced household spending**.
- **Healthcare System Strain:** Older populations typically experience higher rates of chronic illnesses, putting additional strain on India's already stretched healthcare system.
 - A surge in healthcare needs, without adequate infrastructure, could exacerbate health disparities and reduce the quality of life for the elderly.
- **Lower productivity and innovation:** An aging population may lead to reduced economic activity and innovation.
- **Impact on Family Structures:** With rising urbanization and nuclear families, the **burden of eldercare** on working-age adults may cause economic and emotional strain. An increasing **dependency ratio** could further strain social and economic resources.

Way Forward

- **Skill Development of Aging Workforce:** Investing in education and training programs to **equip the aging workforce with skills essential for the 21st-century economy**, such as digital literacy, creativity and innovation, and technological proficiency.
- **Healthcare Infrastructure:** Strengthening public healthcare systems to provide quality and affordable healthcare for the elderly.
- **Financial Inclusion:** Ensuring financial security for the elderly through **accessible and affordable pension schemes**, social security programs, and financial literacy initiatives.
- **Innovation and Productivity Growth:** Investing in research and development, promoting entrepreneurship, and leveraging technology to enhance productivity and address labor shortages.
- **Intergenerational Inclusion:** Fostering intergenerational dialogue and social inclusion to address the concerns of both the young and the elderly.
- **Addressing Demographic Dividend:** India's demographic dividend is hindered by poor education, [gender inequality](#), [skill mismatches](#), and [jobless growth](#) from the [informal economy](#), with a 134th [2023- 24 Human Development Index](#) ranking.
 - Addressing these challenges through improved education, healthcare, and increased [female workforce participation](#) is crucial.

Drishti Mains Question:

What are the potential consequences of India becoming an 'aged' economy before achieving full economic development?

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims:

Q. To obtain full benefits of demographic dividend, what should India do? (2013)

- (a) Promoting skill development
- (b) Introducing more social security schemes
- (c) Reducing infant mortality rate
- (d) Privatization of higher education

Ans: (a)

Q. Consider the following specific stages of demographic transition associated with economic development: (2012)

1. Low birthrate with low death rate
2. High birthrate with high death rate
3. High birthrate with low death rate

Select the correct order of the above stages using the codes given below:

- (a) 1, 2, 3
- (b) 2, 1, 3
- (c) 2, 3, 1
- (d) 3, 2, 1

Ans: (c)

Mains:

Q. "Demographic Dividend in India will remain only theoretical unless our manpower becomes more educated, aware, skilled and creative." What measures have been taken by the government to enhance the capacity of our population to be more productive and employable? (2016)

Q. "While we flaunt India's demographic dividend, we ignore the dropping rates of employability." What are we missing while doing so? Where will the jobs that India desperately needs come from? Explain. ? (2014)

