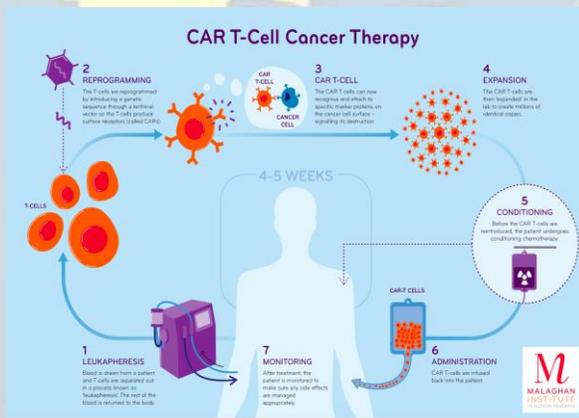


CAR-Therapy

- **Chimeric antigen receptor (CAR) T-cell therapy is a way to get immune cells called T cells (a type of white blood cell) to fight cancer by changing them in the lab so they can find and destroy cancer cells.**
- **CAR T-cell therapy is also sometimes talked about as a type of cell-based gene therapy, because it involves altering the genes inside T cells to help them attack the cancer.**



- **The immune system recognizes foreign substances in the body by finding proteins called antigens on the surface of those cells.**
- **Immune cells called T cells have their own proteins called receptors that attach to foreign antigens and help trigger other parts of the immune system to destroy the foreign substance.**

- **The relationship between antigens and immune receptors is like a lock and key. Just as a lock can only be opened with the right key, each foreign antigen has a unique immune receptor that is able to bind to it**
 - **In CAR T-cell therapies, T cells are taken from the patient's blood and are changed in the lab by adding a gene for a receptor (called a chimeric antigen receptor or CAR), which helps the T cells attach to a specific cancer cell antigen.**
 - **The CAR T cells are then given back to the patient.**
 - **Since different cancers have different antigens, each CAR is made for a specific cancer's antigen**
- ### About Rare Disease
- **Rare diseases are broadly defined as diseases that infrequently occur in a population, and three markers are used: the total number of people with the disease, its prevalence, and the availability/non-availability of treatment options.**
 - **WHO defines rare disease as having a frequency of less than 6.5-10 per 10,000 people.**
 - **As per an estimate, there are 7,000 known rare diseases with an estimated 300 million patients in the world; 70 million are in India.**

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- According to the Organization for Rare Diseases India, these include inherited cancers, autoimmune disorders, congenital malformations, Hirschsprung's disease, Gaucher disease, cystic fibrosis, muscular dystrophies, and Lysosomal Storage Disorders (LSDs)
- There are fundamental challenges in the research and development for the majority of rare diseases as relatively little is known about the pathophysiology or the natural history of these diseases particularly in the Indian context.
- Rare diseases are also difficult to research upon as the patient pool is very small and it often results in inadequate clinical experience.
- Availability and accessibility to medicines are also important to reduce morbidity and mortality associated with rare disease.

Employment data

- Official data shows a decline in the national unemployment rate from 6.1% in 2017-18 to 3.2% in 2022-23.
- Despite a decline in overall unemployment rates, highly educated youth face disproportionate challenges in securing employment, remaining a

consistent structural issue in India's economy.

- The analysis spanning from 1993-94 to 2022-23 demonstrates that individuals with higher education face consistently higher unemployment rates, notably reaching 13% in 2022-23 for graduates.
- Young graduates aged 18 to 29 encountered particularly high unemployment rates, with around 36% facing long spells of unemployment in 2017-18, declining to 27% by 2022-23 but still higher than previous periods.

- The Hindu

Economy and inclusiveness

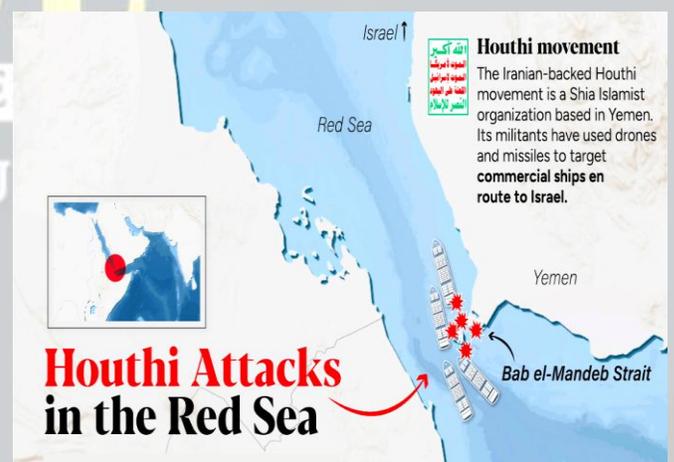
- Investing in education and skills for "high end" manufacturing and services will not benefit the masses if they cannot be employed.
- Richness of economic activity within local webs will create more sustainable growth than policies to participate in long, international supply chains when barriers are rising.
- The Indian state has limited financial capacity.
- It cannot afford to misspend it, by reducing taxes and duties and giving

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incentives to investors, with the expectation that benefits will gush down to the masses.

- More imports will not increase the wellbeing of Indian citizens if they do not have more incomes to buy.
- Foreign direct investment will not boost growth if it does not increase employment soon.
- The mould in which economics was cast in the later part of the 20th century must be broken. Policymakers must reimagine the path for India's growth.
- They must get down to the basics of inclusive economic growth.
- There are no shortcuts.
- The global economy is not growing like it was when China became the factory for the world.
- Producers everywhere are looking for new markets.
- India, with its unmet needs is very attractive for them. India's policies must take advantage of this opportunity and make more for India in India, thus growing both jobs and incomes for India's masses.
- The Hindu

Red sea conflict'



The Hindu

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Chinese Central Economic Work Conference (CEWC)

- The 2023 Chinese Central Economic Work Conference (CEWC) recently concluded, highlighting a stability focused pathway for the nation's 2024 economy.
 - Key directives include shifting from export led to domestic demand-led growth, enhancing high-quality production, striving for tech self-reliance while cooperating with trade partners, and maintaining financial discipline.
 - While echoing previous goals, this agenda emphasizes the need for structural reforms, necessitating a departure from entrenched Chinese party state practices to shape the country's economic future
- Chinese President Xi Jinping has referred to this as the "New Pattern of Development," and is an ambitious structural reform for a country known as the world's manufacturing hub.
 - Key areas of emphasis included the "New Pattern of Development" centered on boosting domestic consumption while maintaining a complementary relationship with international demand.
 - High-quality economic growth, focused on addressing the primary contradiction of inadequate development versus the population's increasing need for a better life, became a priority.

The Hindu

How is China strategically addressing the challenges?

- The first key area is dual circulation.
- As global demand has continued to decline amidst heightened sentiments of protectionism and 'de-risking', the country is now looking inwards to boost domestic consumption and only allow for a complimentary relationship with international demand.