



India's TB Diagnostics Tech Wins Acclaim at WHA

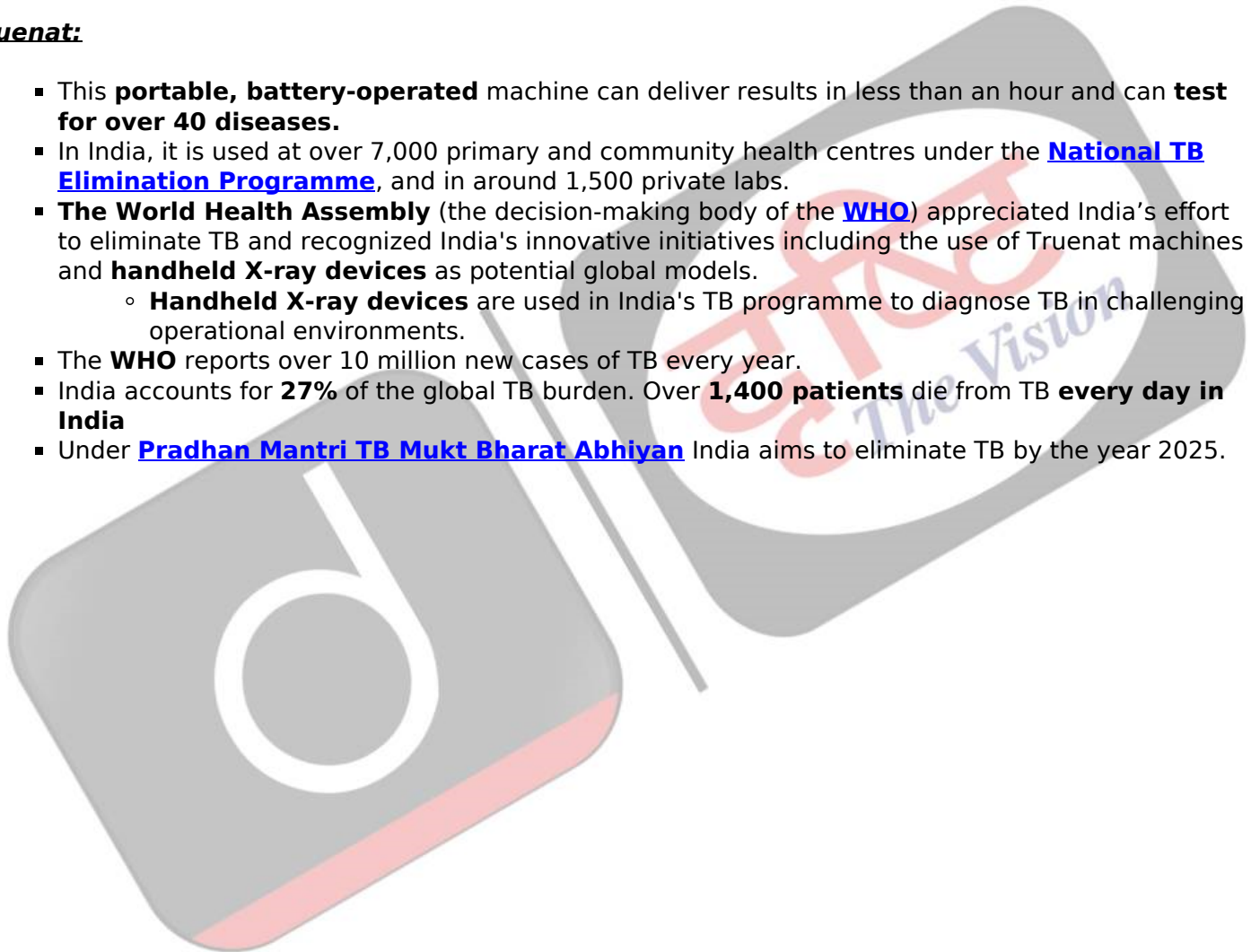
[Source: TH](#)

Recently, the **Truenat**, a rapid **molecular diagnostic test** for **pulmonary and extrapulmonary TB and rifampicin-resistant TB**, was hailed at the 77th **World Health Assembly** in Geneva.

Truenat:

- This **portable, battery-operated** machine can deliver results in less than an hour and can **test for over 40 diseases**.
- In India, it is used at over 7,000 primary and community health centres under the [National TB Elimination Programme](#), and in around 1,500 private labs.
- **The World Health Assembly** (the decision-making body of the [WHO](#)) appreciated India's effort to eliminate TB and recognized India's innovative initiatives including the use of Truenat machines and **handheld X-ray devices** as potential global models.
 - **Handheld X-ray devices** are used in India's TB programme to diagnose TB in challenging operational environments.
- The **WHO** reports over 10 million new cases of TB every year.
- India accounts for **27%** of the global TB burden. Over **1,400 patients** die from TB **every day in India**
- Under [Pradhan Mantri TB Mukt Bharat Abhiyan](#) India aims to eliminate TB by the year 2025.

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Tuberculosis

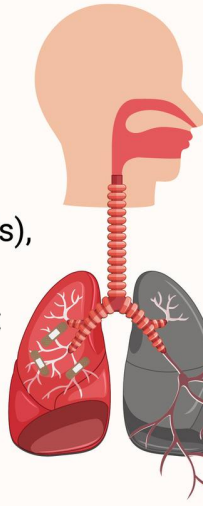


Drishti IAS

Tuberculosis (TB) is an infectious disease that affects the lungs.
Tuberculosis is preventable and curable.

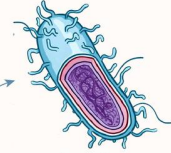
Prevention

- Seek medical intervention if symptoms persist
- If at a higher risk (HIV patients), get tested for TB.
- Practice good cough hygiene:
Wear a mask and avoid contact



Causes:

- *Mycobacterium tuberculosis*
- Coughing droplets
- Prolonged exposure from a patient



Symptoms of TB:

- Chest pain
- Weakness
- Weight loss
- Fever
- Night sweats
- Prolonged cough

Facts

- 1.6 million deaths in 2021 Worldwide
- 13th leading cause of death
- India aims to achieve the UN's TB-related SDGs by 2025, five years ahead of the global target to end the TB epidemic by 2030.

#Tuberculosis

Ni-kshay Programme

- Nikshay Mitra are individuals or groups who adopt one TB patient for their treatment for a period of 6 months
- Provision of free drugs and diagnostics
- Ni-kshay Poshan Yojana for nutritional support to TB patients

Read more: [Pradhan Mantri TB Mukh Bharat Abhiyan](#), [India TB Report 2024](#)

Musankwa Sanyatiensis

Source: [Phys.org](#)

Recently, scientists have discovered fossils of a new **dinosaur** species, **Musankwa sanyatiensis**, along the shores of [Lake Kariba](#) in **Zimbabwe**.

- This herbivorous dinosaur weighed around 390 kg and lived in swampy areas during the **Late Triassic period** (about 210 million years ago).
- It is named after the **houseboat** used during the expeditions and the **Sanyati River** flowing into **Lake Kariba**.

- It is the first dinosaur named from the **Mid-Zambezi Basin** in over 50 years and only the 4th dinosaur species named from the country.
- Africa has a long history of dinosaur discoveries, with the first found in South Africa just 3 years after the term "**dinosaur**" was coined in 1842.
- **Dinosaurs** (a diverse group of reptiles) lived around 243 to 233 million years ago, and diversified into various forms during the **Jurassic and Cretaceous periods**.
- They include birds, which evolved from theropods, and extinct non-avian dinosaurs.



Read more: [Connection Between Dinosaurs and Birds](#), [Dinosaur Fossil -Thanatotheristes](#)

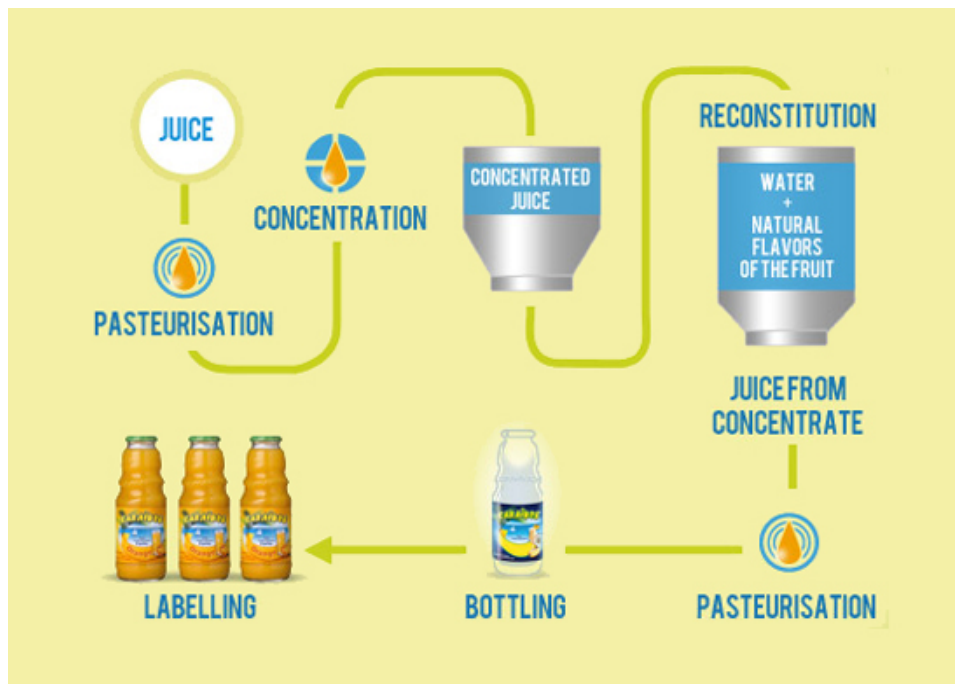
FSSAI Cracks Down on Misleading

[Source: TH](#)

Recently, the **Food Safety and Standards Authority of India (FSSAI)** has directed manufacturers (**Food Business Operators (FBOs)**) to remove "**100% fruit juice**" claims from products made with reconstituted juice.

- **Reconstituted juices** are made by adding water back to concentrated fruit juice.

- FSSAI aims to prevent misleading consumers who might believe they're getting pure, undiluted juice.
- **Key Regulations:**
 - **No "100% Juice" Claims:** As per **Advertising and Claims Regulations (2018)**, such claims are **not allowed** for any fruit juice product.
 - **"Reconstituted" Labeling: Food Products Standards & Additives Regulations (2011)** mandates that reconstituted juices must clearly state "reconstituted" in the ingredient list.
 - **Sweetener Transparency:** Juices with added nutritive sweeteners exceeding 15 gm/kg must be labeled "Sweetened Juice."
- **FSSAI**
 - Established under the [Food Safety and Standards Act \(2006\)](#).
 - An autonomous body under the **Ministry of Health and Family Welfare**.
 - **Mission:** Setting world-class food safety standards, promoting good manufacturing practices, and ensuring food businesses adhere to these regulations.



Read more: [Food Safety and Standards Authority of India \(FSSAI\)](#), [FSSAI to Streamline Food Safety Regulations](#)

Shifting of Route of the Silk Road

For Prelims: Climate Change, Silk Route, [Belt and Road Initiative \(BRI\)](#), [China-Pakistan Economic Corridor \(CPEC\)](#)

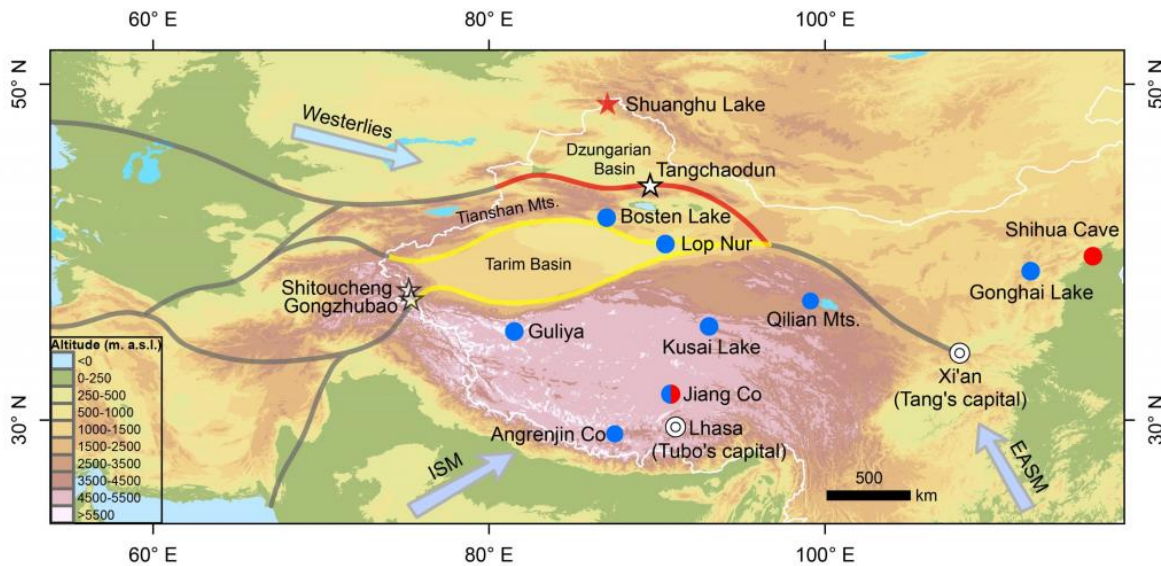
For Mains: Impact of Climate Change, China-Pakistan Economic Corridor and its implications on India.

Source: [DTE](#)

Why in News?

A recent study by Chinese scientists published in the journal **Science Bulletin**, found that the main route of the ancient **Silk Road** shifted northward due to **climate change**.

- The study provides a valuable case study for examining the relationship between climate change and the spatial evolution of human societies.



What is the Silk Road?

- **About:**
 - The Silk Road was a **vast network of trade routes** that connected the **Atlantic seaboard of Europe with the Pacific coast of Asia**, spanning over 1,500 years of history.
 - It was named for the **lucrative silk trade** that was established in China at the far eastern end of the trade route.
 - Besides silk, the route was also used to transport other goods such as spices, gold, and precious stones.
- **Route:**
 - Along the way, it passed through a number of important cities and kingdoms, including Samarkand, Babylon, and Constantinople.
- **History:**
 - The Silk Road has a history of over 1,500 years, conventionally dated to the **2nd century BCE** when contacts between **Europe** and **China** became more established.
 - In the 2nd century BCE, **Emperor Wu** of the **Chinese Han Dynasty** dispatched his diplomat **Zhang Qian** to the "Western Regions" (Xinjiang and beyond). This led to the gradual establishment of the **Tarim Basin route** of the Silk Road.
 - Zhang Qian is credited as the "**Father of the Silk Road**" for his pioneering expedition.
 - Caravans travelling from China's capital Xian or towards it used the **Tarim Basin route**, which skirted the basin enclosed by the **Tianshan, Kunlun, and Pamir mountains** and within the basin lies the **Takla Makan Desert**.
 - After travelling around the Tarim Basin, the caravans would head west towards the **Levant (modern-day Syria, Jordan, the Holy Land, and Lebanon)** and **Anatolia**, where the goods would be transferred to ships in **Mediterranean ports**, and then further westward to **Western Europe**.
 - This route facilitated the flow of goods, people, ideas, religions, and even diseases between the opposite ends of Eurasia and played a crucial role in the cultural and economic exchange between the civilisations of Europe and Asia.

How the Route of Silk Road was Shifted?

▪ Old Route (Tarim Basin Route):

- The original main route of the Silk Road went **around the Tarim Basin** which lies between **the Tianshan Mountains** to the north and the **Kunlun Mountains** to the south.
- The merchants chose this route in order to avoid the harsh desert conditions of the Tarim Basin.

▪ New Route (Junggar Basin Route):

- During the period of around **420-850 CE**, the caravans **no longer** followed the traditional route around the Tarim Basin on the Silk Road.
 - Instead, they started using the **northern slopes of the Tianshan Mountains** (in **Junggar Basin** in modern-day Xinjiang), historically called **Dzungaria**.
 - **This "New Northern" route eventually replaced the Tarim Basin route entirely.**
- **Consequences of the New Route:**
 - It fostered the development of the **Turco-Sogdian cultural** sphere.
 - It facilitated communication and trade between Chinese dynasties and nomadic empires in Central and West Asia, like the **Khazar Empire**.
 - This shift **improved communication and trade across Eurasia**, connecting the Pacific and Atlantic regions.

What were the Reasons Behind the Shift of the Silk Road?

▪ Climate Change:

- Researchers used **chironomid ('lake flies') fossils** to reconstruct past climate and found a period of **cooling and drying (420-600 CE)** in the **Tarim Basin**, which means the region experienced **colder temperatures and less precipitation (climate change)** during that time.
 - The decline in meltwater and precipitation in the Tarim Basin made the traditional route less viable due to **water scarcity**. Thus caravans **switched to the northern route along the Tianshan mountains** because it offered more abundant and stable water resources.

▪ Geopolitical Factors:

- Even after the climate in the Tarim Basin improved (warmer and wetter between 600-850 CE), the trade **route remained on the northern Junggar Basin route**.
- This is due to the rise of the **Tubo Kingdom (Tibet)** south of Xinjiang, whose expanding power clashed with China's Tang Dynasty, making the traditional Tarim Basin route potentially less safe or politically favourable for trade.

What was the Historical Significance of the Silk Route?

▪ Economic Significance:

- The Silk Road served **as the main trade route**, enabling the **trade of high-end products** such as silk, spices, valuable metals, and gemstones between China, India, Persia, Arabia, and the Mediterranean.
- This **generated considerable wealth and prosperity**, playing a role in the economic **advancement and progress of the societies situated** along this ancient network.

▪ Cultural Diffusion:

- The Silk Route facilitated the **exchange of cultural, artistic, and religious ideas** between the East and the West, leading to the spread of **Buddhism, Christianity,**

Islam, and other beliefs. It also enabled the transfer of technologies, agricultural practices, and artistic traditions.

- This exchange promoted the **blending of cultures, languages, and knowledge, enriching cultural heritage and contributing** to a diverse and interconnected world.

▪ **Geopolitical Significance:**

- The Silk Route was a **crucial network of trade routes**, granting power and influence to controlling empires. Securing it led to military outposts, fortifications, and diplomatic ties.
- Competition for **control shaped Eurasia's geopolitical landscape**, influencing the rise and fall of civilizations for centuries.

▪ **Technological Advancements:**

- The Silk Route enabled the **exchange of technological innovations like the compass, gunpowder**, and printing between East and West.
- It also spurred the development of advanced transportation methods, including camel caravans and maritime shipping.

▪ **Legacy and Contemporary Relevance:**

- The Silk Route continues to impact modern trade and cultural exchanges, with initiatives like the **[Belt and Road Initiative](#)** highlighting its importance in current economic and geopolitical dynamics.

How did the Silk Route End, and What are the Revival Efforts in Present Times?

▪ **End of Silk Route:**

- The original Silk Route disappeared in 1453 when the **Ottoman Empire** closed off trade with the West, leading to the separation of East and West. Alternative sea routes were later discovered for more efficient East-West trade.

▪ **Reviving the Silk Route:**

- In 2013, China initiated the "**One Belt, One Road**" (OBOR) or **[Belt and Road Initiative](#)** strategy to revive the Silk Route.
- It aims to enhance connectivity with over 60 countries across Asia, Europe, and East Africa.

What is the Belt and Road Initiative (BRI)?

▪ **About:**

- It represents a multifaceted **development strategy** aimed at enhancing global connectivity and cooperation.
- It was launched in **2013** and aims to link **Southeast Asia, Central Asia, the Gulf region, Africa and Europe** with a network of land and sea routes.

▪ **Objectives:**

- It aims to boost international connectivity by enhancing infrastructure, trade, and economic cooperation.

▪ **Routes of BRI:**

- **Silk Road Economic Belt:**

- This segment of the **BRI is dedicated to improving connectivity, infrastructure, and trade links** across Eurasia through a network of overland transportation routes.

- **Maritime Silk Road:**

- This component emphasises **maritime connections and cooperation** in the form of ports, shipping routes, and maritime infrastructure projects.
 - It begins via the **[South China Sea](#)** going towards **[Indo-China](#)**, South-East Asia and then around the **[Indian Ocean](#)** thus reaching Africa and Europe.

▪ **Geographic Corridors:**

- The land-based Silk Road Economic Belt envisions 6 key corridors for development:
 - **[China-Pakistan Economic Corridor \(CPEC\)](#)**.
 - New Eurasian Land Bridge Economic Corridor.

- China-Indochina Peninsula Economic Corridor.
- China-Mongolia-Russia Economic Corridor.
- China-Central Asia-West Asia Economic Corridor.
- China-Myanmar Economic Corridor.



Drishti Mains Question:

How is China's revival of the ancient silk route through the BRI changing the region's geopolitics? Evaluate the impact.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. Belt and Road Initiative is sometimes mentioned in the news in the context of the affairs of (2016)

- (a) African Union
- (b) Brazil
- (c) European Union
- (d) China

Ans: (d)

Mains

Q1. The China-Pakistan Economic Corridor (CPEC) is viewed as a cardinal subset of China's larger 'One

Belt One Road' initiative. Give a brief description of CPEC and enumerate the reasons why India has distanced itself from the same. **(2018)**

Q2. "China is using its economic relations and positive trade surplus as tools to develop potential military power status in Asia". In the light of this statement, discuss its impact on India as her neighbour. **(2017)**

India's New Economic Brain Power

For Prelims: [Global Capability Centers \(GCCs\)](#), [Multinational Corporations \(MNCs\)](#), [artificial intelligence/machine learning](#), [research and development](#)

For Mains: About Global Capability Centers (GCCs), their impacts and present status, Major shifts in the Indian Economy due to the rise of GCCs

Source: [ET](#)

Why in News?

In recent years, India's transformation from a back-office service provider to a **strategic intellectual hub** for [Multinational Corporations \(MNCs\)](#) has been driven by the rise of [Global Capability Centers \(GCCs\)](#).

- GCCs are **offshore units** established by MNCs to perform strategic functions using specialised talent, cost advantages, and operational efficiencies in different locations worldwide.

What are the Major Shifts in the Indian Economy due to the Rise of GCCs?

- **From Back-Office to Strategic Partner:**
 - Traditionally, in the 1990s and 2000s India's role in the global economy was primarily focused on **back-office functions** like telemarketing and data entry.
 - However, they have now expanded into **complex tasks like R&D, analytics, [artificial intelligence/machine learning](#), robotic process automation** and product development, positioning India as a vital contributor to the global innovation ecosystem.
- **Skill Development and Talent Pool Evolution:**
 - The demand for skilled professionals by GCCs is driving a revamp of India's education and training system.
 - Educational institutions are focusing on developing skills in **[STEM fields \(Science, Technology, Engineering, and Mathematics\)](#)** along with critical thinking and problem-solving abilities to meet the evolving needs of GCCs.
- **Innovation and Knowledge Economy:**
 - GCCs are not just replicating tasks but also becoming [innovation hubs](#) for their parent companies.
 - This fosters a **culture of [research and development](#)** within India, leading to the creation

of new technologies and solutions.

- The **knowledge transfer from MNCs to the Indian workforce** further fuels innovation and strengthens India's position in the knowledge economy.

▪ **Job Market Transformation:**

- GCCs are creating high-paying jobs in various sectors beyond traditional IT services.
- This shift is attracting a **wider range of talent, including engineers, data scientists, and financial analysts.**
- The rise of GCCs offers better career prospects and contributes to an **overall improvement in living standards** for skilled professionals.

▪ **Evolving IT Landscape:**

- The presence of GCCs is driving investments in **cutting-edge technologies** like artificial intelligence, cloud computing, and **big data analytics.**
- This focus on **advanced technologies** positions India as a leader in the global IT services market.

▪ **Increased Global Competitiveness:**

- The rise of GCCs showcases India's capabilities on the international stage.
- MNCs are increasingly **recognizing the talent and cost-efficiency advantages** offered by India.
- This is attracting further **foreign investment** and propelling India's competitiveness in the global knowledge economy.

▪ **What are Global Capability Centers (GCCs)?**

◦ **About:**

- Global Capability Centers (GCCs), also known as Global In-House Centers (GICs), are strategic outposts established by [multinational corporations \(MNCs\)](#) in countries around the world.
- Operating as internal entities within the global corporate framework, these centres **offer specialised capabilities including IT services, research** and development, customer support, and various other business functions.

◦ **Examples of GCCs:**

- General Electric (GE) has a large GCC in Bangalore, focused on R&D and engineering for its aviation and healthcare businesses.
- **Nestle** has established a **GCC in Lausanne, Switzerland**, dedicated to product development and innovation for its food and beverage brands.

◦ **Present Status:**

- In 2022-23, around 1,600 GCCs made up a market of USD 46 billion, employing 1.7 million people.
- Within GCCs, professional and consulting services are the fastest-growing segment despite only accounting for 25% of India's [services exports](#).
- Their compounded annual growth rate (CAGR) of 31% over the last four years significantly outpaces computer services (16% CAGR) and R&D services (13% CAGR).

◦ **Benefits of GCCs:**



- **Cost Efficiency:** Setting up a GCC in a country with **lower operational costs** can provide significant savings for the MNC.
 - **Operational Efficiency:** GCCs can handle specific functions, freeing up headquarters resources to focus on core business strategies.
 - **Market Access:** GCCs can provide valuable insights into local markets, **customer preferences, and regulatory environments**, enabling the MNC to adapt its offerings and strategies for regional success.
- **Impact on Local Economies:**
- GCCs create high-skilled jobs in the host country, boosting the local economy and knowledge base.
 - They contribute to [knowledge transfer and technology adoption](#) within the host country.
 - GCCs can also act as a **catalyst for further foreign investment** by demonstrating the country's skilled workforce and business environment.

Conclusion

The rise of GCCs signifies a significant shift in India's role within the global economy. By leveraging its intellectual capital, India is transforming from a service provider to a strategic partner for MNCs. This trend is poised to have a lasting impact on both India's economic development and the global tech landscape.

Drishti Mains Question:

Q. What are Global Capability Centers (GCCs)? Discuss the major shifts in the Indian Economy due to the rise of GCCs.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. With reference to Foreign Direct Investment in India, which one of the following is considered its major characteristic? (2020)

- (a) It is the investment through capital instruments essentially in a listed company.
- (b) It is a largely non-debt-creating capital flow.
- (c) It is the investment that involves debt-servicing.
- (d) It is the investment made by foreign institutional investors in Government securities.

Ans: (b)

Q. Consider the following: (2021)

1. Foreign currency convertible bonds
2. Foreign institutional investment with certain conditions
3. Global depository receipts
4. Non-resident external deposits

Which of the above can be included in Foreign Direct Investments?

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

(c) 2 and 4

(d) 1 and 4

Ans: (a)

Mains

Q1. “The broader aims and objectives of WTO are to manage and promote international trade in the era of globalization. But the Doha round of negotiations seems doomed due to differences between the developed and the developing countries.” Discuss from the Indian perspective. **(2016)**

Q2. What are the key areas of reform if the WTO has to survive in the present context of the ‘Trade War’, especially keeping in mind the interest of India? **(2018)**

PDF Reference URL: <https://www.drishtias.com/current-affairs-news-analysis-editorials/news-analysis/17-06-2024/print>

