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**DAILY EDITORIAL
ANALYSIS**

TOPIC

**SHIFTING SANDS WITHIN GLOBAL
SUPPLY CHAINS**

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SHIFTING SANDS WITHIN GLOBAL SUPPLY CHAINS

Context

- Global supply chains are at an inflection point. As recent proposed US rules on Chinese connected car tech and Israel's pager attacks indicated the changing focus of global supply chains — from resilience to security.

Evolution of Global Supply Chains

- Global supply chains are the backbone of the modern economy, enabling the seamless flow of goods, services, and information across borders.
- Global supply chains have undergone significant transformations over the past few decades, driven by **technological advancements, geopolitical shifts, and unexpected global events**.
 - ◆ However, the COVID-19 pandemic, in particular, highlighted the vulnerabilities and dependencies within these intricate networks, prompting a reevaluation of strategies from efficiency to resilience and security.

From Efficiency to Resilience

- Traditionally, global supply chains prioritised efficiency, epitomised by the **'just in time'** approach that minimises inventory costs and maximise speed.
- However, the pandemic exposed vulnerabilities in this system, leading to widespread disruptions and shortages.
- Consequently, businesses and governments pivoted to a **'just in case' strategy**, emphasising resilience which involved **maintaining buffer stocks and diversifying suppliers to mitigate risks**.

Technological Integration

- The integration of advanced technologies such as artificial intelligence, blockchain, and the Internet of Things (IoT) is revolutionising supply chain management.
- These technologies enhance transparency, efficiency, and security, enabling real-time tracking and better decision-making.

Role of the US and China

- The United States and China are the world's largest economies, and their trade relationship is pivotal to global supply chains. The US is a major consumer market, while China is a manufacturing powerhouse.
 - ◆ This symbiotic relationship has driven economic growth and innovation but has also led to tensions and competition.
- **China's rise as the 'world's factory'** has been a defining feature of global supply chains. With its vast labour force, advanced infrastructure, and supportive government policies, China has become the go-to destination for manufacturing.
- The **United States**, on the other hand, excels in **innovation and consumption**. American companies lead in technology, pharmaceuticals, and aerospace, driving demand for components and raw materials from around the world.

India and Global Supply Chain

- India has made significant strides in integrating into the global supply chain. The country is a major player in sectors such as pharmaceuticals, textiles, and information technology.
- India has launched several initiatives to boost manufacturing and infrastructure.
 - ◆ The government's **'Make in India' initiative** has further bolstered manufacturing, aiming to transform India into a global manufacturing hub.
 - ◆ Programs like the **National Infrastructure Pipeline**, which aims to invest \$1.4 trillion over the next five years, the **Production Linked Incentive (PLI)** scheme, and the development of **Special Economic Zones (SEZs)** are designed to attract foreign investment and enhance domestic production capabilities.

India's Strategic Advantages

- **Demographic Dividend:** With a young and growing population, India boasts a large workforce that is increasingly skilled and adaptable.
 - ♦ This demographic advantage positions India as an attractive destination for manufacturing and services.
- **Technological Advancements:** India is rapidly adopting new technologies to improve efficiency and productivity in its supply chains.
 - ♦ The integration of digital tools, automation, and artificial intelligence is transforming traditional supply chain operations, making them more resilient and responsive.
- **Geopolitical Shifts:** The ongoing trade tensions between major economies like the US and China have prompted companies to diversify their supply chains.
 - ♦ India, with its stable political environment and favourable trade policies, is increasingly seen as a viable alternative for businesses looking to reduce their dependence on China.
- **Diversification of Trade Partners:** Reducing dependency on a few countries and diversifying trade partners can mitigate risks associated with geopolitical tensions.
 - ♦ Exploring new markets in Africa, Latin America, and Southeast Asia can open up new avenues for trade.

Key Concerns

- **Trade tensions and their impact:** The US-China trade war, which began in 2018, has had profound effects on global supply chains.
 - ♦ Tariffs and trade barriers have forced companies to rethink their sourcing strategies, leading to a shift in manufacturing bases to other countries like Vietnam, India, and Mexico.
 - ♦ This realignment aims to mitigate risks and reduce dependency on any single country.
- **Implications for Global Trade:** Countries are now more cautious about the origins of critical technologies and components.
 - ♦ This shift could lead to the reconfiguration of supply chains, with a focus on securing strategic assets and reducing dependency on potentially adversarial nations.
- **Geopolitical Considerations:** The strategic rivalry between the US and China extends beyond trade to areas like technology, cybersecurity, and intellectual property.
 - ♦ Policies such as the **US CHIPS Act**, which aims to boost domestic semiconductor production, reflect the broader competition for technological supremacy.
- **Security Concerns:** Recent developments have further shifted the focus towards security. For instance, the US Department of Commerce proposed rules to restrict imports of certain technologies from China and Russia, citing national security concerns.
 - ♦ Additionally, an attack in Israel targeting basic communication devices highlighted the potential dangers of even outdated technologies when misused.
 - ♦ It underscores the growing importance of securing supply chains against potential geopolitical threats.
- **Other challenges** include Infrastructure bottlenecks, regulatory complexities, and the need for further skill development are areas that require continued attention.
- However, with ongoing reforms and a clear focus on enhancing its global competitiveness, India is well-positioned to play a crucial role in the future of global supply chains.

Strengthening Supply Chains

- To effectively strengthen supply chains, investments in technology and infrastructure are essential.
- Companies need to adopt advanced and modern technologies like AI-driven predictive analytics, blockchain, and cognitive planning to enhance supply chain visibility and efficiency.
- India's focus on '**Atma Nirbhar Bharat**' (self-reliant India) aims to bolster the country's manufacturing sector and integrate it more deeply into global value chains.
 - ♦ Reforms such as easing FDI norms, agricultural reforms, and progressive labour laws are designed to attract foreign investments and enhance India's competitiveness.

Conclusion and Way Forward

- The shifting sands within global supply chains reflect the complex interplay between efficiency, resilience, and security. As geopolitical tensions rise and technological threats evolve, the focus on securing supply chains will likely intensify.
- Countries must adapt to these changes to protect their economic interests and national security.
- The evolution of global supply chains reflects broader economic and geopolitical trends. As businesses and governments navigate these changes, the focus will likely remain on balancing efficiency, resilience, and security.
- India's proactive measures and technological advancements position it well to play a significant role in the future of global supply chains.

Source: TH

Mains Practice Question

[Q] How have geopolitical tensions, technological advancements, and changing consumer preferences reshaped the dynamics of global supply chains, and what are the key challenges and opportunities arising from these shifts?

