

# Manufacturing Wars

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## Manufacturing Wars: China's Strategic Blockade on India's Tech Sector

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### Context

India has been making significant strides in **electronics manufacturing**, particularly in smartphone production, through initiatives like '**Make in India**' and the **Production-Linked Incentive (PLI) scheme**. Global giants like **Apple** have expanded their footprint in India, with **Foxconn, Pegatron, and Tata Electronics** playing crucial roles in assembling iPhones. However, India still depends on **China for critical components, specialised machinery, and skilled manpower**.

In mid-January 2024, China imposed **restrictions on travel** for its engineers and technicians working in **Foxconn's Indian facilities**. Additionally, it:

- **Recalled** Chinese workers already in India.
- **Curbed exports** of critical specialised manufacturing equipment, over which China holds a **monopoly**.

While Foxconn has attempted to fill the gap with **Taiwanese workers**, the real challenge is the stoppage of **high-end manufacturing equipment**, which is crucial for smartphone assembly. This move by China could **significantly impact India's manufacturing ambitions** and its goal to become a **global production hub**.

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### What is at Play?

China's decision is not merely an economic move but a **strategic geopolitical action** to counter India's rise as a manufacturing competitor.

#### 1. Restricting Knowledge Transfer

- China aims to prevent the **tacit transfer of expertise** from Chinese technicians to their **Indian counterparts**.

- This will slow down India's **capability development** in high-tech manufacturing.

## 2. Weaponising Supply Chains

- China's **curbs on equipment exports** are an attempt to **cripple production** in India.
- By leveraging its **dominance in global supply chains**, China is making it harder for India to become self-sufficient.

## 3. Countering the 'China Plus One' Strategy

- Due to **U.S.-China trade tensions**, global corporations are adopting a '**China Plus One**' strategy to reduce dependence on China.
- **India, Vietnam, and Mexico** have emerged as alternatives.
- China wants to **retain its position as the key supplier** and slow down India's rise as a competitive alternative.

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### India's Response: Strengthening Domestic Capabilities

Over the past few years, the **Indian government** and **state governments** have focused on strengthening **Apple-Foxconn's investments** in India. This has resulted in:

- **Assembling of iPhone 15** at Foxconn's Tamil Nadu facility and **Tata Electronics' Karnataka plant** in 2023.
- **\$14 billion worth of iPhones assembled in India** in FY 2024.
- **iPhone 16 Pro models** being assembled in India for the **first time in 2024**.
- **Padma Bhushan awarded to Young Liu (Foxconn Chairman) in 2024**, reflecting Foxconn's importance to India's manufacturing ecosystem.

Despite these achievements, India remains **primarily a final assembly hub** and needs to develop **a complete manufacturing ecosystem**.

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## A Pillar of 'Make in India'

India has been **heavily investing** in electronics manufacturing to **reduce import dependency**.

### 1. Production-Linked Incentive (PLI) Scheme

- **Budget allocation increased from ₹6,125 crore (\$0.70 billion) in 2024 to ₹8,885 crore (\$1.02 billion) in 2025.**
- **₹6,600 crore (\$0.76 billion) disbursed to Apple's contract manufacturers (Foxconn, Pegatron, Tata Electronics) between 2022-23 and 2024-25.**
- **Custom duties on key mobile components removed** to make manufacturing **cost-effective**.

### 2. India-China Economic Interdependence

- China's restrictions came just **months after India and China agreed** on a **border patrolling arrangement in October 2024** to end a four-year military standoff.
- **India still depends on China** for **components and machinery**, making economic negotiations a necessity.
- This incident shows that **India-China relations are shaped by economic factors** as much as by territorial disputes.

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## India's Long-Term Strategy

India must view this challenge as an **opportunity** to **accelerate self-reliance** in electronics manufacturing.

### 1. Strengthening Domestic Manufacturing

- Focus on **producing key components domestically** rather than just assembling smartphones.
- Encourage **ancillary industries** through incentives and technology-sharing clusters.

### 2. Expanding the National Manufacturing Mission

- The **National Manufacturing Mission** in **Union Budget 2025** is a **positive step**.

- Needs **strong financial backing** to develop **technology clusters** and **enhance skill development**.

### 3. Developing a Skilled Workforce

- **On-site training** and **vocational programs** should focus on **industry-specific skills**.
- Collaborations with **academic institutions** to develop a pipeline of **highly skilled engineers**.

### 4. Encouraging Private Investment

- More **private capital** should be invested in **indigenous contract manufacturers**.
- Strengthening **domestic brands** to compete globally.

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### Conclusion

China's restrictions on **Foxconn workers and equipment exports** highlight the **geopolitical nature of global supply chains**. While these actions may create **short-term disruptions**, they also serve as a **wake-up call** for India to reduce its reliance on China.

By focusing on **domestic component production, skill development, and private sector growth**, India can transition from being a **final assembly hub** to a **global leader in advanced electronics manufacturing**. A **long-term vision** and **strategic policymaking** will be crucial to achieving this goal.

