

# **International Trade and Policy**

## **WEEK 13 – The New Protectionism: Supply Chains and Trade Fragmentation**

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# Agenda

- Understanding the Old vs. New Protectionism
  - Supply Chains Under Pressure
  - Trade Fragmentation: Drivers and Data
  - Export Controls as Geopolitical Tools
  - Building Supply Chain Resilience
  - Future Outlook & Strategic Recommendations
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# Section 1 – Setting the Stage

## What Is Protectionism? (Traditional View)

- ❖ Tariffs, quotas, subsidies
  - ❖ **Aim:** Protect domestic industries from foreign competition
  - ❖ **Classic example:** Smoot-Hawley Tariff (1930)
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# The “New Protectionism” – A Definition

- Non-tariff barriers
  - National security arguments for trade restrictions
  - Industrial policy and technology decoupling
  - Example: US CHIPS Act, EU Net-Zero Industry Act
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# Why Now? Key Drivers

- US–China strategic competition
  - COVID-19 supply shocks
  - Russia–Ukraine war and weaponization of trade
  - Climate and energy transitions
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# From Globalization to Fragmentation

- Visual: One global circle → three blocs (US-led, China-led, neutral)
  - Definition: Reverse globalization
  - WTO trade growth below GDP growth since 2019
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## What's at Stake?

- IMF estimate: 0.2%–7% of global GDP loss
  - Higher inflation, less product variety
  - Geopolitical instability
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## **Section 2 – Supply Chains Under Stress**

### **Slide 8: The Golden Era of Supply Chains (1990–2010)**

- Just-in-time (JIT) logic
  - Low labor cost arbitrage (China as the factory of the world)
  - Minimal inventory, maximum efficiency
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## **The First Cracks (2018–2019)**

- US–China trade war tariffs
  - Huawei ban and early tech decoupling
  - Companies begin “China + 1” strategies
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# COVID-19 – The Great Reveal

- Medical supply shortages (PPE, ventilators, APIs)
  - Container shipping chaos and port congestion
  - Just-in-time becomes just-too-late
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## **Geopolitical Shocks (2022–2024)**

- Russia–Ukraine: grain, energy, neon gas (semiconductors)
  - Red Sea / Suez Canal disruptions
  - Taiwan invasion concerns: semiconductor panic
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## Visual – Supply Chain Concentration Risk

- Map showing over 70% of semiconductors are made in Taiwan / South Korea
  - 80% of rare earth refining in China
  - High-risk nodes highlighted in red
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# The Cost of Disruption

- Average supply chain disruption cost: \$80M+ per event (McKinsey)
  - Share prices drop 7–10% post-disclosure
  - Inventory write-offs and expediting fees
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## **From JIT to JIC (Just-in-Case)**

- Building inventory buffers
  - Dual sourcing and nearshoring
  - Strategic stockpiles (e.g., EU medical reserves)
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## **Section 3 – Trade Fragmentation: Evidence & Trends**

### **Defining Trade Fragmentation**

- Splitting of global trade into rival regional blocs
  - Trade diversion vs. trade creation
  - Visual: Three blocs with internal preferences
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# Measuring Fragmentation

- WTO: Global trade growth 2.4% (2023) vs. 5% historical average
  - Number of discriminatory trade measures tripled since 2010
  - Regional trade agreements up, WTO dispute settlement down
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## **Bloc 1 – The US-Led Network**

- USMCA (North America)
  - IPEF (Indo-Pacific Economic Framework)
  - EU–US Trade and Technology Council (TTC)
  - Friend-shoring: trusted partners only
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## **Bloc 2 – The China-Led Network**

- RCEP (Regional Comprehensive Economic Partnership)
  - BRI (Belt and Road Initiative)
  - Bilateral deals with Russia, Iran, Global South
  - RMB settlement to bypass SWIFT
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## **Bloc 3 – The Neutral / Aligned Middle**

- India, Brazil, Turkey, Vietnam, Indonesia
  - Trade with both blocs, but facing pressure
  - Benefit from investment diversion (factory relocation)
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## **Sectoral Deep Dive – Critical Minerals**

- China controls 60–90% of refining for lithium, cobalt, graphite
  - Export controls on gallium, germanium (Aug 2023)
  - Western response: mineral security partnerships (Canada, Australia, Africa)
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## **Section 4 – Export Controls: The New Frontier**

### **What Are Export Controls?**

- Restrictions on selling goods, software, technology to certain countries
  - Dual-use items: civilian + military applications
  - Old regime: Wassenaar Arrangement (post-Cold War)
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## Why Export Controls Now?

- To slow rival military/AI advancements
  - To protect “foundational technologies”
  - To enforce foreign policy and human rights
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## **Case Study – US Semiconductor Controls (Oct 2022, Oct 2023)**

- . Advanced chips, chipmaking equipment, supercomputers banned to China
  - . Foreign Direct Product Rule: applies even if US content is minimal
  - . Also targets Huawei, SMIC, Yangtze
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# Allied Coordination

- Netherlands (ASML): DUV lithography export licenses required
  - Japan (Tokyo Electron, Nikon): similar restrictions
  - South Korea, Taiwan: pressured but cautious
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# China's Response

- Export controls on gallium, germanium, graphite
  - Ban on rare earth tech exports
  - Accelerated R&D in domestic chips  
(Loongson, SMIC 5nm?)
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# Unintended Consequences

- Choking innovation: fewer cross-border researchers
  - Smuggling and third-party transshipments (Turkey, UAE, Mexico)
  - WTO legal challenges (limited effect)
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## **Beyond Semiconductors – Next Targets**

- AI models and algorithms (open vs. closed weights debate)
  - Quantum computing
  - Biotech synthesis tools
  - Drones and autonomous weapons components
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## **Section 5 – Building Supply Chain Resilience**

### **What Is Supply Chain Resilience?**

- Ability to anticipate, withstand, recover from disruptions
  - Not 100% self-sufficiency (impossible)
  - Trade-off: resilience costs 2–5% more than pure efficiency
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# Resilience Strategy 1 – Diversification

- China + 1 → China + Vietnam / Mexico / India
  - Multiple suppliers for critical components
  - Avoid single points of failure
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# Resilience Strategy 2 – Nearshoring & Friend-shoring

- Nearshoring: Mexico for US, Eastern Europe for EU
  - Friend-shoring: only democratic / trusted nations
  - Example: Tesla Gigafactory Mexico, Intel in Germany
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# Resilience Strategy 3 – Inventory Buffers

- Return of safety stock (JIC)
  - Strategic reserves: medical, energy, critical minerals
  - Digital twins to optimize buffer locations
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## **Resilience Strategy 4 – Visibility & Digitalization**

- End-to-end supply chain mapping
  - AI-powered disruption early warning
  - Blockchain for provenance and compliance
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## **Resilience Strategy 5 – Redundancy**

- Multiple production lines across geographies
  - Surge capacity contracts
  - Example: automobile chips – dual sourcing  
now mandatory
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# Role of Government Policy

- Subsidies: CHIPS Act, EU Chips Act
  - Tariffs on non-resilient sources
  - National resilience strategies (Japan, Korea, Germany)
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## Cost of Resilience – Industry Survey

- 85% of large firms increasing resilience spending
  - Average: 4% of procurement budget
  - Accepting 10–15% higher unit costs for strategic goods
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# Section 6 – Future Outlook & Conclusions

## Three Future Scenarios (2030)

1. **Contested Globalization** (current trend continues)
  2. **Decoupled Blocs** (two separate tech universes)
  3. **Renaissance of Multilateralism** (unlikely but possible)
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## What Will Likely Happen?

- Persistent high tariffs on strategic sectors
  - Dual supply chains (one for West, one for rest)
  - No full decoupling – too costly
  - Trade continues, but with “guardrails”
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# Risks Ahead

- Taiwan conflict → semiconductor stop
  - Energy price spikes from Middle East escalation
  - Overregulation stifling innovation
  - Exclusion of Global South deepening inequality
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# Strategic Recommendations for Companies

- Map your multi-tier supply chain (Tier 1 to Tier 4)
  - Build scenario playbooks (escalation to decoupling)
  - Invest in dual sourcing and regional hubs
  - Lobby for phased-in resilience mandates
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# Strategic Recommendations for Policymakers

- Avoid indiscriminate decoupling
  - Maintain allied coordination to avoid leakage
  - Create resilience credits not just tariffs
  - Keep WTO as a floor, not a ceiling
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# Key takeaway:

- The new protectionism uses national security tools like export controls and subsidies, not just tariffs.
  - Supply chains have permanently shifted from just-in-time efficiency to just-in-case resilience.
  - Trade fragmentation is splitting the world into US-led, China-led, and neutral blocs.
  - Export controls on semiconductors and critical minerals are now the primary geopolitical weapon.
  - Resilience requires diversification, nearshoring, inventory buffers, visibility, and redundancy.
  - Full decoupling is unlikely, but contested globalization with permanent guardrails is here to stay.
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**Thank you!**