Geopolitics and Global Value Chains
The International Business Landscape: 2019 and Beyond

Alex Capri, NUS Business School

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**Key Themes**

- **US-China Geopolitical Rivalry:** Tariffs, NTBs, Export Controls, Sanctions, Protectionism, Nationalism Localization

- **The Evolving Trade landscape:** 3 Scenarios
  - Fair Trade Model
  - China Inc. Model
  - Nationalist Model

- **Localization & Fragmentation:** Technology and Digital Trade

- **What’s Next for Global Value Chains?**
Rise of Nationalism

Increase of Data Localization Laws

Sanctions

Export Controls

Licensing

Increase in Non-Tariff barriers

Data Privacy Laws

US-China “Trade War and Tech War”.
NON-TARIFF BARRIERS

• What Are They?  • Why do they Matter?

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**NON-TARIFF BARRIERS**

**Para-Tariff Measures**
- Customs surcharges
- Internal taxes
- Transactional fees.

**Standards Measures**
- Technical Products
- Labeling.
- Safety
- Testing.
- Inspection
- Marking

**“National Security”**
- Sanctions.
- Export licensing.
- Blocked Deals.

**Finance Measures**
- Advance payments.
- Advance deposits.
- Cash margin requirements.

**Price Measures**
- “Voluntary” restraints.
- Variable charges.
- Price controls.
EXPORT CONTROLS, TECH TRANSFERS & SANCTIONS
U.S. Lifts Ban on China's ZTE After $1.4 Billion Penalty
US cuts of ZTE from American Tech Suppliers

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Source: https://www.youtube.com/watch?v=yxFlrYIYvq5
End-to-End Traceability

Components
- Manufacturing Equipment & Raw Materials
- Foundries
- Component Suppliers

Devices
- Electronics Manufacturing
- Mobile Device Manufacturers

Devices & Services
- Carriers
- Consumers

Source: https://citsites.uga.edu/anth1102/smartphones-a9/
Are Chinese Tech Firms A Security Threat?
What goes into a Huawei smartphone?
How the Chinese phonemaker is reliant on foreign technology

- OLED display (S. Korea/China)
- Designed by HiSilicon or Qualcomm (US)...
  - using EDA software from the US
  - incorporating patents from ARM (UK/SoftBank)
  - with assembly in Taiwan

System on a Chip, the core computer inside the smartphone

Source: FT research
© FT
What’s Next Re: GVC Disruption?

- Rare Earth Materials
- Boeing Aircraft China Sales/Exports
- University Research Funding & Overseas Students
- Apples Market Share in China (30% of global Revenue)
- Public Listing of Chinese Firms on the US Stock Markets

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EMERGING GLOBAL TRADE MODELS

The “Fair Trade” Multilateral Rules Frameworks

The “China Inc.” Globalization Model

The Unilateral “Nationalist Model”
“Fair Trade” & Multilateral Rules-Based Frameworks
“Fair Trade Model”

"FTA Gold Standard"
- Promotes Transparency
- Environmental Standards
- Labor Standards
- Intellectual Property
- E-commerce rules
- Digital trade
- Data Privacy & Security

Good For Small and Medium Size (SMEs)
- Easier Rules of Origin
- Self Certification
- Broader Protections on Intellectual Property

Regulates State Owned Enterprises (SOEs)
- Must Operate Under Transparency Rules
- Purchases and Sales based on commercial Realities and Practices
- Cannot Discriminate Against Enterprises, Goods or Services
- Cannot Benefit from State Subsidies or Assistance

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Trade in the 21st Century:

Technology as an Enabler

Transparency

Rules Frameworks

Sustainability

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The China Inc. Globalization Model
One-Belt-One-Road

“Belt” = Physical Road from China to Europe

“Road” = The Historic Maritime “Silk Road”

- 50% of World GDP
- 65 Countries on 3 Continents
- 4.4 Billion People
- 60% of the World’s Population

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6 Economic Corridors Across Asia, Africa, Europe

Source: HKD Research
Regional Comprehensive Economic Partnership (RCEP)

- 16 Countries
- 45% of World’s Population.
- 28% of GDP.
- Will involve Massive Infrastructure.
- Lead by China.
- AIIB to play a major role.

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The Nationalist Trade Model
The Nationalist Trade Model

Inward looking and Self-Serving.

Rejects Multilateral Trade Agreements, Frameworks.

Trade as a zero-sum game.

Erodes the Post WWII liberal trading order dominated by the US.

Mistrust and fragmentation in the international system.

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Cross Border Data Flows
Digital Trade in the 21st Century:

- Cross-border data flows are surging and connecting more countries.

<table>
<thead>
<tr>
<th>Regions</th>
<th>NA United States and Canada</th>
<th>EU Europe</th>
<th>AS Asia</th>
<th>LA Latin America</th>
<th>ME Middle East</th>
<th>AF Africa</th>
<th>OC Oceania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>Gigabits per second (Gbps)</td>
<td>&lt;50</td>
<td>50–100</td>
<td>100–500</td>
<td>500–1,000</td>
<td>1,000–5,000</td>
<td>5,000–20,000</td>
</tr>
</tbody>
</table>

2005
100% = 4.7 Terabits per second (Tbps)

2014
100% = 211.3 Tbps

NOTE: Lines represent interregional bandwidth (e.g., between Europe and North America) but exclude intraregional cross-border bandwidth (e.g., connecting European nations with one another).

SOURCE: TeleGeography, Global Internet Geography; McKinsey Global Institute analysis

45x larger
Global flows of trade and finance are flattening, while data flows are soaring.

SOURCE: MCKINSEY
Data Localization Laws Are Surging

![World map showing the extent of data localization laws](image)

<table>
<thead>
<tr>
<th>COLOR</th>
<th>STRENGTH OF MEASURES</th>
<th>COUNTRIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bold</td>
<td>Strong: Explicit requirements that data must be stored on servers within the country</td>
<td>Brunei, China, Indonesia, Nigeria, Russia, Vietnam</td>
</tr>
<tr>
<td>Dark Purple</td>
<td>De Facto: Laws that create such large barriers to the transfer of data across borders that they effectively act as data localization requirements</td>
<td>European Union</td>
</tr>
<tr>
<td>Medium Purple</td>
<td>Partial: Wide range of measures, including regulations applying only to certain domain names and regulations requiring the consent of an individual before data about them is transferred internationally.</td>
<td>Belarus, India, Kazakhstan, Malaysia, South Korea</td>
</tr>
<tr>
<td>Light Purple</td>
<td>Mild: Restrictions on international data transfers under certain conditions.</td>
<td>Argentina, Brazil, Colombia, Peru, Uruguay</td>
</tr>
<tr>
<td>Light Green</td>
<td>Sector-specific: Tailored to specific sectors, including healthcare, telecom, finance, and national security.</td>
<td>Australia, Canada, New Zealand, Taiwan, Turkey, Venezuela</td>
</tr>
<tr>
<td>White</td>
<td>None: No known data localization laws.</td>
<td>Remaining Countries</td>
</tr>
</tbody>
</table>
Data Privacy Regulations Around the World Will Increase
Digital Disruption & Trade in the 21st Century:

- E-commerce and the platform economy
- Social Media
- Sharing Economy

Source: indiaretailing.com
Changing Production Technologies

- Automation: Scale Industries
- Additive Manufacturing (3D printing)
- Capital Substitution for Labour
- Transition: Asset Heavy to Asset Light Models
Off-Shoring to Next Shoring

1980’s - Present

“Off-Shoring”
1980’s-1990s

• Labor cost arbitrage
• Extended supply chains
• Regulatory arbitrage
• Farther from demand
• Economies-of-scale model (low variety)
• Far from R&D and Innovation Centers
• Increased supply chain risks
• IP/Transfer of technology risk

“Near Shoring”
1990s-2000s

• Labor costs no longer primary criteria
• Shorter, multi-faceted supply chains
• Production closer to demand
• Multi-faceted innovation and design footprints
• Robust global networks of suppliers
• More production variety
• Lower supply chain risks

“Next-Shoring”
2010-Present

• Proximity to demand
• Proximity to innovation
• Virtual networks
• Talent Pools
• Short supply chains
• Flexible production
• Diverse, fragmented markets, products
• Agile, evolving
• Sustainable, socially accountable

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3D- Localization, Fragmentation
3D Disintermediation
“Servicification” of GVCs

- **Digital Platforms** (Facilitation, management, maintenance, digital trade)
- **Commoditization of data**
- **IoT** (infrastructure, connectivity)
- **Sustainability and Ethics Service Providers** (NGOs, niche players)
- **AI & Knowledge Intensive Services**  
  (manufacturing of algorithms, cognitive data analysis)
- **Trust and Security Services** (privacy, security, truth)
- **Regulatory Compliance** (auditing, planning)
- **Taxation** (auditing, planning, optimization etc)
- **Shared Economy** (last-mile delivery; capacity optimization etc)
Small and Medium Sized Businesses
The Economics of Small Business

Small or Medium-Sized
- Around 95%
- Contribution to world GDP
  - About 50%

Big Corporations
- Around 5%
- Employment in small or medium-sized businesses
  - 60%

Source: World Bank
Technology, Small Businesses and Trade
Digital Disruption & Trade in the 21st Century:

MSMEs
- "Leveling UP"
- Leveraging Tech
A “One-Stop Shop”: Case of Alibaba
What’s Next for Global Value Chains?
Glocalization of production clusters

• Regulations and NTBS

Digital Economy & Ecosystems

Urbanization/Localization

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Migration to production hubs within FTA areas.
Increased Trade amongst MSMEs
Increased Data Protectionsism
Thank You

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