

GVCs – Risks, Security, and US-Korea Cooperation

Webinar on The Biden Administration and US-ROK Economic Cooperation

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In Brief:

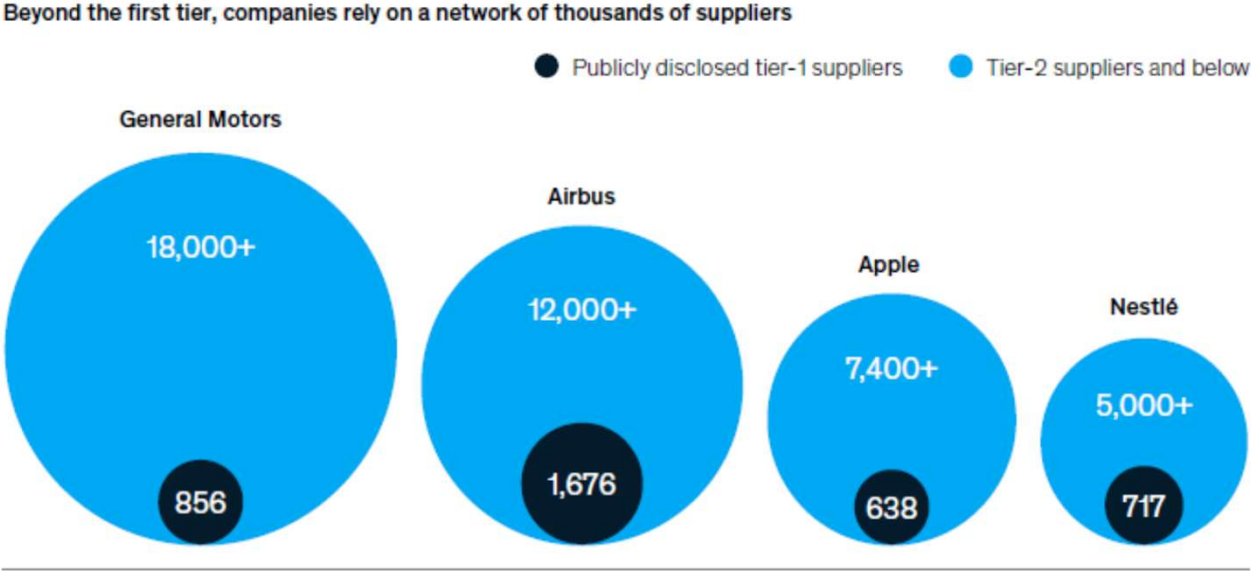
The global Covid-19 pandemic has led to intense discussions of global value chain resiliency, risks, and security.

Discussions reflect a variety of motives. High chance of policies that are both costly and counterproductive.

What's needed is a clear analysis of

- what about GVCs really matters,
- what is the useful role of government policy
- what international cooperation is necessary.

Major companies have thousands of direct and indirect suppliers



1. Analysis based on 668 out of 1,371 companies in MSCI index; excludes 57 companies that did not have public information available on tier-1 suppliers and 645 companies that provide services. This constitutes an incomplete estimate of customer-supplier relationships based on public disclosures. Suppliers include providers of intermediate inputs, services, utilities, software, etc.
2. Median of simple average of tier-1 suppliers for each manufacturing industry considered.
Source: Bloomberg Supply Chain database; McKinsey Global Institute analysis

Convergence of complaints about GVCs

Covid pandemic – supply disruptions and shortages of medical equipment and many other goods.

Populist backlash against globalization, and demands to re-shore production.

Increasing US-China hostility, and worries about China's role in GVCs.

➔ Chances of costly, even counter-productive policy is high.

Importance of thinking clearly – The problem of demand spikes

After initial supply disruptions, most pandemic-related shortages arose from sharp spikes in demand. Demand skyrocketed for PPE, ventilators, toilet paper, household bleach...

International trade and GVCs were source of resiliency in many cases.

Gilead drew on a network of over 40 companies in North America, Europe, and Asia to boost remdesivir supply from an inventory of 5000 doses in January 2020 to 2 million doses by the end of the year.

The OECD concluded that global food supplies fared much better in 2020 than they had in 2008-10, because countries had agreed not to re-impose food export bans.

Lessons from demand spikes

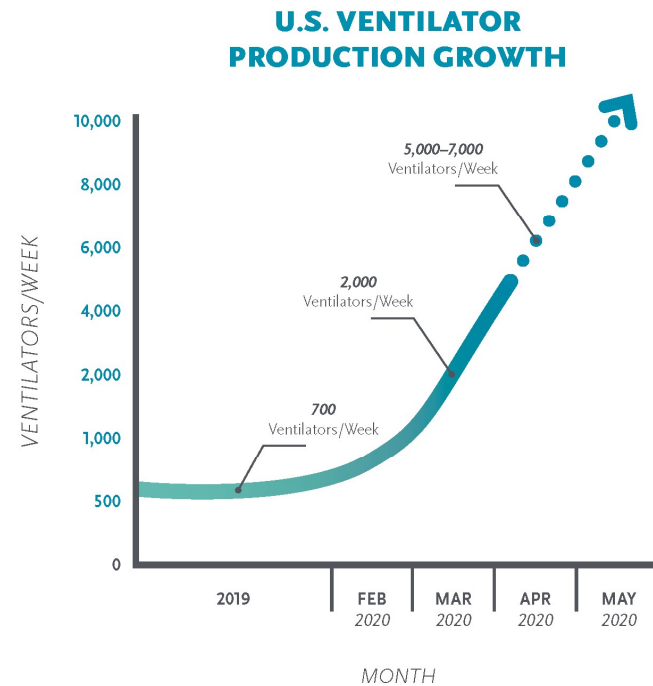
Self-sufficiency **does not provide security** when demand spikes

Export bans to reserve production for domestic use can backfire if other countries restrict exports of necessary components.

Open markets and international trade can respond to demand surges when they are localized or differ in timing.

Stockpiles can help meet shortages until production ramps up.

Supply response – US ventilator production



Source: US Advanced Medical Technology Assoc. Press release, April 1, 2020.

Forces that drive firms to create and manage GVCs

Labor costs only a small part.

Tremendous efficiencies in relying on specialized firms that produce at large scale

Global value chains require coordination, and create risks for firms.

Supply chain management is a high-level executive function in major firms.

Firms' supply chain risks have increased sharply in recent years

More frequent natural events -- extreme weather, pandemics

Trade conflicts intensified – e.g. large increases in US-China bilateral tariffs.

Political disputes that spill over into economic sanctions

Profusion of export controls, national security limits or bans.

➔ McKinsey estimates companies can now expect supply chain disruptions of 1+ month to occur every 3.7 years.

Firms are increasing supply chain resilience

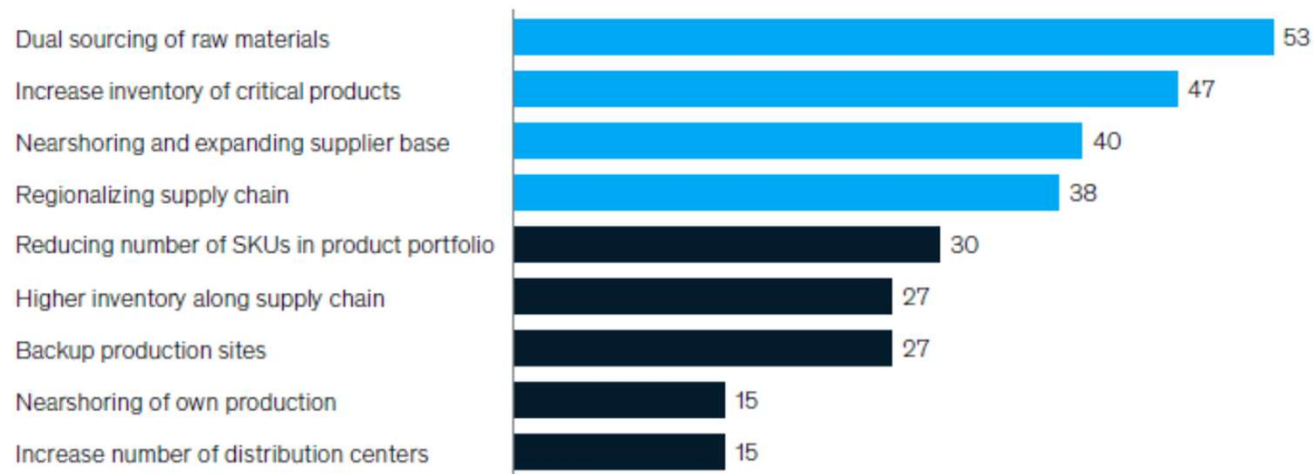
Surveyed business leaders are increasing resilience in supply chains and production through multiple strategies.

93% of global supply chain leaders are planning to increase resilience¹

44% would increase resilience even at expense of short-term savings²

Planned actions to build resilience

% of respondents¹



1. McKinsey survey of global supply chain leaders, May 2020.

2. McKinsey survey of business executives, May 2020.

Source: McKinsey survey of business executives, May 2020 (n = 605); McKinsey survey of global supply chain leaders, May 2020 (n = 60); McKinsey Global Institute analysis

What role for government policy?

Areas where policy action can strengthen incentives or overcome coordination problems among firms

- Encourage or require mapping and stress-testing of GVCs and the development of response plans for disruptions in government contracts.
- Encourage the development and diffusion of resiliency standards.
- Organize firm participation and encourage wider diffusion of resiliency standards.
- International cooperation among policymakers particularly important.

What role for government policy?

Areas where firms don't bear the risks or reap the benefits from enhanced GVC security

- National security
- Public health
- Sufficient supplies of critical materials

Each of these is a global issue, and requires cross-national cooperation.

National security – Supply chain integrity

Do products function as promised? Capable of externally-triggered failure? Open to communications interception/espionage?

US has emphasized blacklisting – Huawei, ICT transactions screening

Need to cooperate with Korea and others on whitelisting – building trusted partner and supplier relationships

Also important to work with private sector efforts like ISO 28000 supply chain security management and the Open Group's Trusted Technology Provider Standard

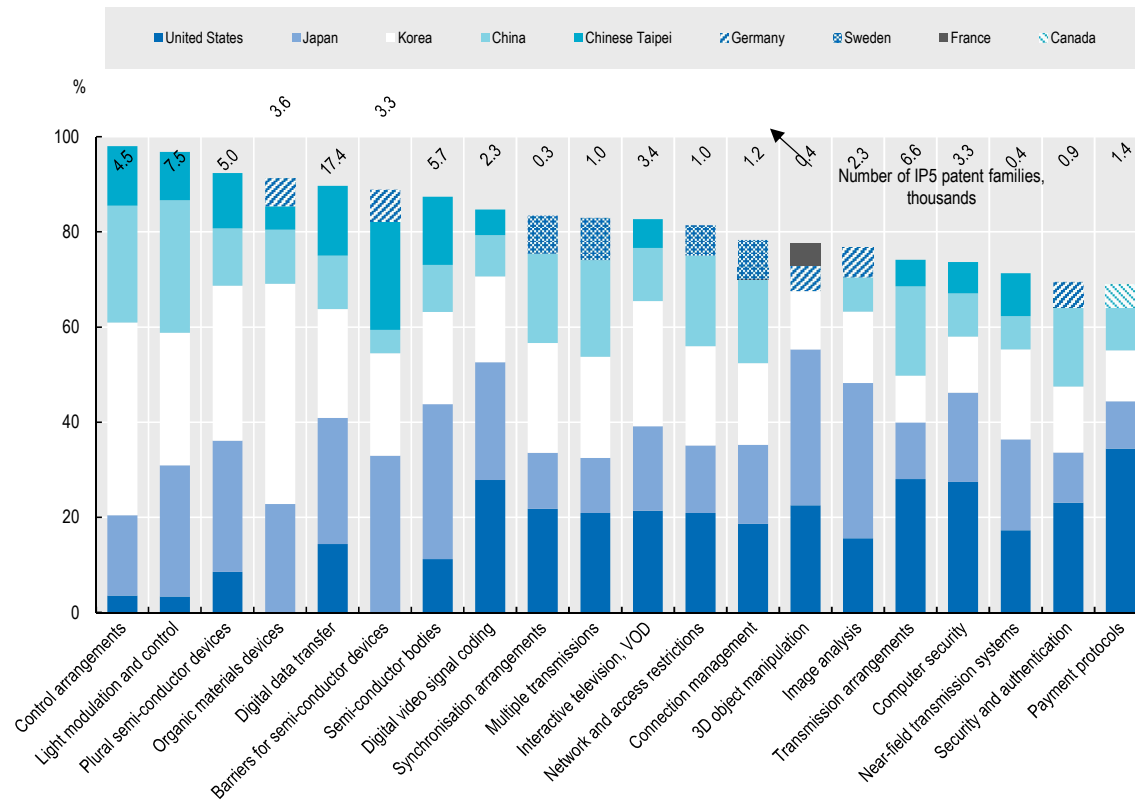
National security – Technology

Technology development is a critical input of GVCs

Overlap of commercial technology and national security is now vastly greater than before.

Emergent technology development heavily concentrated in five economies – the United States, Korea, Japan, Taiwan, and China.

Top 5 economies in 20 emerging technologies development



Source: OECD Science, Technology, and Industry Scoreboard - 2017

National security – Technology

Preventing the theft or misappropriation of national security critical technology requires cooperation among like-minded countries through a number of efforts

- Export controls
- Screening inward FDI and technology transfer
- Safeguarding R&D

International cooperation and consistency vital.

Summary

GVCs pose risks to, but also increase the resiliency of supply.

Firms are already taking steps to increase the resiliency of their GVCs.

Gov't policy should support and enhance these efforts, not impose self-sufficiency requirements.

Policy should also address national security and other public good issues.

Cooperation among the US, Korea, and other countries is vital.