

China and the WTO: The Yawning Gap Between Its Commitments and Practices

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December 14, 2021

Today's Presentation

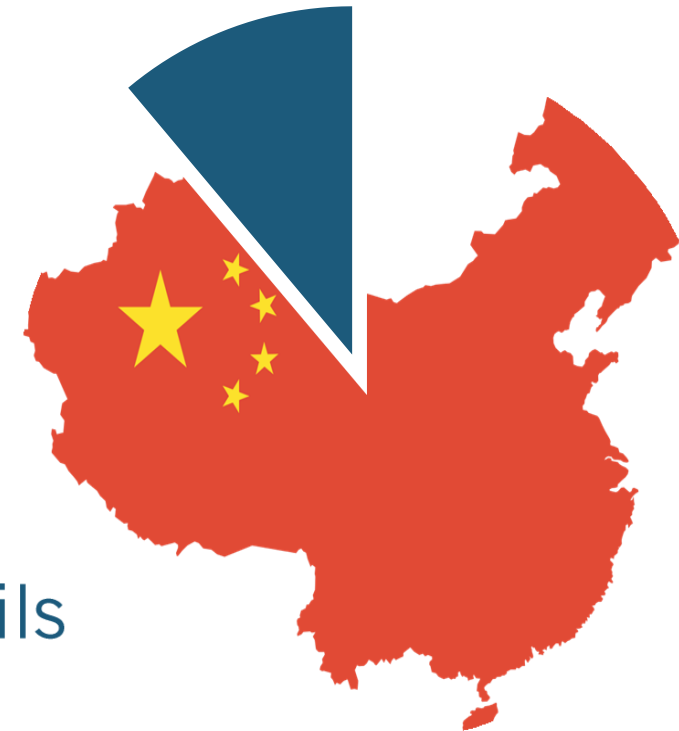
- 1 U.S.-China Trade and Economic Challenges
- 2 How China Falls Short of WTO Commitments
- 3 Policy Recommendations

Evolution of Chinese Economic Policy

- Phase 1: 1980-2006: FDI attraction.
- Phase 2: 2006-2012: “Indigenous Innovation.”
 - “National Medium- and Long-term Program for Science and Technology Development (2006-2020)”: help Chinese companies move up the value chain.
- Phase 3: 2012-present: “China Inc.”
 - “Made in China 2025 Strategy,” The “13th Five-Year Plan for Science and Technology,” The “13th Five-Year Plan for National Informatization,” and “National Guidelines for Development and Promotion of the IC Industry.”

China Is Unique in the Global Trading System

- Heavily mercantilist strategy
- Seeks autarky and absolute advantage
- State and market are joined at the hip
- Policies favor Chinese firms
- Lack of rule of law/will of the party prevails



Chinese Innovation Mercantilism's Impact on Global Innovation

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Industry by Industry: More Chinese Mercantilism, Less Global Innovation

ROBERT D. ATKINSON | MAY 2021

China's long-standing and rampant "innovation mercantilist" policies harm global innovation by taking market share and revenues from more-innovative foreign competitors, thereby diminishing the resources they can invest in research and development toward further innovation.

KEY TAKEAWAYS

- In most industries, Chinese firms operate far from the frontier of innovation. To the extent China's mercantilist policies erode market share and reduce revenue for innovation leaders, they also reduce investment in the next round of innovation.
- Most scholarly, econometric studies on the impact of China's economic policies on foreign research and development (R&D) and innovation find a negative relationship.
- ITIF compiled case studies of five industries: solar panels, high-speed rail, telecom equipment, semiconductors, biopharmaceutical products. In each case, our economic models suggested significant negative impact on global R&D and patenting.
- In the semiconductor industry alone, ITIF found that if Chinese firms had 80 percent less market share, there would be 5,000 more U.S. patents annually.
- If China were to reduce its unfair mercantilist policies, the pace of global innovation would increase. But in a classic win-lose dynamic, China shows no inclination to do so.
- Allied nations should pressure China to reduce its harmful policies and encourage the WTO to focus more on the innovation effects of trade distortions.
- To apply pressure, allies should limit market access for innovation-based goods and services that are supported by Chinese government and its mercantilist policies.
- Allies also should cooperate more on technology policy and establish stronger trade agreements to allow for the free flow of innovation-based goods.

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Moore's Law Under Attack: The Impact of China's Policies on Global Semiconductor Innovation

STEPHEN EZELL | FEBRUARY 2021

China's mercantilist strategy to grab market share in the global semiconductor industry is fueling the rise of inferior innovators at the expense of superior firms in the United States and other market-led economies. That siphons away resources that would otherwise be invested in the virtuous cycle of cutting-edge R&D that has driven semiconductor innovation for decades.

KEY TAKEAWAYS

- No industry has an innovation dynamic quite like the semiconductor industry, where "Moore's Law" has held for decades: The number of transistors on a microchip doubles about every two years, producing twice the processing power at half the cost.
- The pattern persists because the semiconductor industry vies with biopharmaceuticals to be the world's most R&D-intensive industry—a virtuous cycle that depends on one generation of innovation to finance investment in the next.
- To continue heavy investment in R&D and CapEx, semiconductor firms need access to large global markets where they can compete on fair terms to amortize and recoup their costs. When they face excess, non-market-based competition, innovation suffers.
- China's state-directed strategy to vault into a leadership position in the semiconductor industry distorts the global market with massive subsidization, IP theft, state-financed foreign firm acquisitions, and other mercantilist practices.
- Inferior innovators thus have a leg up—and the global semiconductor innovation curve is bending downward. In fact, ITIF estimates there would be 5,100 more U.S. patents in the industry annually if not for China's innovation mercantilist policies.
- To address the challenge Chinese innovation mercantilism poses to the semiconductor industry, the United States needs to work with like-minded nations while enhancing its own innovation capacity in the sector.

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The Impact of China's Production Surge on Innovation in the Global Solar Photovoltaics Industry

DAVID M. HART | OCTOBER 2020

China's subsidy-aided rise to dominance in PV manufacturing has driven prices way down, but at the cost of undermining promising alternative technological pathways. Policymakers should adopt measures to sustain greater diversity in PV and similar technologies.

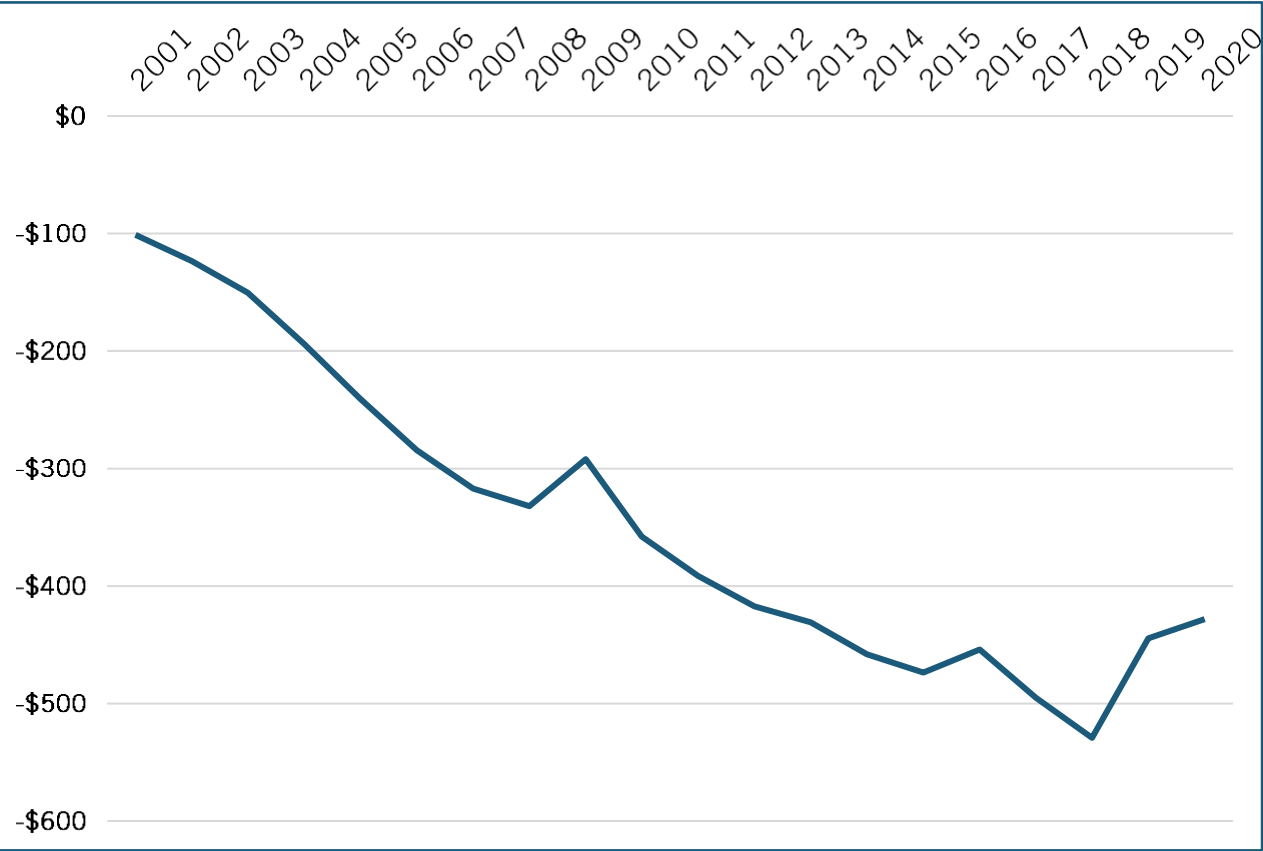
KEY TAKEAWAYS

- Sustained innovation in solar photovoltaics (PV) is vital to achieve global climate goals. Experts differ on whether today's dominant PV technology can be improved to the extent required. The world needs more options; China's dominance limits them.
- China became the dominant global player in PV manufacturing during the 2010s with critical help from government subsidies.
- Excessive subsidy-powered competition from China decimated the industry in the rest of the world, eliminating many innovative companies.
- China's surge shifted the course of technological innovation: PV prices dropped, efficiency rose, and process innovation flourished. But R&D-intensity, patenting, and start-ups cratered.
- As the course of innovation shifted, alternative technological pathways that might have led to even lower prices and better performance were cut off.
- Policymakers should learn from this experience and adopt measures that would create and sustain technological diversity in PV and other climate-critical technologies, while working with allies to curb clean energy mercantilism.

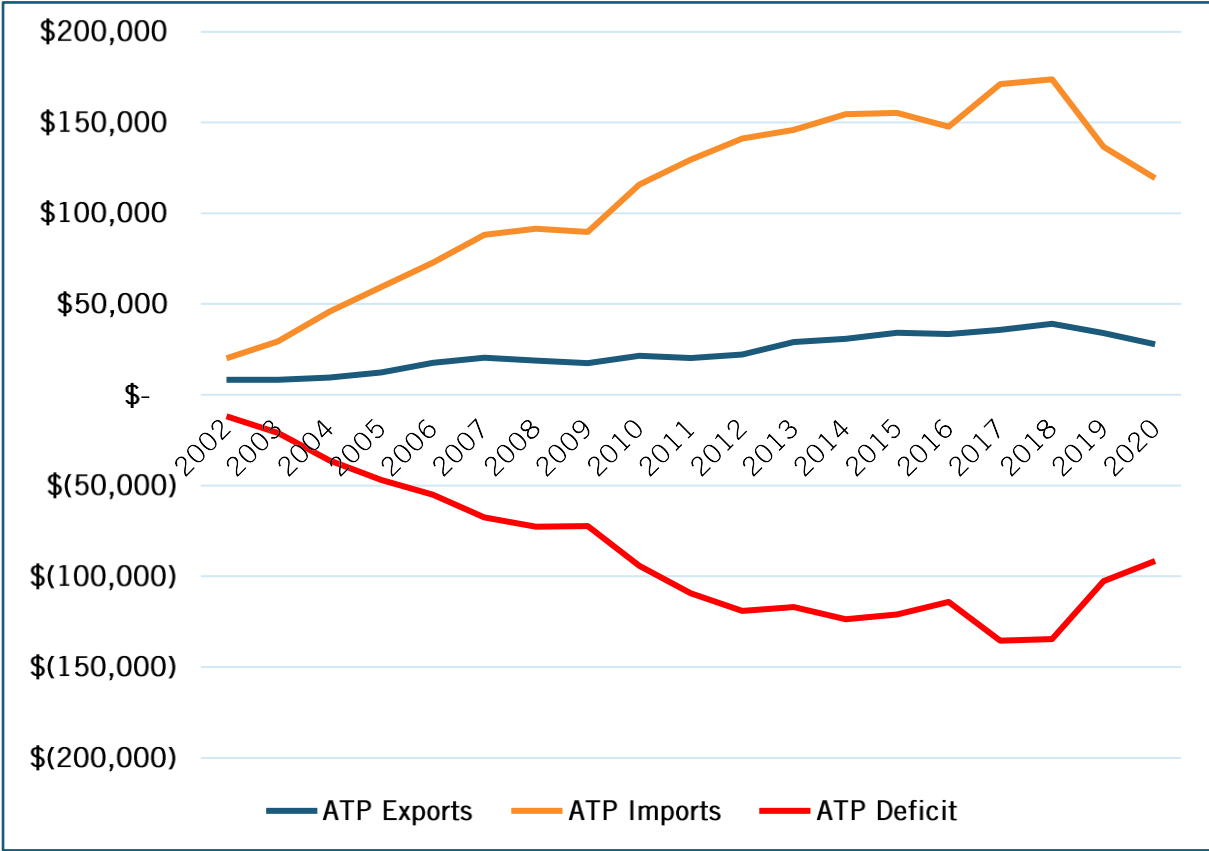
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China's Mercantilist Policies Have Generated Large Surpluses...

U.S. Goods Trade Deficit With China, 2001-2020 (\$Billions)



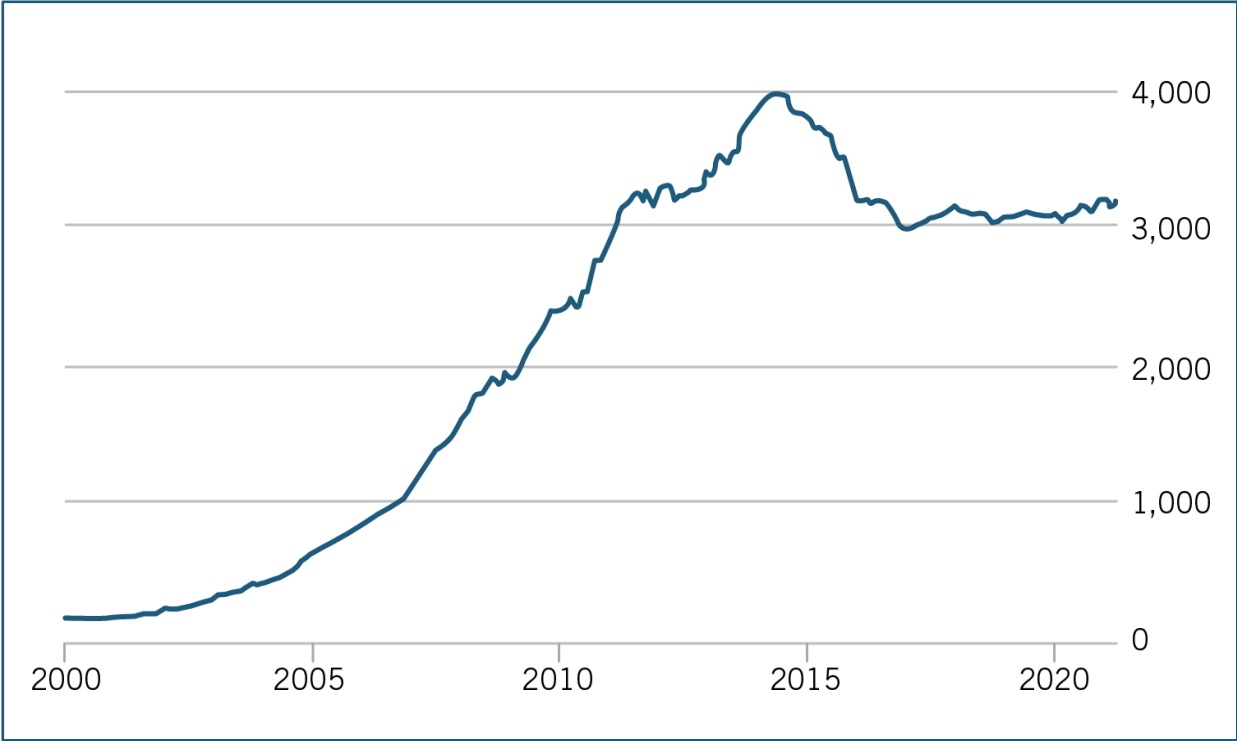
U.S./China Advanced Technology Products Trade 2001-2020



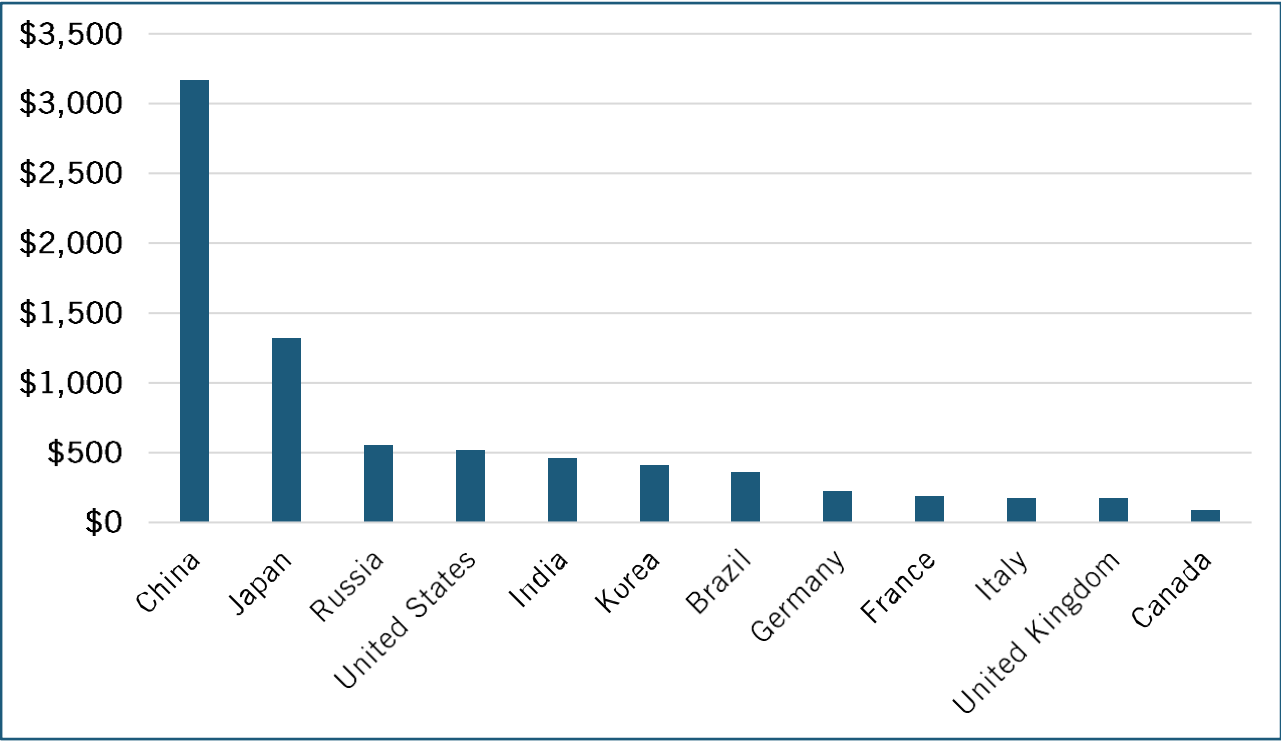
Source: ITIF, "False Promises II: The Continuing Gap Between China's WTO Commitments and Practices"

And Foreign Currency Reserves

China's Foreign Currency Reserves, 2000-2021 (\$ Trillions)



Select Countries' Foreign Currency Reserves, 2019, (\$ Trillions)



Source: ITIF, "False Promises II: The Continuing Gap Between China's WTO Commitments and Practices"

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China's Adherence to Its WTO Commitments

Chinese WTO Commitment	Has China Lived up to the Commitment
Embracing open, market-oriented policies	No
Embracing national treatment: treating foreign firms the same as domestic ones	No
SOEs shrinking as a share of the economy, especially in technology industries	No
SOEs making purchases based on commercial considerations	No
Curtailing extensive industrial subsidization	No
Providing timely and transparent notification of subsidies	No
Curtailing forced technology transfer, including through coerced joint ventures	No
Intellectual property theft and violations being significantly reduced	No
Technology standards developed transparently according to WTO TBT principles	No
Competition and anti-monopoly policies applied on non-discriminatory terms	No
Joining the Government Procurement Agreement	No
ICT and telecommunications market opening to foreign producers	No

False Promises II: The Continuing Gap Between China's WTO Commitments and Practices

STEPHEN EZELL, JUNE 2021

As China nears its 20th year of World Trade Organization (WTO) membership, originally acceding to the organization on December 11, 2001, it has never been further away from faithfully committing not just to the foundational principles and tenets of the organization but also to its fundamental obligations and commitments. WTO membership comes with rights—especially enjoying preferential access to other nations' markets—but also responsibilities. In particular, it commits nations to support and pursue "open, market-oriented policies" in accordance with the foundational principles of "non-discrimination, market access, reciprocity, and fairness."¹ China has taken full advantage of WTO rights, while largely ignoring the responsibilities and commitments through its embrace of state-directed capitalism predicated upon an aggressive innovation mercantilism that denies foreign enterprises access to Chinese markets on reciprocal terms; distorts global markets, including for advanced-technology goods; and deprives nations of the benefits they believed they'd receive when granting China participation in this community of trading nations.

This report recounts the history of China's accession to the WTO, documents the trade rules China is still failing to comply with, describes the economic benefits China has accrued in part by not complying with its WTO commitments, and offers policy recommendations for how policymakers from the United States and like-minded nations can address the continuing China trade challenge. This report updates an initial 2015 Information Technology and Innovation Foundation (ITIF) report on this topic, finding that despite repeated promises and even a full-scale Section 301 investigation initiated by the Trump administration, China has made little progress in fulfilling a wide range of its WTO commitments over the past two decades.²

The report's policy recommendations include:

- Revoke China's Permanent Normal Trade Relations (PNTR) and re-negotiate permanent most-favored nation (MFN) market access levels for China at the WTO.
- Enforce existing U.S. and international law to block imports of Chinese products made with forced labor or with the commission of other human rights violations.
- Pursue a non-violation nullification and impairment case against China at the WTO.
- Develop a comprehensive "Bill of Particulars" against China.
- Insist that China extend to other nations provisions from the U.S.-China Phase One agreement.
- Strengthen subsidies disciplines at the WTO.
- Form a Global Strategic Supply Chain Alliance (GSSCA).

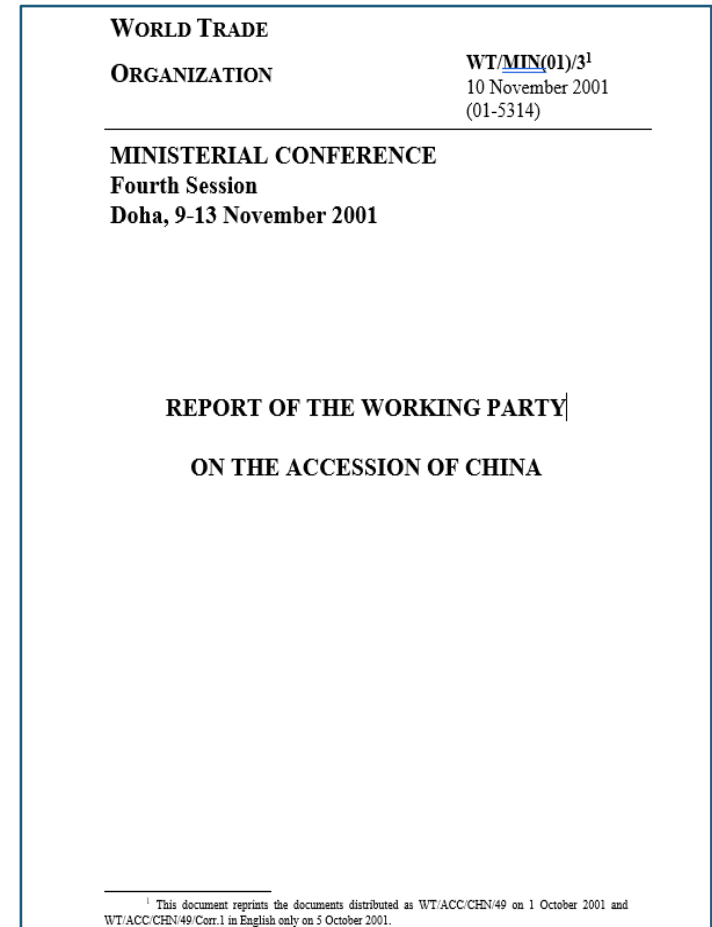
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Rejection of the WTO's Market Orientation

- National treatment, transparency, non-discrimination.
- *“The Government of China would not influence, directly or indirectly, commercial decisions on the part of state-owned or state-invested enterprises, including regarding the quantity, value, or country of origin of any goods purchased or sold.”*
- Under Article 19 of the Company Law, all SOEs or private Chinese companies have a Chinese CCP cell, codifying CCP influence over corporate governance.

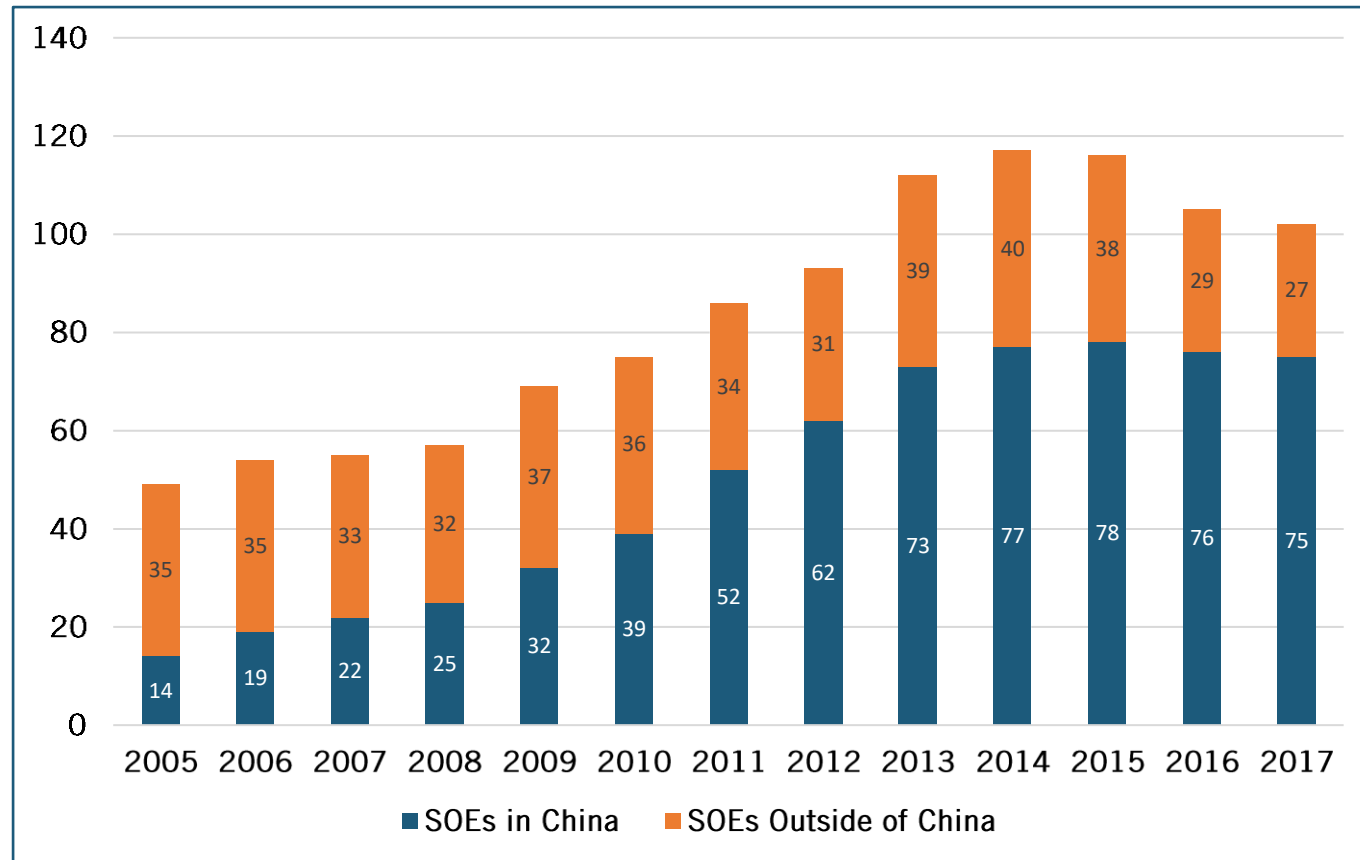
Source: ITIF, “False Promises II: The Continuing Gap Between China’s WTO Commitments and Its Practices”



Influence and Prevalence of State-Owned Enterprises (SOEs)

- 150,000 SOEs accounting for 40% of industrial assets worth \$15 trillion.
- OECD: “Somewhat surprisingly, state assets doubled relative to GDP in competitive SOE industries.”
- 80% of Chinese SOEs recorded a profit in 2020.

Number of SOEs in *Fortune* Global 500, 2005–2017



Source: ITIF, “False Promises II: The Continuing Gap Between China’s WTO Commitments and Its Practices”

Industrial Subsidies a Key Component of Chinese Strategy

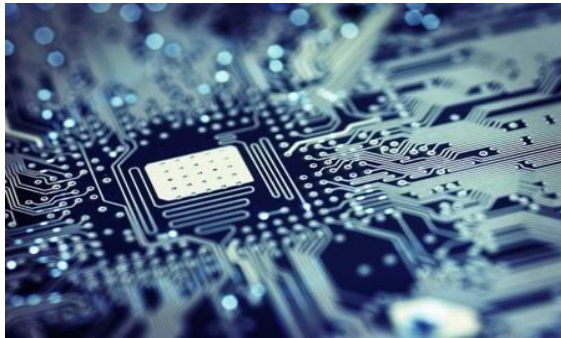
- Since China joined the WTO in 2001, subsidies have annually financed about 20 percent of China's manufacturing capacity.
- 95% of Chinese firms in tech industries received R&D subsidies in 2015, with those subsidies accounting for 22% of firms' R&D investments.



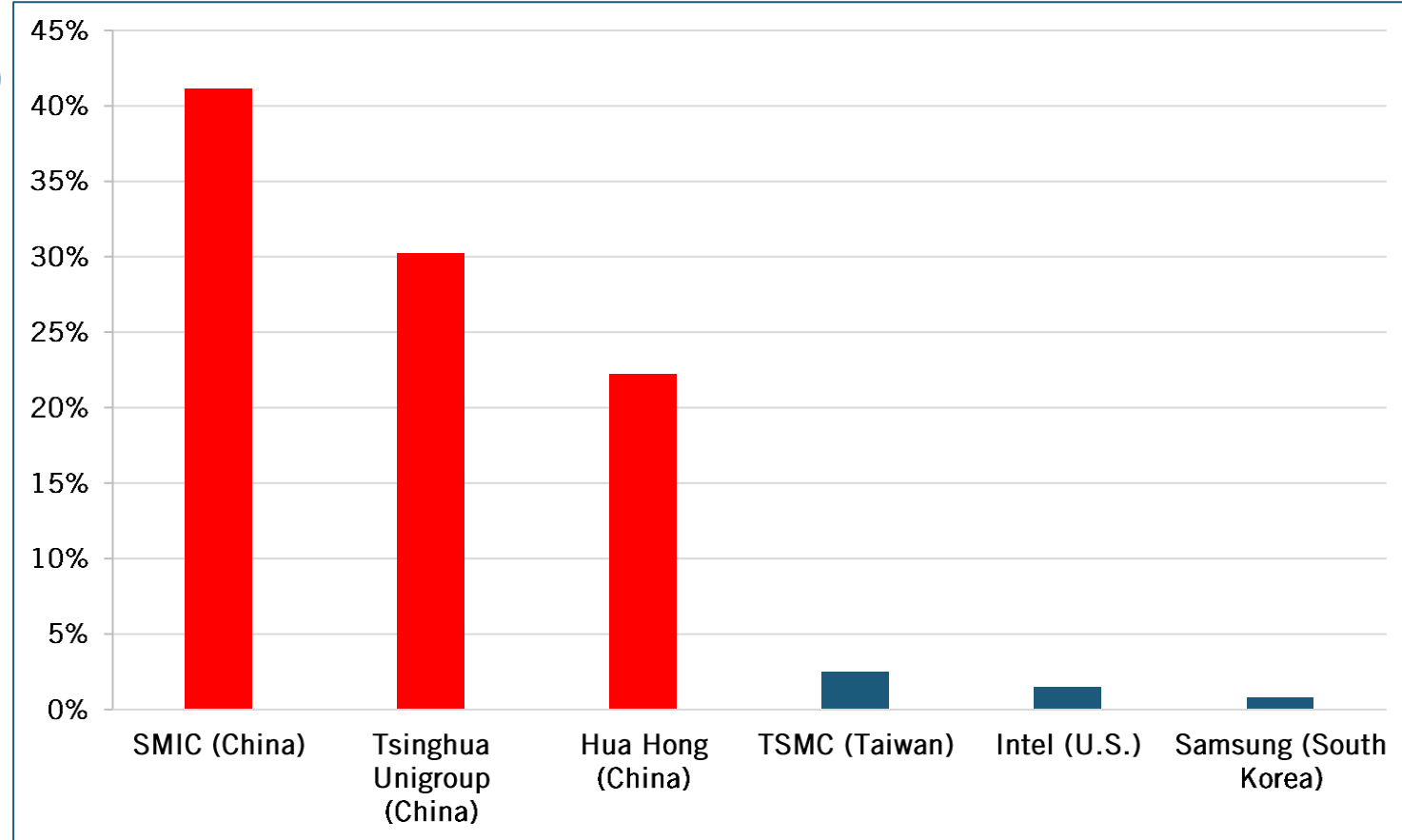
Source: Lily Fang et al., "Corruption, Government Subsidies, and Innovation: Evidence from China"; Jonas Nahm, Johns Hopkins SAIS

Chinese Subsidies to the Semiconductor Industry

- National IC Plan: \$170 billion to develop a Chinese closed-loop semiconductor ecosystem.
- OECD: “86% of identified global semiconductor subsidies from 2014-2018 to Chinese firms.”



State Subsidies as a Percentage of Revenue for Chip Fabs, 2014-2018



Source: OECD, “Measuring Distortions in International Markets: The Semiconductor Value Chain”

Subsidies Across Other Chinese Industries


- Huawei: \$75 billion in state support over 25 years. \$100 billion line of export credit.
- \$42 billion in solar PV subsidies from 2010-2012 alone; China's share of market grew from nil to 60% from 2005 to 2011.
- Chinese government provided \$52 billion in subsidies to steel producers from 2001 to 2006 alone.



Source: ITIF, "False Promises II: The Continuing Gap Between China's WTO Commitments and Its Practices"

Forced Technology Transfer/Joint Ventures

- “Thanks to the WTO, foreign firms are no longer required to hand over technology in exchange for entry to China’s market.” – *The Economist*, 2011
- Forced tech transfer in sectors from high-speed rail, to autos, to biotech, and cloud computing.
- USTR: “Formal/informal JV requirements key to MIC 2025.”



Harvard Business Review
www.hbr.org

Beijing has been quietly implementing policies to enable China to overtake the West as the globe's technology powerhouse. They just might be working.

China vs the World

Whose Technology Is It?

by Thomas M. Hout and Pankaj Ghemawat

Included with this full-text *Harvard Business Review* article:


- 1 [Article Summary](#)
Idea in Brief—the core idea
- 2 [China vs the World](#)

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ASIA

Forced Tech Transfers Are on the Rise in China, European Firms Say

The practice has become more widespread despite official assurances from Beijing it would be stopped



A visitor to the China Beijing International High-Tech Expo looks at a computer chip through a microscope in May 2018. Companies that are in high-value, cutting-edge industries have felt compelled to transfer technology at higher-than-average rates, according to a survey by the European Union Chamber of Commerce in China.

PHOTO: NG HAN GUAN/ASSOCIATED PRESS

By [Julie Wernau](#)
May 20, 2019 5:24 am ET

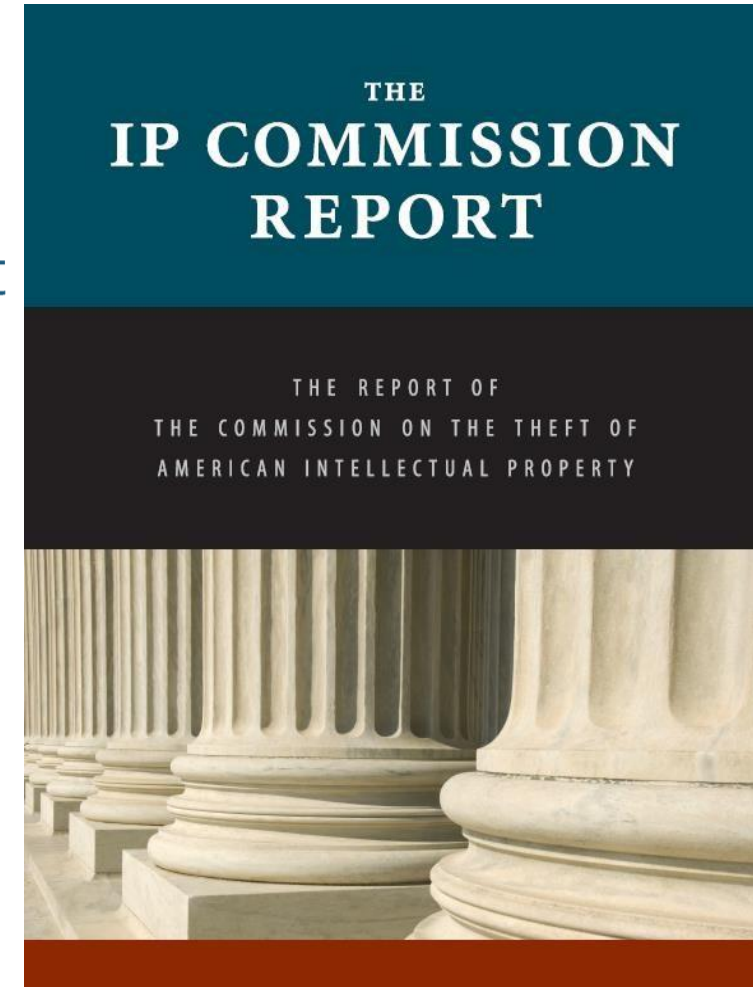
European businesses in China say forced technology transfers to local firms have become more common over the past two years as foreign firms battle for access in the world’s second-largest economy.

Such technology transfers have continued to take place despite **official assurances that this practice would be stopped**, according to an annual survey by the European Union Chamber of Commerce in China, with 20% of the survey’s 585 participants saying they have felt compelled to transfer technology to maintain market access, up from 10% in 2017.

Source: ITIF, “False Promises II: The Continuing Gap Between China’s WTO Commitments and Its Practices”

Intellectual Property Theft

- “China has adopted a massive, whole of society approach to economic espionage.” – Nicholas Eftimiades
- \$600 billion in annual IP theft “may represent the greatest wealth transfer in history.” – Gen. Keith Alexander
- CNBC: 1 in 5 North American organizations report having their IP stolen in China within the past year.
- EUIPO: Foreign IP infringement costs the EU \$73 billion annually with China/Hong Kong “the main offender.”



Source: ITIF, “False Promises II: The Continuing Gap Between China’s WTO Commitments and Its Practices”

Closed or Restricted Market Access

- U.S. cloud services companies lose nearly \$1 billion in possible revenues annually due to China's cloud services restrictions.
- At year-end 2020, foreign banks held just 1.4% of banking assets in China.
- China committed to allowing “20 films to be imported annually” and to “permit joint ventures to operate cinemas and distribute videos.”



Source: ITIF, “False Promises II: The Continuing Gap Between China’s WTO Commitments and Its Practices”

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Five Choices for Confronting China's Innovation Mercantilism

1. Wait for conversion to Washington consensus
2. Harangue and implore
3. Resigned defeat
4. Global isolation
5. Constructive, alliance-backed confrontation



Stopping China's Mercantilism: A Doctrine of Constructive, Alliance-Backed Confrontation

ROBERT D. ATKINSON, NIGEL CORY, AND STEPHEN J. EZELL | MARCH 2017

Effectively managing the U.S.-China trade and economic relationship will be one of the most significant international challenges the Trump administration faces.

There is a growing understanding that China is an outlier when it comes to global norms and rules governing trade, investment, and economic policy, and that the unremitting and even accelerating "innovation-mercantilist" behavior on the part of the Chinese government represents a threat not only to the U.S. economy, particularly its advanced industries, but indeed to the entire global economic and trade system. The previous three U.S. administrations sought engagement and dialogue with China's leaders, in the belief and hope that this would lead the Chinese government to retreat from its mercantilist path. It should by now be clear that this approach has failed. For, rather than reform, China has doubled down on its innovation-mercantilist strategies, seeking global dominance across a wide array of advanced industries that are key to U.S. economic and national security interests. And despite the claims of some apologists for Chinese behavior, it's clear what the end game is: Chinese-owned companies across a range of advanced industries gaining significant global market share at the expense of American, European, Japanese, and Korean competitors. A far more proactive, whole-of-government response, in tight partnership with our allies, is needed to ensure that Chinese innovation mercantilism is contained and then rolled back and a genuine market- and rules-based global trading system restored.

INFORMATION TECHNOLOGY & INNOVATION FOUNDATION | MARCH 2017

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Policy Recommendations – Constructive Confrontation

- Bring a WTO non-violation nullification/impairment case against China.
 - Jointly publish a comprehensive “Bill of Particulars” against China.
 - Create a “DATO”: A Democratically-Aligned Trade Organization.
 - Deny Chinese companies benefitting from stolen IP access to U.S. financial markets; insist Chinese companies use GAAP.
 - Continue the work of the Trilateral Trade Ministers Working Group, including significant subsidies reform work in the WTO.
 - Join the CPTPP, bringing South Korea and Taiwan with us.
-

Policy Recommendations – Strengthen Ourselves & Allies

- Pass the United States Innovation and Competitiveness Act (USICA).
 - \$120 billion in advanced-tech industry R&D funding over the next four years.
 - \$50 billion for semiconductor manufacturing in the U.S.
 - Investments in regional tech hubs, university tech centers, MEP, Mfg. USA.
- Pass the Strategic Competition Act of 2021.
 - Calls on U.S. to develop an Indo-Pacific strategy to counter China.
 - Provides \$100 billion to the Development Finance Corporation to invest in supply chain security, infrastructure development, and cybersecurity w/ regional allies.

Thank You!

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