



THE US-CHINA BUSINESS COUNCIL

美中贸易全国委员会

US-China Business Council Comments on China's Influence in International Standards Setting for Emerging Technologies

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Standards serve as the building blocks for product development and help ensure functionality, interoperability, and safety. Standards provide many benefits to consumers and society overall, allowing products like credit cards, phones, and computers to work across different countries and providing the foundation for the internet and world wide web, enabling global communication and exchange of information.

The degree of alignment between standards and the technical specifications of a company's technology can also determine how effectively companies can commercialize new technologies and access markets. The Chinese government recognizes standards as an important component for international industrial competitiveness. China has made it a priority to become more influential in the bodies that set international standards and its participation in international standards-setting organizations (SSOs) has increased dramatically in recent years.

The voluntary, market-driven, consensus-based standardization system works well for US interests and should be maintained. Constructive participation by Chinese stakeholders is also important for US companies and consumers. China is both the largest producer of goods exported across the world and a huge market for imported goods and international investment, so Chinese input is crucial for ensuring product interoperability. International SSOs are the most level playing field for standardization that exists, so it is preferable to have technical debates with Chinese counterparts there than in Chinese domestic SSOs where due process is often weaker.

While there are concerning anecdotes about Chinese companies being pressured to vote as a bloc in international SSOs or Chinese companies flooding technical committees with proposals, there is no evidence that such behavior constitutes a trend, and most international SSOs have sufficient safeguards in place to mitigate negative impacts.

Some steps that the US government can take to support US leadership in international standards include support for industry participation and funding continuity for US government technical experts to participate. It is also critical to clarify that the entity list does not apply to standards setting activities, which has handicapped US participation in some organizations and encouraged China to create home-grown alternatives to some international standards.

Chinese policies related to international standards setting

China recently released a standardization plan outlining goals through 2035, but many of its efforts related to international standardization can be traced back to China's 2015 [Standardization Reform Plan](#)

and [Five-Year Plan for Standardization](#) covering the period from 2016 through 2020. Both initiatives highlight high-level goals, namely, to:

- Participate in at least half of all standards drafting and revision efforts in recognized international SSOs;
- Establish China as a “standards power” by 2020;
- Strengthen China’s participation in the governance of international SSOs;
- Increase the number of Chinese-held leadership positions in technical bodies; and
- Promote Chinese standards abroad through overseas construction contracts and equipment exports to help Chinese companies “go global.”

These policies reflect a two-pronged strategy to increase China’s standards influence globally—by strengthening its sway in international SSOs and encouraging other countries to adopt Chinese standards.

On October 10, the general offices of the Communist Party of China Central Committee and the State Council [issued](#) an outline for the next stage of China’s standards setting strategy covering the period through 2035. The outline is the product of a multi-year research process that [began](#) in 2018 with “China Standards 2035,” a research program led by the Chinese Academy of Engineering that [concluded](#) in 2020.

China appears set to continue its two-pronged approach to influencing standards internationally:

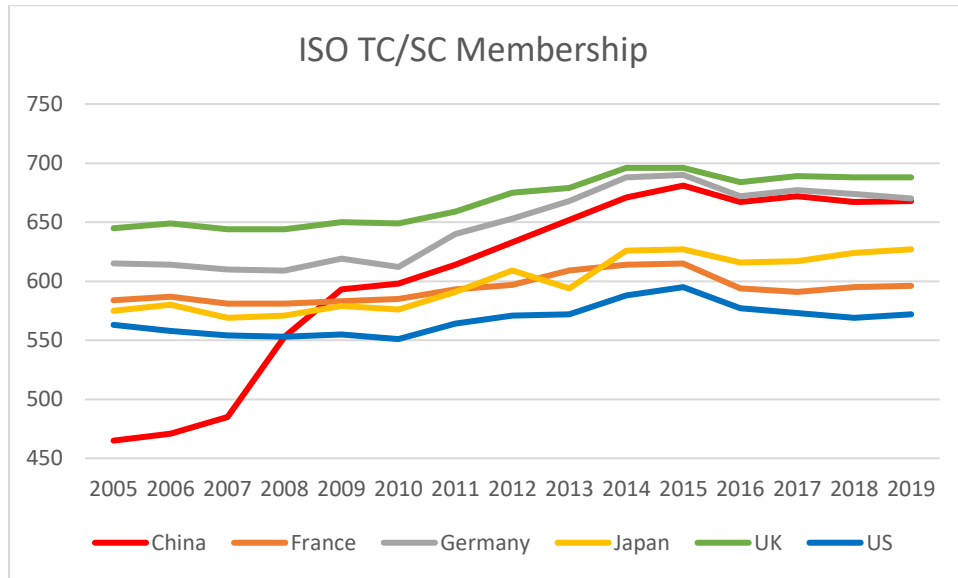
- **Chinese participation in international standards setting:** The new outline does not include specific goals for participation in standards drafting, governance, and technical committee leadership as the 2015 plan, but it commits to “actively participate” in international standards setting and fulfill its responsibilities as a member of the International Organization for Standardization (ISO).
- **Standards export initiatives:** While the new outline does not explicitly encourage promoting Chinese standards abroad to advantage Chinese companies in overseas markets as previous plans did, it does state that China will actively work together with Belt and Road countries toward the alignment of standards and increase standards dialogues with BRICS countries (Brazil, Russia, India, China, and South Africa) and the Asia-Pacific Economic Cooperation (APEC) forum. As a practical matter, since standards setting takes significant technological expertise and resources, developing countries tend to adopt international standards or standards from other countries instead of developing their own.

China’s 2035 standards outline covers a long list of technologies for standardization work, highlighting some of China’s technological development priorities such as artificial intelligence, quantum information, biotechnology, digitized industrialization, next-generation information technology, big data, blockchain, health, new energy, new materials, smart ships, high-speed rail, gene editing, and autonomous driving.

This reflects a view of standards not only enabling interoperability but also promoting innovation by allowing companies to build upon established practices rather than devoting resources to establish their own. While prioritizing certain technologies can help focus resources, by promoting some technologies over others, especially in emerging technologies that are not yet mature enough for standardization, the Chinese government runs the risk of hampering innovation by limiting companies’ flexibility to experiment with alternate technologies or by limiting competition among different industry standards.

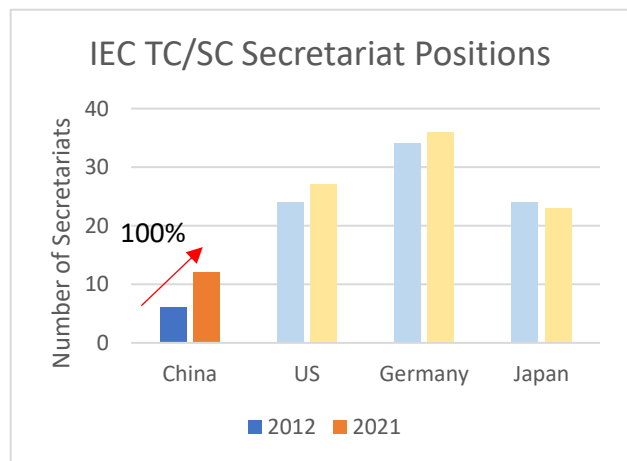
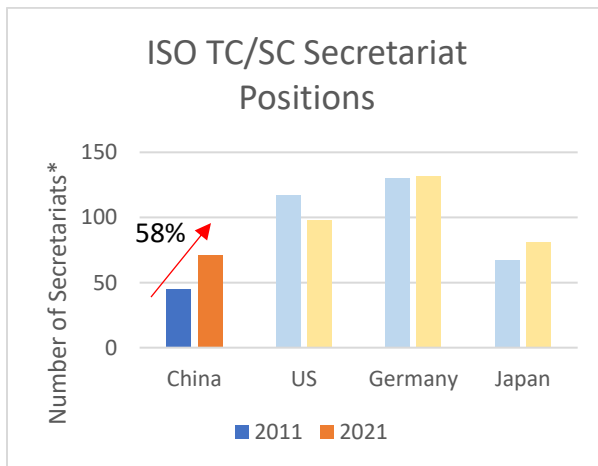
Recent trends in China’s participation rates

In line with China’s standards policy goals, China’s participation in multilateral standards-setting institutions as well as multi-stakeholder industry consortia has increased dramatically. While over the past decade China has had very high participation rates in the ISO and the International Electrotechnical Commission (IEC), two of the largest multilateral SSOs, it has taken a much greater leadership role in standards-drafting technical committees in recent years. Those in a leadership capacity are able to influence the agenda, how conversations are structured, and how time is allocated.



Source: French Standardization Association, [Wall Street Journal](#)

From 2011 to 2021, the number of Chinese-occupied secretariat positions in technical committees (TCs) or subcommittees (SCs) increased by 58 percent in ISO. In IEC, they increased 67 percent from 2012 to 2020. The number of secretariat positions occupied by other major participants like the United States, Germany, and Japan in both organizations remained relatively flat over these time periods.



*Includes twinned secretariats

Sources: [ISO](#), [IEC](#), [NIST](#)

Similarly, Chinese companies participating as voting [members](#) in the Third Generation Partnership Project (3GPP), the multi-stakeholder body responsible for 5G standards setting, have more than doubled in recent years to 139 in December 2021, more than twice the 58 US voting members.

Tracking the volume of participants on a country-by-country basis gives an indication of how much each country is investing into standards participation, but it provides no information about the return on that investment. Determining any individual nation's influence over a standardization process requires measuring outcomes in the marketplace, not merely participation or inputs.

Due to COVID-19 concerns, many standardization activities have become virtual since early 2020. In many cases, this has allowed them to be more inclusive since participation does not require travel and is less resource intensive. However, the logistics of video meetings have also made it more difficult to reach consensus. Based on conversations with member companies, the virtual environment has not significantly changed China's level of influence in international standards setting since it remains bound by effective due process and governance practices.

Importance of constructive Chinese participation in international standards

As both the largest producer of goods exported across the world and a massive market for imported goods and international investment, China's robust input in international standards is critical to ensure the creation of balanced, comprehensive standards that serve industry needs.

Chinese participation in international standards setting also has some positive effects on China's domestic standards environment:

- **Greater standards compatibility:** China's participation in international standards setting has led to a growing acceptance of international standards as a basis for national standards. Greater alignment between international and Chinese standards can greatly reduce engineering costs and the time needed for a foreign company to bring a product to the Chinese market and reduce market access barriers.
- **Promotion of due process:** As China becomes more familiar with standards-setting procedures and expectations in international SSOs, these are more likely to trickle down to improve China's domestic SSOs, bringing them more in-line with World Trade Organization (WTO) principles for standards setting.
- **Opportunities for technical discussions in neutral forums:** International SSOs provide an inclusive venue and encourage constructive debate, so they offer an opportunity to engage with Chinese stakeholders on an even playing field. Chinese participation in technical discussions in international SSOs may help Chinese experts better understand the concerns of foreign companies that at times might not be able to fully participate in domestic standards-setting in China.

Concerns with Chinese behavior in international standards setting bodies

US and Chinese standards-setting systems are fundamentally different. In the United States, standards are developed through industry-led processes and tend to be voluntary, with much of the funding coming from companies. By contrast, most standards setting in China is government-led, and compliance with standards can be mandated. There is concern that as Chinese stakeholders become more active in international standards setting, they could change rules and norms in a way that introduces weaknesses that exist in the Chinese system, both in due process as well as the technical quality and long-term relevance of the resulting standards.

Some Chinese policies and official statements characterize international standards setting in a competitive context as a tool to advance a domestic industrial policy agenda. China's last standardization [five-year plan](#) includes the goal of "promoting advantageous and special Chinese technology standards to become international standards to serve Chinese enterprises and industry going global."

China's standards policies can amplify the market-distorting effects of its broader industrial policies like Made in China 2025, which provide disproportionate government support for Chinese companies in an effort to create globally competitive national champions. While companies from all countries participate in standards-setting to gain a competitive advantage, the level of government involvement and policy support in China is unique, especially when juxtaposed with countries like the United States where standardization activities are grassroots-driven and industry-led.

While some Chinese government support is constructive, such as training programs focused on due process and expectations for technical review of their proposals, other methods are more concerning. For example, local governments across China provide [financial incentives](#) for companies to set standards, and compensation is often highest for companies involved in setting international standards. China's 2035 standards outline continues to encourage rewards for drafting technical standards. It also promotes strengthened government support for financing, credit, talent, and policy coordination and using funds to guide private capital to support standardization work.

Subsidies for standards setting distort the standardization environment since they incentivize drafting standards for standards' sake rather than being driven by market need. This is likely a contributing factor to the large numbers of low-quality Chinese standards proposals in international SSOs that some participants have reported. Large numbers of low-quality proposals gum up international standards-setting and take time and resources away from evaluating technically sound proposals. However, rules supporting consensus-based standards make it difficult for a single participant to push through low-quality proposals or exclude other participants. In SSOs with strong governance practices, a large number of proposals does not necessarily translate to influence.

Another concern is that Chinese stakeholders are sometimes pressured into voting as a bloc on proposals that would advance Chinese industrial policy goals for strategic industries even if such proposals are contrary to worldwide standards optimization. While it is not uncommon for international standards setting to involve coalition building, this is typically industry-led rather than coordinated around a government's industrial policy goals. However, much of this concern is driven by a handful of alarming [anecdotes](#) that are not representative, and most organizations have sufficient checks in place to prevent abuses. Divisive standards proposals are the exception rather than the norm, and participants typically reach consensus on most standards proposals without even requiring a vote.

While leadership positions in international SSOs can be influential, strong governance practices make it extremely difficult in most organizations to leverage these positions to force through certain proposals without consensus or block proposals.

Policy recommendations

Voluntary, open, market-driven, consensus-based standards setting serves the interests of US companies. The US government should continue to support industry-led standards setting. At the same time, it should also continue supporting China's participation in international standards setting, which is crucial to ensure interoperability of products from the United States, China, and the rest of the world.

There are some important steps that the US government can take to support US leadership in international standards:

- **Clarify the applicability of export controls to standards setting:** The US government should clarify that restrictions do not apply to regular interactions with entity-listed Chinese participants in international standards-setting activities. While the Bureau of Industry and Security did issue [rules](#) in 2020 that clarified restrictions do not apply to certain standards setting activities with Huawei, they do not cover other entity-listed Chinese companies that regularly participate in standards setting and do not apply to all types of standards setting development and promulgation activities. This lack of clarity has had two adverse effects:
 - US companies have been forced to sideline themselves at some SSOs out of a fear of legal repercussions, diminishing their ability to provide timely technical guidance on standards.
 - China has begun creating domestic consortia to develop home-grown alternatives to technologies like HDMI and Wi-Fi because they are afraid of being cut out of the international organizations that set these specifications. This could have significant repercussions for US companies and consumers that rely on interoperability with technology in the Chinese market.
- **Provide resources to support industry-led US participation:** Travelling to attend international standards setting meetings is very resource-intensive, which can be a barrier to participation. While virtual meetings due to COVID-19 controls have reduced some of these barriers temporarily, there are many drawbacks to video meetings such as time zone coordination and logistical difficulties reaching consensus. Many of these meetings will likely return to being in-person when possible, at which point it would be helpful for the US government to:
 - Provide the venue or funding to host major meetings in the United States for international SSOs. Attendance rates are often higher for participants from a meeting's host country. Because it is difficult for industry to fund large international standards gatherings, meetings are more frequently held in countries like China where the government is willing host.
 - Make visa approvals for Chinese participants in US-hosted standards-setting meetings in a timely manner so the United States remains a desirable location for standards-related meetings and maintains its level of influence in international standards setting.
 - Contribute to the travel costs of US experts attending international standardization meetings by creating a program that has appropriate guidelines and safeguards. Grants should be based on merit and without conditions placed on positions taken by the attendee.
- **Provide consistent funding for US government participation:** US government technical experts can be important participants in international standards setting. Having consistent funding over multiple years ensures that these experts are able to provide input in the full cycle of the standards-setting process, which can take two to four years. When US experts are forced to withdraw in the middle of a drafting process due to funding reasons, this can be detrimental to US influence on these standards.
- **Promote good governance and due process:** The US government should be active in regional forums with Chinese involvement, such as APEC, the G20, the Organization for Economic Cooperation and Development, and the WTO, to promote standards-setting best practices which create a level playing field for all and allow the best technologies to advance.