

Sino-U.S. Solar Economic Statecraft and its Implications for the Liberal International Order

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Introduction

Over the past few years, great power competition between the United States and China has intensified.⁷⁸ Although economic statecraft is not an optimal strategy that often escalates interstate conflict, both countries are increasingly using it. I define economic statecraft as using industrial policies, export controls, and investment restrictions in order to achieve national security goals.⁷⁹

In the solar industry, we have witnessed the increased usage of economic statecraft by both the United States and China which I argue negatively impacts the Liberal International Order (LIO). Section 2 will analyze China's economic statecraft in the solar industry. Section 3 will examine American economic statecraft as a response to Chinese solar strategies. Section 4 will analyze how these specific instances of

economic statecraft are negatively impacting the LIO. Finally, Section 5 will provide a brief conclusion.

Chinese Solar Economic Statecraft

Chinese economic statecraft in the solar industry focuses on capturing as large a portion of the global market share as possible, and then maintaining the geoeconomic advantage. The Chinese government implemented solar policies much earlier and more comprehensively than the United States through utilizing subsidy programs, tax credits, and preferential lending in particular to boost domestic firms.

Since 2011, China has been using feed-in tariffs for its solar industry where domestic solar producers were given guaranteed increased 10 percent profit margins for their efforts by the government. There are large amounts of government solar projects with lucrative contracts that also typically offered 10 percent profit

margins.⁸⁰ In addition, tax credits are offered by the Chinese government to incentivize local industry as well as tempt foreign companies.⁸¹ Moreover, although creating overcapacity issues,⁸² the China Development Bank and other Chinese financial institutions have provided massive capital to Chinese solar industries in the wake of the 2008 crisis that solar industries in other nations simply could not rival.⁸³ The solar sector is a reoccurring part of China's 5-year plans. The current 14th Five-Year Plan sets a target of 18 percent of electricity generation from wind and solar by 2025.⁸⁴

These government efforts are paying off. As of 2021, China dominates the global market share of polysilicon, ingots, wafers, cells and modules manufacturing, the main components of solar production, exceeding 80 percent share in all 5 sectors. It also accounts for a significant portion of the Chinese economy and trade. In 2021, China's solar exports of \$30 billion made up 7 percent of China's surplus trade over the prior 5 years. It is expected that the world will continue to be dependent on China for solar in the foreseeable future.⁸⁵

United States Economic Statecraft

American economic statecraft in the solar industry can be viewed as a reactive response to China's industrial policies and dominance of the solar industry, which has severely depleted American capacity in the sector. The United States has lost 80 percent of the global market share of solar in the past decade and 89 percent of current domestic solar shipments are imported from Chinese companies.⁸⁶

Under the Obama administration, in 2012 the U.S. attempted to hamper China's growth in the solar sector by implementing discriminatory trade tariffs against China's solar industry on an anti-dumping basis. The United States argued that the Chinese government was subsidizing their domestic solar industry which was unfairly disadvantaging American solar producers.⁸⁷ In 2018, the United States adopted uniform tariffs against any solar products made abroad on the basis

that Chinese manufacturers moved their operations to other countries in Southeast Asia to dodge the discriminatory tariffs.⁸⁸

In recent years, the Biden administration began to utilize more economic statecraft to boost the domestic solar sector. The policy instruments the United States has used include tax incentives, public financing initiatives, tariffs, and R&D funding. This push for solar is part of a wider initiative around countering Chinese industrial dominance in important sectors such as solar.

The Inflation Reduction Act (IRA) enhanced incentive structures and policies relating to renewable energy.⁸⁹ For instance, the IRA has a \$27 billion Greenhouse Gas Reduction Fund with the purpose of starting green banks around the country. Depending on the goals and initiatives of those banks, as they are given discretion in what local initiatives they fund, portions of that \$29 billion will go towards the solar industry.

In June of 2022, Biden also issued an executive order to utilize the Defense Production Act which increases domestic production of solar panels, federal procurement of solar panels, and places 24-month waiver on solar imports from Southeast Asia that were affected by the tariffs so as to ensure supply.⁹⁰

Overall, U.S. economic statecraft has increased in both intensity and scope since the new Biden administration due to China's rise and the politicization of climate change in the United States. This is in contrast to the early 2010s in which American policy was mainly focused on tariffs and research subsidies. The goal is to capture a larger market share of the sector and compete with China which is considered a perceived threat by both Democrats and Republicans.

Implications for LIO

The LIO is a global order with three distinct characteristics that are weakened by the usage of protectionist economic statecraft. First, it prescribes values of economic liberalism and liberal democracies. Second, it is maintained by a number of

international institutions that uphold and enforce those values. Third, it is a unipolar power structure with the U.S. as the hegemon.⁹¹ All three of these facets are undermined by the usage of economic statecraft in the solar industry by China and the United States.

The economic statecraft policies that the United States and China have been implementing with respect to solar are policies that run against these tenets of free trade and economic liberalism. These nations are trying to artificially change the situation so that their domestic industries have an advantage in the solar industry rather than allowing the market to make the determination.

The American trade tariffs in the solar industry are a concrete example of how the international institutions are being undermined, in particular the World Trade Organization (WTO), which by extension undercuts the LIO. The WTO is an institution designed to promote free trade by putting regulations in place that are supposed to limit trade barriers like tariffs. The 2018 tariffs implemented by the United States were essentially a protectionist policy for the American solar industry. The adoption of these tariffs raises questions about the efficacy of the WTO and whether its principles will still be upheld, considering its purpose is to prevent such barriers to trade. This is especially true after the WTO 2021 ruling on these tariffs, which found them to be compliant with WTO agreements. This was the first time a challenged safeguard was found to be conforming to the General Agreements on Tariffs and Trade 1994 (GATT). The issue was compounded by the confusing arguments made by the WTO that seemed to be legally unsound and left it unclear how nations should proceed in future similar situations.⁹² At the very least, the ruling leaves nation-states confused as to when safeguards are legally applicable within WTO guidelines. The ruling also seems to indicate that the WTO is willing to tolerate American interpretations of WTO regulations more so than other nations.⁹³ The 2021 WTO ruling sets a precedent that the values of the LIO are only to be protected when they align with American interests. If the enforcement mechanism of an institution like the

WTO is not reliable, then it also makes the structure of the LIO, in which institutions are a vital part of, seemingly flawed.

With both China and the United States increasing their usage of protectionist economic statecraft, the unipolar nature of the LIO is challenged, undermining the entire order. The unipolar dynamic typically means that the United States is powerful enough on its own basis to not need to resort to protectionist economic statecraft; however in this instance China has made itself enough of a power in the world that its primacy in the solar sector necessitates such a response from the United States. This dynamic indicates the gradual shifting of the global power structure from a unipolar to a bipolar one.⁹⁴ China's ability to use economic statecraft and achieve such a strong position in the global solar market, challenges American authority and the authority of the LIO indicating that the current world order is not hegemonic. Instead, it suggests that China itself possesses enough economic and political strength to partially participate in the LIO and its values while escaping significant punishment.

It should be noted that China has historically benefitted from the rules of the WTO as the WTO encouraged economic liberalism that helped facilitate China's large exports. The WTO discouraged barriers to trade which allowed China to capitalize on its advantages in production capacity and cost. China has achieved its economic strength largely in part due to LIO principles such as hyper globalization, which allowed it to develop so rapidly and facilitated China's rise to become the world's largest goods exporter in 2009.⁹⁵ If the WTO and its rules were to disappear those advantages in trade would be negated. This is what makes the situation for China difficult because the WTO is clearly favoring the U.S. contrary to its own rules, but at the same time it still generates a net positive for China's economy. In fact, it appears China does not want to fundamentally challenge the LIO and is very receptive to the concept of multilateralism.⁹⁶ The issue for China is that it has never complied with the political components of the WTO, and its continued denial of those aspects is also a significant

undermining factor for the LIO.⁹⁷ China's grievances with the LIO are more centered on the hegemony possessed by the United States and LIO institutions, and the imposition of Western ideals such as democracy, free press, and human rights.⁹⁸ The reality of the LIO being dominated by the U.S. and international institutions heavily favored towards the West is not beneficial if sometimes detrimental to China and its interests, so it would be logical for China to counter it.

America is heavily incentivized to maintain all aspects of the LIO for numerous reasons. First, it is a structure that has it as the unipolar power with international institutions aligned with its beliefs, and that provides distinct advantages, such as power in establishing precedents. It is also an order that was constructed around American values and beliefs, so its erosion is also a reflection on global sentiment of these beliefs as well as the United States.⁹⁹ What is more puzzling is why the United States is now choosing to violate the LIO, with its usage of economic statecraft. The logical conclusion we can make is that the United States is no longer aligned with all of the aspects of the LIO as it once was. The political components of democracy and free speech are clearly still important to the United States as it has not violated them, but the values of economic liberalism no longer fit with the United States as it has decided to forgo those in favor of strength in the solar sector.

From these understandings of America and China we can understand that the LIO is unlikely to disappear completely as some of its components and facets are vital for the current positions of both actors and will

be necessary for the future as well. This means they will likely endeavor to at least retain the economic liberalism aspect of the LIO as much as possible, so as to ensure their continued growth.

Conclusion

The solar industry will be critical in the near future as it is one of the solutions to the existential threat of climate change. Having a strong solar industry would be a boon to any nation's economy in the future, thus we are seeing the U.S. and China competing to achieve primacy in the sector by using economic statecraft. The increased usage of this economic statecraft, however, is detrimental to the continued existence and relevance of the LIO as it challenges some of the LIO's core values. Great power economic statecraft in the solar industry has undermined the institutions that enforce those values. It is unlikely the liberal international order will vanish in the foreseeable future, but there is no reason for us to become sanguine about its prospects.

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