



# A Bargaining Theory of US–China Economic Rivalry: Differentiating the Trade and Technology Wars

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## Abstract

This article examines the outbreak and persistence of US–China economic war, which comprises both the trade war, featured with retaliatory tariffs, and the technology war, featured with restrictions on Chinese access to US technologies. Building on the analytical framework of bargaining and war, I argue that different components of the economic war emerged from distinct causes. The outbreak of the trade war was primarily driven by the information problem, characterized by mutual uncertainty and the lack of effective communications. The technology war was largely a result of the commitment problem driven by the existing power's concern regarding potential future changes in the balance of power. After examining the initiation stage during the Trump era, I further analyze how the economic war has unfolded during the Biden administration. While the prospect of a new trade war seems unlikely as mutual uncertainty diminishes, existing tariffs remain as the commitment problem on trade issues has become more critical. The preventive technology war is expected to persist, reflecting Washington's ongoing concerns over China's growing leadership in technology.

## Introduction

In the past several decades, China has undergone a remarkable transformation, ascending rapidly as an economic and technological powerhouse on the global stage. Its economic growth has been increasingly featured with significant advancements in high-tech sectors, including renewable energy, quantum computing, and 5G telecommunications. These strategic moves aim to transition its economy from being the “world’s factory” to a hub of cutting-edge technology, reducing its dependence on foreign technology. State-sponsored research, substantial investment in STEM (Science, Technology, Engineering, and Mathematics) education, and policies encouraging technological development have enabled China to narrow the innovation gap with the USA, challenging the long-standing dominance of the USA in global economic leadership.

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Washington has watched China's rise with wary eyes, recalibrating its response to what it has perceived as a strategic rivalry. On the one hand, policymakers and observers have interpreted Beijing's territorial claims and grand strategies, like the Belt and Road Initiative as indicators of its broader ambition to reshape the international order.<sup>1</sup> On the other, a prevailing domestic discourse attributes China's rise as a contributing factor to a range of internal challenges, including the decline of manufacturing jobs. These perceptions have driven US policymakers to depart from earlier fluctuations of engagement and containment, adopting a stance that increasingly favors a confrontational approach. This transition, taking root before but intensifying under the Trump administration, engaged the USA into an "economic war" with China. The economic war has been marked by a trade war focusing on punitive tariffs and a technology war characterized by restrictions on Chinese high-tech firms and STEM researchers.

During the presidential election of 2016, the then-candidate Donald J. Trump accused China of unfair trade practices and threatened to impose tariffs on Chinese imports. Although the two governments attempted to achieve a trade truce with a joint statement in May 2018, President Trump soon ignored the joint statement and followed through on months of threats to impose tariffs on Chinese products. In 2019, both sides failed again to reach an agreement after 5 months of negotiation, leading to more tariffs that destabilized the global market. In December, the trade war was put on hold with the Phase I agreement in which China pledged to increase purchases from the USA and renewed commitments on intellectual property. The Biden administration has maintained a phase of truce amid the ongoing economic rivalry, refraining from imposing new tariffs while also not removing the ones established by the Trump administration.

Meanwhile, the Trump administration launched a series of strategic policies and regulatory actions aimed at curtailing China's technological advancement. Unlike the trade war, however, President Trump did not seek to cool down the technology war but escalated it for the rest of his term. The US Department of Commerce placed several Chinese tech firms, such as ZTE and Huawei, on the Entity List, effectively banning them from purchasing US technology without government approval. Due to concerns over espionage and the transfer of sensitive technologies, visa policies were tightened for Chinese nationals, particularly students and researchers in STEM fields, and so were Chinese investments involving technology firms and startups. Internationally, the Trump administration lobbied its allies to exclude Chinese technology, particularly Huawei's 5G infrastructure, citing security risks and advocating for alternatives from non-Chinese providers. Under the Biden administration, there has been a continuation of stringent technology policies towards China, though with a more diplomatic tone and emphasis on alliances and international partnerships.

How can we understand the initiation and progression of the economic war, including both the trade war and the technology war? Many news analyses compared the US-China tension to the "Thucydides' Trap," which suggested that war between Athens and Sparta became inevitable due to the rise of Athens and the fear in Sparta. While such comparisons might help us understand the possibilities of the long-term trajectory, they fail to recognize the differences in the rationales behind the trade war and the technological war, nor do they account for the differences in how these "wars" emerged and have persisted. Why did negotiations precede the launch of the trade war, but not the technology war? Why did the Trump administration halt the trade war in late 2019 and yet showed no signs of cooling down the technology war? Why did the Biden administration neither remove previously imposed tariffs nor impose additional tariffs? These "wars" are worth studying not only because they were initiated and developed in different ways, but also because they

<sup>1</sup> Darren J. Lim and G. John Ikenberry, "China and the Logic of Illiberal Hegemony," *Security Studies*, Vol. 32, No. 1 (2023), pp. 1–31.

expand our understanding of wars in the age of economic interdependence and great power competitions.<sup>2</sup>

Drawing on the literature of bargaining and war, this article examines the distinct rationales behind the initiation and persistence of the US–China economic war, which includes: (1) the trade war featured with retaliatory tariffs; and (2) the technology war marked by efforts to block China’s access to the US technology and market.<sup>3</sup> The bargaining literature identifies two major explanations to war, the information problem and the commitment problem. I argue that the former was a primary factor in the onset of the trade war, whereas the latter predominantly triggers the technology war<sup>4</sup>; over time, however, the commitment problem becomes more pronounced, contributing significantly to the persistence of both wars.

Under the Trump administration, the outbreak of the trade war in 2018 was mainly attributed to an information problem featured with mutual uncertainty and ineffective communications. Beijing was initially unsure of Washington’s intentions, and the US was equally in the dark about China’s threshold for economic pain. This led to the initial tit-for-tat tariff exchange. Despite the Phase I Agreement signaling a truce, the tariffs remained, suggesting that the previously hidden commitment problem was emerging as the information asymmetry diminished. Washington worried that easing the tariffs could end up further strengthening China’s economic position. In contrast, the initiation of the technology war was driven more directly by a commitment problem. Theoretically, as the rising power cannot credibly commit itself not to revise the status quo in the future, the existing power has incentives to secure its advantageous position now by launching preventive war against the rising power. The Trump administration took preventive measures to impede China’s technological progress, a response to the perceived inevitable rise of China’s technological capabilities.

As President Joe Biden took office, the nature of these confrontations has continued to evolve with the commitment problem dominating not only the technology war but also the trade war. While the fundamental disagreement over trade-related issues remains, the initial uncertainty that triggered the trade war under Trump has largely declined, making it unlikely for the Biden administration to impose *additional* retaliatory tariffs on Chinese goods. Yet, the Biden administration’s reluctance to revoke existing tariffs suggests that the commitment problem has overshadowed the initial information problem. For the technology war, although the Biden administration shifts from outright conflict to a strategy of patient, calculated competition, the implementation of additional restrictions on China and the emphasis on domestic technological advancement imply that the commitment problem remains unresolved, signaling that the technology war is far from over.

<sup>2</sup> Dong Jung Kim, “Realists as Free Traders: The Struggle for Power and the Case Against Protectionism,” *International Affairs*, Vol. 94, No. 6 (2018), pp. 1269–86; Ling S. Chen and Miles M. Evers, “‘Wars without Gun Smoke’: Global Supply Chains, Power Transitions, and Economic Statecraft,” *International Security*, Vol. 48, No. 2 (2023), pp. 164–204; Nurullah Gur and Siref Dilek, “US–China Economic Rivalry and the Reshoring of Global Supply Chains,” *Chinese Journal of International Politics*, Vol. 16, No. 1 (2023), pp. 61–83.

<sup>3</sup> In 2020, the unexpected coronavirus pandemic threw them into propaganda war, with Trump using the term “China virus” and Chinese state media attacking Secretary of State Mike Pompeo. Although the propaganda or diplomatic war continued to escalate until the presidential election, the escalation had less to do with falling into the Thucydides’ trap than with diverting the attention of the public away from domestic issues.

<sup>4</sup> This argument does not imply that the information problem and the commitment problem are mutually exclusive. As discussed later, the initiation of war typically involves an interplay of both problems.

## Beyond the Thucydides' Trap: Understanding Bargaining and War

China's recent rise, especially after the 2008 financial crisis, has revived the scholarly debate on power transition.<sup>5</sup> Tracing 16 historical cases of power transition from the Peloponnesian War to the Cold War, Allison identifies 12 clues critical for states to avoid the Thucydides' trap, such as the presence of higher authorities beyond nation states, economic and social networks, cultural commonalities, nuclear weapons, alliance, and leadership.<sup>6</sup> Integrating Allison's 12 clues into 7 key variables (e.g. economic interdependence, rising power dissatisfaction, domestic political system), Mastro finds that the risks of conflicts between the USA and China are far from definitive, depending on how the USA perceives China's intention.<sup>7</sup> Chan, Hu, and He argue that the USA tends to overestimate China's hostile intention, despite the limited evidence of China's revisionist intention.<sup>8</sup> As a result, the two countries are likely to involve at least in the "cold war-style competition short of war," even though a hot war is avoidable.<sup>9</sup>

While the Thucydides' trap debate sheds light on the long-term trajectory of US–China relations, it overlooks the discrepancies in the motivations underlying the trade war and technology war, as well as their distinct patterns of development. Why did the trade negotiations fail twice before the two sides reached an agreement in December 2019? Why did the Trump administration launch the technology war with few negotiations? Why did the Biden administration neither eliminate existing tariffs nor initiate a new trade war? The formal literature of bargaining and war is useful as it seeks to explain the outbreak of war as an alternative to the failure of achieving peaceful bargains.<sup>10</sup> Assuming that war is costly, the bargaining literature offers the causal mechanisms explaining what prevents actors from achieving peaceful bargains. What the trade war and the technology war have in common is that even though neither of them involved actual fighting or casualties, they were both often characterized as "war" due to their costliness. Therefore, we can also ask why the two countries opted for costly measures, such as retaliatory tariffs or other sanctions, rather than a peaceful agreement. With the premise that tariffs and sanctions were costly to both the USA and China, I adopt the literature of bargaining and war to explain the outbreaks of trade war and technology war. Next, I review the two major mechanisms of the outbreak of war.

## The Information Problem versus The Commitment Problem

When two adversaries negotiate over certain disputes, what prevents them from achieving a peaceful agreement given that war is costly? First, the literature on the information problem suggests that uncertainty and ineffective communications jointly contribute to the

<sup>5</sup> For the earlier literature on power transition, see A. E. K. Organski, *World Politics* (New York: Knopf, 1958); Steve Chan, *China, the US and the Power-Transition Theory: A Critique* (London: Routledge, 2007); Dale C. Copeland, "The Constructivist Challenge to Structural Realism: A Review Essay," *International Security*, Vol. 25, No. 2 (2000), pp. 187–212; Jack S. Levy, "Preventive War and Democratic Politics: Presidential Address to the International Studies Association, 1 March 2007, Chicago," *International Studies Quarterly*, Vol. 52, No. 1 (2008), pp. 1–24; Stephen Van Evera, *Causes of War: The Structure of Power and the Roots of War* (Ithaca, NY: Cornell University Press, 1999).

<sup>6</sup> Graham Allison, *Destined for War: Can America and China Escape Thucydides's Trap?* (Boston, MA: Houghton Mifflin Harcourt, 2017).

<sup>7</sup> Oriana Skylar Mastro, "In the Shadow of the Thucydides Trap: International Relations Theory and the Prospects for Peace in US-China Relations," *Journal of Chinese Political Science*, Vol. 24, No. 1 (2019), pp. 25–45.

<sup>8</sup> Steve Chan, Weixing Hu, and Kai He, "Discerning States' Revisionist and Status-quo Orientations: Comparing China and the US," *European Journal of International Relations*, Vol. 25, No. 2 (2019), pp. 613–40.

<sup>9</sup> Brandon K. Yoder, "Uncertainty, Shifting Power and Credible Signals in US-China Relations: Why the 'Thucydides Trap' Is Real, but Limited," *Journal of Chinese Political Science*, Vol. 24, No. 1 (2019), pp. 87–104.

<sup>10</sup> James D. Fearon, "Rationalist Explanations for War," *International Organization*, Vol. 49, No. 3 (1995), pp. 379–414.

bargaining failure and hence the outbreak of war.<sup>11</sup> Uncertainty emerges as adversaries hold private information about their own attributes, such as their policy preference, capability, or willingness to use force.<sup>12</sup> Moreover, the incentive to bluff renders diplomatic communications alone ineffective in reducing uncertainty.<sup>13</sup> During the negotiations, each adversary has an incentive to misrepresent one's private information—that is, to bluff—in order to gain bargaining advantages. The information problem is particularly acute when a weak type of adversary is present, as the weak adversary has incentives to exaggerate its strength or resolve for a better deal. Uninformed about which type it faces, the other adversary may propose a suboptimal offer either accepted by the weak type, or rejected by the one who turns out strong.<sup>14</sup> Hence, the risk-return tradeoff generates the inherent danger of war.

A solution to the information problem is to send costly signals, which helps the uninformed adversary distinguish the strong type from the “weak” one. When negotiating with the uninformed adversary, the weak type could benefit from bluffing whereas the strong type would rather demonstrate its strength and distinguish itself from the weak type. To address the information problem, the strong type adopts the strategy of costly signaling: by involving additional costs that the weak type would not pay, the strong type can separate itself from the weak one and thus credibly signal its strength to the uninformed adversary. Two adversaries are more likely to reach an agreement once the information problem is solved.<sup>15</sup> In practice though, the two sides may send costly signals through several rounds of escalation to demonstrate their resolve until at least one side updates sufficient knowledge about the other's resolve and concludes that no *additional* costs would extract a better deal from the other.

It is essential to recognize that the information problem is not confined to state-level dynamics but extends to individual leaders as well. As new leaders possess private information about their intentions and capabilities that are not immediately apparent to others, leadership turnover between adversaries can introduce a dual information problem: while the new leader may seek to signal their resolve, adversaries may simultaneously attempt to probe these signals to discern genuine strength from mere posturing.<sup>16</sup> Either way, leadership transitions increase the risks of conflicts between adversaries; the risks then decline over time as private information is revealed. Recent research suggests that the risks of bargaining failures driven by leadership turnover are more acute when a democratic leader is supported by a political coalition different from her predecessor's, or when an authoritarian leader has consolidated domestic power before turning attention back outward.<sup>17</sup>

<sup>11</sup> Fearon, “Rationalist Explanations for War,” pp. 379–414; James D. Fearon, “Signaling Foreign Policy Interests: Tying Hands versus Sinking Costs,” *Journal of Conflict Resolution*, Vol. 41, No. 1 (1997), pp. 68–90.

<sup>12</sup> New private information is created when states experience transition in leadership, political coalitions, or regimes. See Brett Ashley Leeds, Michaela Mattes, and Jeremy S. Vogel, “Interests, Institutions, and the Reliability of International Commitments,” *American Journal of Political Science*, Vol. 53, No. 2 (2009), pp. 461–76; Cathy Xuanxuan Wu, Amanda A. Licht, and Scott Wolford, “Same as the Old Boss? Domestic Politics and the Turnover Trap,” *International Studies Quarterly*, Vol. 65, No. 1 (2021), pp. 173–83; Cathy Xuanxuan Wu and Scott Wolford, “Leaders, States, and Reputations,” *Journal of Conflict Resolution*, Vol. 62, No. 10 (2018), pp. 2087–117.

<sup>13</sup> Recent works suggest that under some conditions, diplomatic communications can be effective in reducing mutual uncertainty. See Alexandre Debs and Jessica Chen Weiss, “Circumstances, Domestic Audiences, and Reputational Incentives in International Crisis Bargaining,” *Journal of Conflict Resolution*, Vol. 60, No. 3 (2014), pp. 461–76; Fearon, “Signaling Foreign Policy Interests,” pp. 68–90; Kenneth A. Schultz, “Domestic Opposition and Signaling in International Crises,” *American Political Science Review*, Vol. 92, No. 4 (1998), pp. 829–44.

<sup>14</sup> Fearon, “Rationalist Explanations for War,” pp. 379–414.

<sup>15</sup> This is the scenario when only the information problem is present. Later, I review the literature that examines the interaction between the information problem and the commitment problem. See Thomas C. Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1960).

<sup>16</sup> Scott Wolford, “The Turnover Trap: New Leaders, Reputation, and International Conflict,” *American Journal of Political Science*, Vol. 51, No. 4 (2007), pp. 772–88.

<sup>17</sup> Wu, Licht, and Wolford, “Same as the Old Boss?” pp. 173–83.

Both scenarios can increase the likelihood of conflict and make peaceful agreements more challenging to achieve as each side struggles to gauge the other's intentions and capabilities through diplomatic negotiations.

The second causal mechanism—the commitment problem—focuses on the lack of enforcement mechanisms under the international system. Without an effective enforcement mechanism, a self-enforcing agreement is often the key to continued compliance. In the context of great power dynamics, an obstacle to self-enforcing agreements is time inconsistency or more specifically, the shifts in the distribution of power over time. When states are expected to interact repeatedly, one's choice in the current period depends on its expectation about potential changes in the future period. If two actors consider the current period only, it is possible for them to achieve an agreement (or maintain the status quo) that matches their relative power *at present*. However, the concerns about power dynamics *in the future* alter calculations between a rising power and a declining power at present, as their current interactions have significant future implications. Without an effective enforcement mechanism, there is no guarantee that the rising power would comply with the existing agreement. In other words, the rising power cannot credibly commit itself not to renegotiate a better agreement (i.e. to change the status quo) that matches its *future* strength once it surpasses the declining power. The commitment problem therefore puts the declining power at a disadvantage in the future. To avoid future disadvantages, the declining power may attack the rising power *now*, rather than negotiate a deal which would allow the latter to grow in the future.<sup>18</sup> Hence, the strategy of the declining power is often called “preventive war.”

The conventional wisdom suggests that the declining power is most likely to launch preventive war when two actors experience a “large and rapid” shift in the distribution of power. In practice, it remains unclear what characterizes a “large and rapid” shift in empirical analysis. As the dimensions of state power have expanded nowadays, it is more difficult for policymakers to reach a consensus on how to estimate the shift in the distribution of power. The uncertainty about the rate of power shifts may alleviate the fear of the existing power, reducing the risks of preventive war.<sup>19</sup> Nonetheless, other studies suggest that the “slow but persistent” shifts in the distribution of power can also trigger preventive war, as long as the declining power is certain to be surpassed within a finite period of time.<sup>20</sup>

Finally, wars might be prolonged by the coexistence of the information problem and the commitment problem.<sup>21</sup> A hybrid model that integrates both asymmetric information and the commitment problem identifies an intermediate scenario called “screening for war.”<sup>22</sup> In this scenario, one side engages in an initial battle to test the other's capabilities and intentions, and after the information is revealed, comes to believe that it faces an “unappeasable” adversary who will not be satisfied by any compromise in the future. Consequently, the former continues to fight even if both sides have enough information to reach a settlement. In other words, when the information problem and the commitment problem coexist, the commitment problem emerges and prolongs conflicts even after the information problem is resolved. Hence, it is essential to recognize that the predominance of either problem

<sup>18</sup> James D. Morrow, “The Strategic Setting of Choices: Signaling, Commitment, and Negotiation in International Politics,” in David A. Lake and Robert Powell, eds., *Strategic Choice and International Relations* (Princeton: Princeton University Press, 1999), pp. 77–114; Robert Powell, “War as a Commitment Problem,” *International Organization*, Vol. 60, No. 1 (2006), pp. 169–203.

<sup>19</sup> See Muhammet A. Bas and Robert Schub, “Peaceful Uncertainty: When Power Shocks Do Not Create Commitment Problems,” *International Studies Quarterly*, Vol. 61, No. 4 (2017), pp. 850–66. Note that the type of uncertainty is different from that was discussed in the information problem, where the source of uncertainty often lies in the willingness to fight or resolve.

<sup>20</sup> Colin Krainin, “Preventive War as a Result of Long-term Shifts in Power,” *Political Science Research and Methods*, Vol. 5, No. 1 (2017), pp. 103–21.

<sup>21</sup> Powell, “War as a Commitment Problem,” pp. 169–203.

<sup>22</sup> Scott Wolford, Dan Reiter, and Clifford J. Carrubba, “Information, Commitment, and War,” *Journal of Conflict Resolution*, Vol. 55, No. 4 (2011), pp. 556–79.

can oscillate throughout the various phases of interstate interactions and that the seeming dominance of one problem does not negate the underlying influence of the other. “The relative importance of asymmetric information and commitment problems determines whether we should observe what looks like purely information-based conflict, purely commitment-based conflict, or the intermediate scenario.”<sup>23</sup> This perspective is crucial in analyzing the dynamic nature of the trade war and the technology war between the USA and China, where the onset of war may be predominantly influenced by one problem, yet the presence of the other continues to shape the strategic environment.

Before I apply these mechanisms to the US–China relations in the next section, it is important to clarify two points. First, while the original literature focuses more on militarized conflicts, states also adopt non-militarized tools to address the information problem or the commitment problem. In international bargaining, militarized costly signals include military mobilization and limited war<sup>24</sup>; non-militarized costly signals include a leader’s public threats, economic sanctions, and tariffs.<sup>25</sup> Likewise, states can adopt preventive measures in a non-militarized setting. For instance, a declining power can adopt moderate competitions or limited containment to hedge against the rising power’s gains or to figure out the rising power’s true intention.<sup>26</sup> Second, the focus on strategic interactions between adversaries does not imply that domestic actors have little impact in foreign policy. Interstate disputes emerge as states have divergent interests which are largely affected by domestic politics.<sup>27</sup> Domestic actors often shape national preferences and resolve, both of which are important sources of uncertainty during international negotiations. Domestic politics is also heavily involved in how leaders allocate the outcomes of international negotiations.<sup>28</sup> In other words, domestic political dynamics are crucial in understanding a variety of questions, such as how disputes emerge in the first place and who, domestically, benefit or lose from international outcomes. Nonetheless, as I am interested in why, given their own domestic attributes, Washington and Beijing escalated their disputes into the trade war and the technology war, this paper focuses more on strategic interactions between states than on strategic interactions between leaders and domestic constituents.

## Initiation of the US–China Economic War

The previous section reviews two mechanisms of the outbreak of war: the information problem featured with uncertainty and incentives to bluff, and the commitment problem featured with power shifts over time. In this section, I adopt these mechanisms to examine the outbreak of economic war between the USA and China, which comprises the trade war and the technology war, respectively.<sup>29</sup> For the trade war, I focus on why the USA and China failed to reach a trade agreement twice, before reaching the Phase I agreement in

<sup>23</sup> Ibid., p. 558.

<sup>24</sup> Fearon, “Signaling Foreign Policy Interests,” pp. 68–90; Darren Filson and Suzanne Werner, “Bargaining and Fighting: The Impact of Regime Type on War Onset, Duration, and Outcomes,” *American Journal of Political Science*, Vol. 48, No. 2 (2004), pp. 296–313; Robert Powell, “Bargaining and Learning While Fighting,” *American Journal of Political Science*, Vol. 48, No. 2 (2004), pp. 344–61; R. Harrison Wagner, “Bargaining and War,” *American Journal of Political Science*, Vol. 44, No. 3 (2000), pp. 469–84.

<sup>25</sup> James D. Fearon, “Domestic Political Audiences and the Escalation of International Disputes,” *American Political Science Review*, Vol. 88, No. 3 (1994), pp. 577–92; Erik A. Gartzke et al., “Signaling in Foreign Policy,” in Cameron Thies, ed., *The Oxford Encyclopedia of Foreign Policy Analysis* (Oxford: Oxford University Press, 2017), pp. 1–30; Schultz, “Domestic Opposition and Signaling in International Crises,” pp. 829–44.

<sup>26</sup> Brandon K. Yoder, “Hedging for Better Bets: Power Shifts, Credible Signals, and Preventive Conflict,” *Journal of Conflict Resolution*, Vol. 63, No. 4 (2019), pp. 923–49.

<sup>27</sup> Andrew Moravcsik, “Taking Preferences Seriously: A Liberal Theory of International Politics,” *International Organization*, Vol. 51, No. 4 (1997), pp. 513–53.

<sup>28</sup> Bruce Bueno de Mesquita, Alastair Smith, Randolph M. Siverson, and James D. Morrow, *The Logic of Political Survival* (Cambridge: MIT Press, 2003).

<sup>29</sup> Although these confrontations intertwined in the US-China relations, I separate them for analytical purpose.

December 2019. I argue that the trade war was mainly driven by the information problem. The trade war was initiated in 2018 because Beijing was uncertain about the preference of the Trump administration who failed to send consistent messages, and then it was further escalated in 2019 because Beijing had to send a costly signal to the Trump administration who had underestimated Beijing's resolve. For the technology war, I focus on how Washington worried about the commitment problem raised by China in the technology area and therefore adopted preventive measures, such as entity listing, export controls, investment screening, and scrutinizing China-related researchers. These measures took the "whole-of-government" approach, targeted China explicitly or implicitly, and sought to undermine China's capabilities in technological advances.<sup>30</sup>

### The Information Problem and the Outbreak of the Trade War

The US–China relationship has experienced ups and downs in the past decades. Initially, tensions were fueled by uncertainties about each other's intentions and political trajectories. The USA, dubious of China's communist governance and economic reforms, oscillated between deterrence and engagement.<sup>31</sup> Similarly, China feared the US intentions toward its one-party rule. With mutual uncertainties, both sides had incentives to act tough, leading to confrontations in the 1990s, such as the Taiwan Strait Crisis and the Belgrade embassy bombing. However, both sides gradually updated their understanding of each other over time, through frequent interactions, easing tensions in the 2000s.<sup>32</sup> In particular, they learned to navigate the influences of domestic politics on foreign policy, with the USA acknowledging the impact of Chinese nationalism and China gaining insight into the domestic pressures on US presidents, especially during elections.<sup>33</sup>

During this period of growing cooperation and understanding, the US–China trade had reached unparalleled levels by the time Trump took office. While bilateral trade generated economic benefits for both countries, the same issues that would later characterize Trump's trade grievances with China—a growing trade deficit, manufacturing job losses, and perceived unfair trade practices—were already longstanding challenges.<sup>34</sup> The Obama era, however, saw no trade war, mainly because Washington then needed China's economic growth and cooperation in handling the 2008 financial crisis. Despite limited tariffs on Chinese imports, Barack Obama avoided trade hostilities as he viewed China as a critical partner to handle the global financial crisis during his first term.<sup>35</sup> Even as China was increasingly perceived as a strategic competitor during the second term, the Obama administration pursued a multilateral approach on trade issues, leveraging the WTO mechanisms and forging the Trans-Pacific Partnership rather than launching a unilateral trade war.<sup>36</sup>

<sup>30</sup> The emphasis on the predominant problem at the initiation of each war does not imply that the other problem was absent. Both the information problem and the commitment problem are integral to understanding various phases of these conflicts.

<sup>31</sup> Thomas Christensen, "Windows and War: Trend Analysis and Beijing's Use of Force," in Robert S. Ross and Alastair I. Johnston, eds., *New Directions in the Study of China's Foreign Policy* (Stanford, CA: Stanford University Press, 2006), pp. 50–85.

<sup>32</sup> Certainly, the September 11 attacks and other factors also improved the bilateral relationship. See Qingguo Jia, "Learning to Live with the Hegemon: Evolution of China's Policy toward the US since the End of the Cold War," *Journal of Contemporary China*, Vol. 14, No. 44 (2005), pp. 395–407; Marc Lynch, "Why Engage? China and the Logic of Communicative Engagement," *European Journal of International Relations*, Vol. 8, No. 2 (2002), pp. 187–230.

<sup>33</sup> Jessica C. Weiss, "Authoritarian Signaling, Mass Audiences, and Nationalist Protest in China," *International Organization*, Vol. 67, No. 1 (2013), pp. 1–35; Wang Jisi, *Gaochu bushenghan: lengzhan hou meiguo de quanqiu zhanlue he shijie diwei* (*Lonely at the Top: America's Post-Cold War Global Strategy and Status*) (Beijing: Shijie zhishi chubanshe, 1999).

<sup>34</sup> Yong Wang, "Interpreting US-China Trade War Background, Negotiations and Consequences," *China International Strategy Review*, Vol. 1, No. 1 (2019), pp. 111–25.

<sup>35</sup> Barack Obama, *A Promised Land* (Penguin UK, 2020), pp. 474–82.

<sup>36</sup> Anshu Siripurapu and Noah Berman, "The Contentious US-China Trade Relationship," *Council of Foreign Relations*, 26 September 2023, <https://www.cfr.org/backgrounder/contentious-us-china-trade-relationship>.

Obama's strategies highlight a significant shift in the trade policy under the Trump administration, suggesting that domestic challenges alone were insufficient to trigger a full-blown trade war.

As discussed earlier, leadership transitions increase the risks of conflict, particularly: (1) when a democratic successor represents a different political coalition than their predecessor; or (2) when an authoritarian leader shifts the focus to international affairs after solidifying their domestic control. The former scenario applies to the election of Donald Trump. As a Washington outsider, Trump not only represented a different political party from his predecessor, but also deviated from the establishment of his own party. The latter scenario applies to China as Xi Jinping consolidated his power and turned more attention to foreign relations toward the end of his first term.

The election of Donald Trump created uncertainty about the US foreign policy in general and the US–China relations in specific. President Trump came to the White House as an outsider without experiences in foreign affairs. Under the “America First” slogan, Trump rejected major foreign policy principles established and maintained by his predecessors since the end of World War II. Instead of enhancing the global leadership, he withdrew from major international institutions and occasionally threatened to abandon commitments to US allies. With the campaign promise to “make America great again,” Trump narrowed the focus on short-term economic and security needs, showing little interest in defending international norms. Moreover, Trump's inconsistent leadership further exacerbated the information problem. Not only were Trump's remarks often contradictory with each other, but his cabinet also produced incoherent policy. As the cabinet members competed for Trump's attention, who had his ear varied from time to time.<sup>37</sup>

Likewise, Xi Jinping demonstrated significant differences from his three predecessors since Deng Xiaoping. During his first term, Xi's major challenge mainly came from the inner circle of the Chinese Communist Party (CCP) rather than from outside. While Xi showed strong resolve in cracking down corruptions and removing term limits for his presidency, his resolve in facing foreign adversaries, especially the USA, remained untested. It was clear though that Xi Jinping gradually moved from the long-held principle “hiding strengths and biding time,” established by Deng Xiaoping, to a more assertive and confident gesture.<sup>38</sup> China began constructing artificial islands on disputed South China reefs, a departure from the policy of “setting aside disputes and pursuing joint development” advocated by the former Premier Wen Jiabao. The Belt and Road Initiative was launched in 2013 to enhance China's global influence through economic cooperation and infrastructure connectivity. Xi also increased reliance on international institutions to enhance China's regional and global leadership.<sup>39</sup> These assertive policies demonstrated Xi's dedication in promoting China's national interests. However, the extent of his resolve to defend national interests, especially in the face of opposition, remained largely unknown to the Trump administration. Thus, as both countries embraced leaders distinct from their predecessors, mutual uncertainties emerged, setting the stage for trade confrontations that would test the resolve of both leaders.

The USA and China involved in the trade war with retaliatory tariffs from July 2018 to December 2019. The two sides failed to reach an agreement in May 2018, leading to the first episode of trade war from July to December 2018. The resumed negotiation failed again in May 2019, followed by the second episode of trade war from July to September 2019. Strategic interactions between Washington and Beijing over trade issues demonstrate two

<sup>37</sup> Jon Finer, “Trump Has No Foreign Policy,” *Politico Magazine*, 18 February 2017, <https://www.politico.com/magazine/story/2017/02/trump-has-no-foreign-policy-214797>.

<sup>38</sup> Weixing Hu, “Xi Jinping's ‘Major Country Diplomacy’: The Role of Leadership in Foreign Policy Transformation,” *Journal of Contemporary China*, Vol. 28, No. 115 (2019), pp. 1–14.

<sup>39</sup> Wei Liang, “China's Institutional Statecraft under Xi Jinping: Has the AIB Served China's Interest?” *Journal of Contemporary China*, Vol. 30, No. 128 (2021), pp. 283–98.

aspects of the information problem mentioned above: the risk-return tradeoff and costly signaling.

During the first episode of negotiations in early 2018, Beijing was confused about what Trump wanted from China and whom he would listen to. Trump's remarks on China moved from China "raping" the USA during election campaigns to not blaming China for taking advantage of the USA during his visit to Beijing.<sup>40</sup> Initially, Beijing believed that Trump cared mainly about reducing trade deficits and getting more access to China's market. In February, China's top diplomat, Yang Jiechi, visited Washington and showed willingness to work with his US counterparts and address their concerns on trade issues.<sup>41</sup> Chinese Vice Premier Liu He soon presented a proposal which included tariff reduction on US products, purchases of \$250 billion US goods, further access to China's financial sector, and negotiations for a bilateral trade agreement, but Liu's offer did not appear attractive to US officials.<sup>42</sup> Meanwhile, the US Trade Representative (USTR) issued a Section 301 report complaining about China's forced technology transfer and other practices.

Despite the reaction of US officials and the Section 301 report, Beijing maintained its assessment about Trump's preferences for two reasons. First, it appeared that Trump leveraged the Section 301 report to extract more concessions from Beijing on the trade issues. In fact, when ZTE—a leading Chinese telecommunication company—was sanctioned by the US Department of Commerce in April, Trump promised to help ZTE get back into business during his phone conversation with Xi.<sup>43</sup> Second, as US officials openly disagreed with each other during their visit to Beijing in early May, Chinese officials believed that the hawkish voice had not dominated the Trump administration.<sup>44</sup> On 20 May, Chinese Vice Premier Liu He and Secretary of the Treasury Steven Mnuchin released a joint statement that both sides agreed to put the scheduled tariffs on hold and China pledged to buy more US goods. Surprisingly though, Washington soon reinstated the tariff plans on 29 May, launching the initial round of trade war against China.

Why was the joint statement short-lived? First, the hawks finally had Trump's ear. Compared to Mnuchin, Director of National Trade Council Peter Navarro and Trade Representative Robert Lighthizer demanded more fundamental changes in how the Chinese government handles economic activities, especially regarding technology transfer, government subsidies, and cyber espionage. Lighthizer, who was heavily involved in the US-Japan trade war of 1980s, wanted to postpone negotiations and have tariffs ready to be imposed first, so that "the United States would have a better chance of forcing China to change."<sup>45</sup> Second, even though Trump considered the ZTE sanctions as a bargaining chip, he could not afford to appear weak in front of China on trade issues. After the joint agreement received negative media reactions from both the left and the right, Trump asked his team to take "a tougher approach, including tariffs, to force Beijing to bend" and even edited the statement on sanctions himself.<sup>46</sup>

When trade negotiations resumed in January 2019, Beijing was clearer about Trump's preferences. During the Trump-Xi Summit in November 2018, Chinese officials finally learned that Lighthizer would lead the trade negotiations.<sup>47</sup> Beijing also came to realize

<sup>40</sup> V. Stracqualursi, "10 Times Trump Attacked China and Its Trade Relations with the US," *ABC News*, 9 November 2017, <https://abcnews.go.com/Politics/10-times-trump-attacked-china-trade-relations-us/story?id=46572567>.

<sup>41</sup> Bob Davis and Lingling Wei, *Superpower Showdown: How the Battle Between Trump and Xi Threatens a New Cold War* (New York: Harper Business, 2020), p. 199.

<sup>42</sup> *Ibid.*, p. 203.

<sup>43</sup> *Ibid.*, p. 225.

<sup>44</sup> *Ibid.*, p. 222.

<sup>45</sup> *Ibid.*, p. 216.

<sup>46</sup> *Ibid.*, p. 228.

<sup>47</sup> Davis and Wei, *Superpower Showdown*, p. 303.

that the Trump administration sought to “decouple” with China and that getting tough on China had received bipartisan support.<sup>48</sup>

This time, however, it was Washington who underestimated Xi’s resolve in staying firm with his baseline. While the CCP was willing to further economic reforms, it was critical to ensure that these reforms were perceived as self-determined rather than yielding to external influences. Lighthizer demanded that Beijing make changes to address the key concerns of the USA, such as giving up industrial policies and government subsidies, and that “National People’s Congress approve changes”; moreover, Lighthizer wanted to keep tariffs intact as an enforcement mechanism. From Beijing’s perspective, these demands “were seen as a threat to the Communist Party’s rule and could undermine an economic system” that enabled China’s growth; Xi Jinping considered the elimination of tariffs as a “bottom-line demand.”<sup>49</sup> In late April, Xi decided to stand firm and instructed Liu to toughen the position with the USA, believing that “time was on China’s side.”<sup>50</sup> On 3 May, the US delegates were shocked to learn that their Chinese counterparts deleted all commitments to change domestic laws to meet the US demands; they soon refused to accept Liu’s promise that China would “fulfill its pledges through administrative and regulatory changes.”<sup>51</sup> At this point, another round of trade war was inevitable as each side believed that the other could not afford to leave the table without an agreement. The only way to find out was to resume the trade war. From July to September 2019, each side attempted to appear tough with additional tariffs and convince the other to concede first.

By the time high-level talks resumed in early September, Beijing and Washington had clarified mutual uncertainty about their baselines and resolves through additional tariffs imposed on one another. As the costs of trade war accumulated, domestic pressures from both sides grew to the extent that Trump and Xi were more serious in negotiating a truce than appearing tough. On the one hand, Trump’s key advisors, including Lighthizer, were more ready to accept Beijing’s offer which, in fact, was similar to the one initially proposed by Liu He in March 2018.<sup>52</sup> They came to understand that it was infeasible to request Beijing to change domestic laws or transform its economic model anytime soon. With a more coherent voice, the advisors persuaded Trump to accept a phased deal, reassuring the President that he would not be accused of “going soft on China.”<sup>53</sup> On the other, while Beijing initially wanted to eliminate all retaliatory tariffs imposed on Chinese imports, Chinese officials eventually settled for a deal that cut 15% tariffs in half on \$120 billion of Chinese products but kept 25% tariffs unchanged on the \$250 billion. During the last days of negotiations, Trump explicitly warned Chinese officials of additional tariffs if they failed to strike a deal.<sup>54</sup> To avoid further escalation of the trade war, both sides made significant concessions to reach a truce: the USA did not insist on specific changes in China’s legal system, whereas Beijing did not insist on the complete removal of US tariffs.

To sum up, costly trade war occurred due to the risk-return tradeoff as well as costly signaling. The first failure in May 2018 was mainly driven by Beijing’s uncertainty about what the Trump administration wanted. Beijing’s uncertainty was exacerbated by the significant division not only within Trump himself but also among his cabinet members. As a result, Beijing underestimated Trump’s own incentives of appearing tough in front of China

<sup>48</sup> Steven Jiang and Ben Westcott, “China’s Trade War Woes Won’t Go Away after Democrats’ Midterm Gains,” *CNN*, 7 November 2018, <https://www.cnn.com/2018/11/07/asia/us-china-democrats-midterms-intl/index.html>.

<sup>49</sup> Davis and Wei, *Superpower Showdown*, pp. 14–9.

<sup>50</sup> *Ibid.*, p. 17.

<sup>51</sup> David Lawder, Jeff Mason, and Michael Martina, “Exclusive: China Backtracked on almost All Aspects of U.S. Trade Deal-Sources,” *Reuters*, 8 May 2019, <https://www.reuters.com/article/idUSKCN1SE0WJ/>. Also see Davis and Wei, *Superpower Showdown*, pp. 20–4.

<sup>52</sup> That is, Beijing pledged to purchase more US goods, opening China’s financial market to American firms, and protect intellectual property rights more rigorously, and left tough issues for further negotiations.

<sup>53</sup> Davis and Wei, *Superpower Showdown*, p. 367.

<sup>54</sup> *Ibid.*, p. 370.

as well as the influence of hawks inside the White House. When the negotiation restarted in early 2019, the Trump administration also underestimated Beijing's resolve in maintaining its political economic system intact, leading to the second failure in May 2019.<sup>55</sup> Through the accumulation of tariffs over time, both sides were able to reduce mutual uncertainty and establish, respectively, their reputation of toughness. The Trump administration ultimately decided not to impose new tariffs on China, recognizing that a trade war against China was not "easy to win." Yet, it had no intention to lift the previously imposed tariffs, believing that Beijing was unwilling to relinquish control over its national economy as demanded by the USA. A trade truce emerged in December 2019 as both sides reached the Phase I Agreement.<sup>56</sup>

### The Commitment Problem and the Emergence of Technology War

The risk of preventive war remains low between the USA and China due to the absence of "large and rapid" shifts in the distribution of power. The concept of national power used to be restricted on material factors, such as military strength, natural resources, and economic wealth. After the end of the World War II, the emergence of the US-led international order expanded the dimensions of national power. The USA gained unparalleled ability to influence and persuade other states through the leadership in international institutions, international norms, and cultural impacts.<sup>57</sup> As the second largest economy, China has not yet replaced the Western hegemonic order dominated by the USA, nor will it soon be able to establish an alternative hegemonic identity "that would simultaneously satisfy its domestic needs and appeal to others."<sup>58</sup> China has acted as a "revisionist stakeholder" who demands for the change of its international status rather than the transformation of the international rules.<sup>59</sup> Washington may fear the rise of China, but a preventive war by force seems too costly for now.

Although China and the USA are unlikely to experience "large and rapid shifts" in the distribution of power across multiple dimensions, China has increasingly emphasized self-reliance on technology and improved in critical areas, such as the information and communications technology. In 2015, two initiatives further demonstrated Beijing's commitments in advancing technological innovation and caught the attention of the USA. The first one, titled the "Made in China 2025" Initiative (MIC 2025), attempted to gradually increase the share of domestic products in strategic sectors where China had been heavily relying on imported technologies. For instance, the MIC 2025 set the goal to increase the domestic market share of made-in-China robots to 50% by 2020 and to 70% by 2025. To

<sup>55</sup> One could argue that underlying commitment issues, though not as critical as information asymmetries, also played an important role. The US delegation's insistence on legal changes within China—though not successful—was a strategic attempt to secure a stronger commitment from Beijing. This concern reflects a deeper, albeit less overt, commitment problem that coexisted alongside the more visible and relevant information problem at the initiation stage. I thank a reviewer for this insight.

<sup>56</sup> Again, the focus on bilateral negotiations does not downplay the role of domestic politics in the US–China trade war. While I focus on why the two sides failed to achieve agreements earlier and adopted costly tariffs to signal their toughness to one another, it is beyond the scope of this paper to examine, for instance, why the attitudes about US–China trade relations had become increasingly negative or how the two governments allocated tariffs across different sectors. For the research on the role of domestic politics in the US–China trade war, see John Kuk, Deborah Seligsohn, and Jiakun Jack Zhang, "The Partisan Divide in US Congressional Communications after the China Shock," *Economics & Politics*, Vol. 34, No. 3 (2022), pp. 494–526; Shipping Hua, ed., *The Political Logic of the US–China Trade War* (Lexington: Lexington Books, 2022).

<sup>57</sup> Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton: Princeton University Press, 1984); Joseph S. Nye, *Soft Power: The Means to Success in World Politics* (New York: Public Affairs, 2004).

<sup>58</sup> Bentley B. Allan, Srđjan Vucetic, and Ted Hopf, "The Distribution of Identity and the Future of International Order: China's Hegemonic Prospects," *International Organization*, Vol. 72, No. 4 (2018), pp. 839–69.

<sup>59</sup> Suisheng Zhao, "A Revisionist Stakeholder: China and the Post-World War II World Order," *Journal of Contemporary China*, Vol. 27, No. 113 (2018), pp. 643–58.

achieve the targeted market share, the Chinese government would provide domestic companies with subsidies and easy access to cheap capital.<sup>60</sup> The second initiative, “Military-Civil Fusion” (MCF), seeks to boost collaboration between private sectors and defense industrial sectors in dual-use technologies. The MCF encourages private sectors and academic institutions to work with the military in key areas, such as aviation, automation, and information technology. To direct the MCF efforts, in 2017, the CCP established the Central Commission for Integrated Military and Civilian Development in which President Xi served as the chair and then Vice Premier Zhang Gaoli was responsible for the Commission’s daily operations. With strong government support and manufacturing capabilities, it was estimated that China could outpace the USA “in commercializing discoveries initially made in US labs and funded by US institutions.”<sup>61</sup>

The USA was also concerned about the rapid expansion of CCP’s political strength empowered by technological advances. Washington worried that CCP’s expansion of control at home could enhance its power abroad and thus threaten the interests of the USA. In 2014, China passed a national security law, giving the government more power to deal with perceived security threats both within and outside China. In 2017, a national intelligence law was passed, suggesting that intelligence agencies may ask relevant organizations and citizens to provide necessary support and cooperation. The new laws raised concerns among western countries, for they worried that Beijing might define national interests too broadly and force private companies to comply, such as sharing data with intelligence agencies. As then Secretary of State Mike Pompeo put it bluntly, “under Chinese law, Chinese companies and researchers must...under penalty of law, share technology with the Chinese military.”<sup>62</sup> Similarly, the MCF revealed Beijing’s ambitions not only in accelerating technology innovations but also in strengthening military power. As the MCF obscured the division between civilian and military development, the Trump administration warned that civilian cooperation between American researchers and their Chinese counterparts could aid China’s military development. “Simply put, in the context of MCF, it is impossible to rely upon any Chinese promise of purely peaceful or civilian end use if the technology in question has value to China’s security services or its military,” said Christopher Ford, then Assistant Secretary of State for International Security and Nonproliferation.<sup>63</sup>

In response, a series of new legislation were introduced to prevent China’s rise as a technological and military power. In August 2018, the Congress passed the National Defense Authorization Act, which included the Export Control Reform of Act (ECRA) and the Foreign Investment Risk Review Modernization Act (FIRRMA). The ECRA requires Department of Commerce’s Bureau of Industry and Security (BIS) to lead a regular inter-agency review that identifies “emerging” and “foundational” technologies and adds them to the list of export controls under the Export Administration Regulations (EAR). The FIRRMA expands the jurisdiction of the Committee on Foreign Investment in the USA (CFIUS) to protect US critical technologies from the exploitation of foreign investments. Although the new rules do not mention specific countries, it seems that China is the most important foreign target through the legislative process. The idea of ECRA emerged as the Department of Defense warned that Chinese governments had actively acquired advanced technologies

<sup>60</sup> US Chamber of Commerce, “Made in China 2025: Global Ambitions with Local Protections,” 2017, [https://www.uschamber.com/sites/default/files/final\\_made\\_in\\_china\\_2025\\_report\\_full.pdf](https://www.uschamber.com/sites/default/files/final_made_in_china_2025_report_full.pdf).

<sup>61</sup> US-China Economic and Security Review Commission, “The Annual Report to Congress: Emerging Technologies and Military-Civil Fusion: Artificial Intelligence, New Materials, and New Energy,” 2019, <https://www.uscc.gov/sites/default/files/2019-11/Chapter%203%20Section%202%20-%20Emerging%20Technologies%20and%20Military-Civil%20Fusion%20-%20Artificial%20Intelligence%2C%20New%20Materials%2C%20and%20New%20Energy.pdf>.

<sup>62</sup> Mike Pompeo, “Silicon Valley and National Security,” *US Department of State*, 13 January 2020, <https://2017-2021.state.gov/silicon-valley-and-national-security/>.

<sup>63</sup> Christopher Ford, “Bureaucracy and Counterstrategy: Meeting the China Challenge,” *US Department of State*, 11 September 2019, <https://2017-2021.state.gov/bureaucracy-and-counterstrategy-meeting-the-china-challenge/>.

in Silicon Valley.<sup>64</sup> During the drafting period, the MIC 2025 was informally cited to justify extra controls.<sup>65</sup> In addition, the FIRRMA requires the Secretary of Commerce to file reports on Chinese investment every 2 years with detailed breakdown, including whether and how Chinese investments align with the goals of the MIC 2025.<sup>66</sup>

In practice, earlier restrictions focused on blocking the US market from the Chinese tech companies who Washington believed had links Beijing.<sup>67</sup> In May 2018, the Pentagon banned stores on military bases from selling phones made by ZTE and Huawei, citing security concerns.<sup>68</sup> In May 2019, President Trump signed an executive order prohibiting the purchase or use of any communications technology produced by entities who were controlled by “a foreign adversary” and likely to create an “undue risk of sabotage” of US communications systems; without specifying particular entities, the executive order was almost certain to target Huawei and other Chinese telecommunication firms.<sup>69</sup> The Federal Communications Committee later cut off funding to rural wireless carriers who used equipment from Huawei or ZTE.<sup>70</sup> The Trump administration also warned US allies against using Huawei’s equipment in their telecommunication networks.<sup>71</sup> The earlier measures appeared more defensive in nature, mainly to protect data privacy and critical infrastructure from Chinese equipment.

Nonetheless, the Trump administration soon took more offensive steps in preventing Chinese technology companies from growing and advancing. Through entity listings and export controls, the US government restricted leading Chinese technology companies from acquiring US technologies and components. As the largest provider of 5G equipment and the second-largest manufacturer of smartphones, Huawei replaced ZTE as the main target of the USA in 2019. The Trump administration understood that the ban on purchasing Huawei products alone was not enough, for the USA was not Huawei’s core market and only a few governments were readily willing to follow Washington’s lead in banning Huawei’s equipment. Therefore, on the same day when Trump banned purchases of Huawei’s product, the Commerce Department added Huawei to the “entity list,” banning US firms from selling components and technologies, such as semiconductor chips or Google’s Android system, to

<sup>64</sup> Michael Brown and Pavneet Singh, “China’s Technology Transfer Strategy: How Chinese Investments in Emerging Technology Enable A Strategic Competitor to Access the Crown Jewels of U.S. Innovation,” *Defense Innovation Unit Experimental*, January 2018, <https://nationalsecurity.gmu.edu/wp-content/uploads/2020/02/DIUX-China-Tech-Transfer-Study-Selected-Readings.pdf>.

<sup>65</sup> Kevin Wolf, Thomas McCarthy, and Andrew Schollossberg, “The Export Control Reform Act and Possible New Controls on Emerging and Foundational Technologies,” *Akin Gump*, 12 September 2018, <https://www.akingump.com/en/insights/alerts/the-export-control-reform-act-of-2018-and-possible-new-controls>.

<sup>66</sup> *Ibid.*

<sup>67</sup> The politicization of the forced technology transfer, highlighted in the initial USTR 301 investigation, and accompanying trade disputes, can be interpreted as a calculated probe—consistent with the prediction driven by the information problem—into China’s resolve to safeguard its high-tech ambitions, including the MIC 2025. The earlier development of the technology war, in conjunction with the trade war, underscore the complex dynamic where informational asymmetries and commitment issues intertwined at the initial stages of the economic war between the USA and China. I thank a reviewer for this insight.

<sup>68</sup> For a full timeline of US bans on Huawei, see Sean Keane, “Huawei Ban Timeline: Detained CFO Makes Deals with US Justice Department,” *CNET*, 30 September 2021, <https://www.cnet.com/news/privacy/huawei-ban-timeline-detained-cfo-makes-deal-with-us-justice-department/>.

<sup>69</sup> Eric Geller, “Trump Signs Order Setting Stage to Ban Huawei from U.S.,” *Politico*, 15 May 2019, <https://www.politico.com/story/2019/05/15/trump-ban-huawei-us-1042046>.

<sup>70</sup> David McCabe, “Huawei Funds Are Cut Off by F.C.C. Over Security Threats,” *The New York Times*, 22 November 2019, <https://www.nytimes.com/2019/11/22/technology/huawei-funds-cut-fcc.html>.

<sup>71</sup> Australia and Japan quickly followed suit, whereas major European allies, such as France and Germany, were not ready to give up their independent decision-making process. Nonetheless, as Beijing stepped up control in Xinjiang and passed the national security law for Hong Kong in 2020, more countries were persuaded to ban Huawei from their 5G networks or tighten scrutiny. For instance, Britain, who initially permitted Huawei equipment in its noncritical network, changed the decision to ban Huawei entirely from its 5G network in July 2020. See Robbie Gramer, “Trump Turning More Countries in Europe Against Huawei,” *Foreign Policy*, 27 October 2020, <https://foreignpolicy.com/2020/10/27/trump-europe-huawei-china-us-competition-geopolitics-5g-slovakia/>.

Huawei unless approved by the government.<sup>72</sup> Losing access to the Android system proved to be a significant hit to Huawei. In 2020, overseas shipments of Huawei's smartphones fell by 35% in the first quarter and 27% in the second quarter year-on-year.<sup>73</sup> In May 2020, the Commerce Department extended the ban to cover foreign semiconductor manufacturers who used US technology to make chips customized for Huawei; in August, the ban prohibited sales of all chips with US technology to Huawei, customized or not, essentially cutting Huawei's access to major semiconductor manufacturers in South Korea and Taiwan.<sup>74</sup> According to Kevin Wolf, former Assistant Secretary of Commerce for Export Administration in BIS, these bans were unilateral for they were "specific to particular end users and primarily apply to commercial items not identified on any of the multilateral regime lists of dual-use items."<sup>75</sup>

Beyond sanctions against Huawei, the Trump administration tightened export controls and investment screening on Chinese businesses. As mentioned earlier, the new legislation prohibits the export, reexport, and transfer of "emerging" and "foundational" technologies to China for "military end use" or "military end users." On the one hand, the Trump administration expanded the scope of military end to address challenges posed by the MCF. In January 2020, BIS expanded the scope of "military end use" and "military end users" such that "even if an export of a covered item is purely for civil end uses and the recipient is otherwise engaged in civil activities, the entity is still a military end user if any other part of its business supports military end uses".<sup>76</sup> Based on the new definition, BIS published an updated list of "military end users" including 57 Chinese entities. On the other, the critical technologies BIS attempted to control closely matched the key industries listed in the MIC 2025. In October 2020, BIS published a list of "emerging" technologies, including but not limited to hybrid additive manufacturing, computational lithography software, and technology for finishing semiconductor wafers for 5 nm production. While the scope of "emerging" technologies was narrower than "foundational" ones, it took BIS nearly 2 years to finalize this list and ensure implementation of export controls through the Wassenaar Arrangement, a multilateral export control regime in which the USA and many of its like-minded partners are members. Regarding "foundational" technologies such as artificial intelligence, semiconductors, and robotics, it was widely believed that the Trump administration would impose unilateral export controls even if it was difficult to coordinate multilateral enforcement of these restrictions.<sup>77</sup>

The Trump administration also took a series of unprecedented measures against Chinese researchers in the name of fighting against economic espionage. In June 2018, the White House Office of Trade and Manufacturing Policy released a report on "How China's Economic Aggression Threatens the Technologies and Intellectual Property of the United States and the World," documenting how "the Chinese State seeks to access the crown jewels of American technology and intellectual property" through theft, espionage, forced technology transfer, talent recruitment, and state-backed investment. President Trump reportedly claimed that "almost every [Chinese] student that comes over to this country is a spy."<sup>78</sup> In

<sup>72</sup> Keane, "Huawei Ban Timeline."

<sup>73</sup> Dan Strumpf, "Huawei Overtakes Samsung as Top Handset Maker Thanks to Robust China Sales," *Wall Street Journal*, 12 May 2020, <https://www.wsj.com/articles/huawei-struggles-to-get-along-without-google-11589277481>.

<sup>74</sup> Jeanne Whalen and Ellen Nakashima, "U.S. Tightens Restrictions on Huawei Yet Again, Underscoring the Difficulty of Closing Trade Routes," *Washington Post*, 17 August 2020, <https://www.washingtonpost.com/business/2020/08/17/us-cracks-down-huawei-again/>.

<sup>75</sup> Kevin Wolf, "Developments in Unilateral U.S. Dual-Use Export Controls," *AW-Prax*, April 2021, [https://www.akingump.com/a/web/4TkJLuDdoUSF4gJMCz9ya/3b2k3P/beitrag-wolf-aus-aw-prax\\_2021\\_04\\_v2-korr-2-umbruch.pdf](https://www.akingump.com/a/web/4TkJLuDdoUSF4gJMCz9ya/3b2k3P/beitrag-wolf-aus-aw-prax_2021_04_v2-korr-2-umbruch.pdf).

<sup>76</sup> Wolf, "Developments in Unilateral U.S. Dual-Use Export Controls," p. 184.

<sup>77</sup> *Ibid.*

<sup>78</sup> Annie Karni, "Trump Rants behind Closed Doors with CEOs," *Politico*, 8 August 2018, <https://www.politico.com/story/2018/08/08/trump-executive-dinner-bedminster-china-766609>.

November 2018, the Department of Justice launched the China Initiative, the first country-specific initiative in the Department's history, to confront "China's malign behaviors" as mentioned above. Chinese scientists who conducted research in the USA received increasing scrutiny for potential connections with the Chinese government or military. During the Trump administration, numerous researchers were investigated and some later faced charges. However, many cases were associated not with national security issues, such as economic espionage, but with "research integrity" issues, such as researchers accused of failing to disclose China-related grants. The China Initiative appeared "an umbrella term for cases with almost any connection to China."<sup>79</sup> Although the China Initiative imposed significant costs on both sides by disrupting the once thriving research collaboration between China and the USA, the Trump administration considered it necessary to prevent China from obtaining critical technologies of the USA.

In summary, although the risk of preventive war remained low between the USA and China, the Trump administration implemented a series of costly measures to prevent China's rise as a global tech power.<sup>80</sup> China's technological progress has so far relied on foreign technologies, especially those from the USA. To maintain technological supremacy, the Trump administration took the "whole-of-government" approach to block China's access to US-related critical technologies and received strong bipartisan support from the Congress. The new legislation authorized executive branches to expand the scopes of military use and military users subject to export controls and investment screening. In practice, many costly measures were designed to undermine China's capabilities in advancing technology, however, without broad support beyond close allies.

## Persistence of the US–China Economic War

Drawing from the formal literature of bargaining and war, the previous section suggests that there are two causal mechanisms within the existing US–China confrontation. On the one hand, the initiation of trade war in the form of retaliatory tariffs was mainly driven by mutual uncertainty and ineffective communications between Beijing and Washington. On the other, the technology war, featured with blocking China's access to critical technologies through various measures to prevent its rising power, was largely consistent with the logic of the commitment problem. This section further discusses how the trade war and the technology war have persisted during the Biden administration.

### Trade Truce with Old Tariffs in Place

The bargaining literature suggests that tensions driven by the information problem alone tend to cool down over time after private information is clarified. Uncertainty encourages leaders to miscalculate the others' resolve or to demonstrate their own resolve with tough gestures, increasing the risks of conflicts. Once the information problem is alleviated, both sides are less likely to adopt *additional* costly tools (e.g. launching a new trade war) to signal their preferences or resolve. However, when the information problem and the commitment problem are *both* present, solving the information problem alone may not be sufficient to resolve an existing conflict; as uncertainty declines, the commitment problem becomes more prominent and can prolong the conflict.

The leadership transition to Joe Biden brings less uncertainty between Beijing and Washington as they are more familiar with each other. Biden's extensive experience in the Senate

<sup>79</sup> Eileen Guo, Jess Aloe, and Karen Hao, "The US Crackdown on Chinese Economic Espionage is a Mess. We Have the Data to Show It," *MIT Technology Review*, 2 December 2021, <https://www.technologyreview.com/2021/12/02/1040656/china-initiative-us-justice-department/>.

<sup>80</sup> Again, the technology war was not devoid of information problems; the politicization of issues such as forced technology transfer was also a strategic probe into China's resolve to defend its high-tech companies.

Committee on Foreign Relations and two visits to China as Vice President make it easier for foreign observers to trace his foreign policy preferences. Biden and key figures in his foreign policy team, including Anthony Blinken and Jake Sullivan, served in the Obama administration and developed close working relationships with Biden. Kurt Campbell, Biden's Indo-Pacific coordinator, is considered the architect of the "pivot to Asia" strategy. With a team of Obama-era veterans close to Biden, the Biden administration is more familiar with foreign policy to Beijing.

The Biden administration has inherited a more profound understanding of Beijing's positions, a legacy of the insights gained from Trump's trade war. As the trade war dragged on, while Beijing became disillusioned with Trump's "America First" policy and the bipartisan support for getting tough on China, the Trump administration realized that it had underestimated Xi Jinping's determination to safeguard CCP's dominance in economic affairs.<sup>81</sup> This understanding carried over into the Biden administration. Key figures within Biden's team, having witnessed the trajectory of Trump's trade war, questioned the effectiveness of Trump's practice in pushing China to change its economic system and stated that their goal was not to overthrow CCP's leadership. US national security adviser Jake Sullivan emphasized that the Biden administration sought a system of peaceful coexistence and would not try to transform China.<sup>82</sup> This stance has led to a trade policy that avoids further escalation through *additional* tariffs, suggesting that the information asymmetry that once provoked the trade war has significantly diminished.

However, the underlying commitment problem has become more prominent in trade issues. The system of coexistence, as Sullivan suggested, is characterized by competition rather than rapprochement. Secretary of State Blinken also stated that the USA was not seeking to change China's political system, but rather to engage in strategic competition with China and address areas of concern including trade practices.<sup>83</sup> Such a stance provides context for the Biden administration's decision to retain the tariffs established from the previous administration, despite domestic pressures to ease tariffs to mitigate inflation. US Trade Representative Katherine Tai has been a vocal opponent against lifting tariffs, arguing that "the United States has repeatedly sought and obtained commitments from China, only to find that lasting change remains elusive."<sup>84</sup> According to the US Trade Representative report, China had "doubled down on its harmful trade and economic abuses" and has not fulfilled its promised purchases of US goods under the Phase I trade agreement.<sup>85</sup> Tai viewed the existing tariffs imposed on China not only as a "significant piece of leverage" that she would not easily "walk away from" but as a critical tool that could "help improve the competitive position of the US economy in the medium and long term."<sup>86</sup>

Compared to the Trump era, the Biden administration has chosen to avoid imposing new tariffs and maintain existing tariffs. This combination of strategic moves indicates the resolution of the informational asymmetries, yet it also highlights an enduring commitment

<sup>81</sup> In fact, the Trump administration had launched trade wars or threatened to impose tariffs against several other economies, including Japan, Canada, Mexico, and the European Union, but Beijing's responses were consistently tougher.

<sup>82</sup> Fareed Zakaria (Host), "Interview with National Security Adviser Jake Sullivan," CNN, 7 November 2021, <https://transcripts.cnn.com/show/fzgps/date/2021-11-07/segment/01>.

<sup>83</sup> Antony J. Blinken, "The Administration's Approach to the People's Republic of China," 26 May 2022, <https://www.state.gov/the-administrations-approach-to-the-peoples-republic-of-china/>.

<sup>84</sup> Katherine Tai, "Testimony of Ambassador Katherine Tai Before the Senate Finance Committee Hearing on the President's 2022 Trade Policy Agenda," March 2022, <https://ustr.gov/about-us/policy-offices/press-office/speeches-and-remarks/2022/march/testimony-ambassador-katherine-tai-senate-finance-committee-hearing-presidents-2022-trade-policy>.

<sup>85</sup> US Trade Representative, "2022 Trade Policy Agenda and 2021 Annual Report," 2022, [https://ustr.gov/sites/default/files/2022/TradePolicyAgendaand2021AnnualReport\(1\).pdf](https://ustr.gov/sites/default/files/2022/TradePolicyAgendaand2021AnnualReport(1).pdf).

<sup>86</sup> David Lawder, "USTR Tai Calls U.S. Tariffs on Chinese Goods 'Significant' Leverage," *Reuters*, 22 June 2022, <https://www.reuters.com/business/ustr-tai-says-us-tariffs-chinese-goods-are-significant-leverage-2022-06-22/>.

problem that has become more salient. Despite reduced uncertainty, the Biden administration has recognized that Beijing remains unyielding in modifying its trade and economic policies. As a result, revoking current tariffs might inadvertently bolster China's position rather than elicit the desired reform. In summary, while the information problem that once triggered the trade war during the Trump era has largely been resolved, the existing tariffs remain in place under the Biden administration, reflecting the growing significance of the commitment problem.

### “Clear-eyed” Technology War with Domestic Empowerment

Since the two countries are unlikely to experience “rapid and large” shifts in the distribution of power, the USA will not initiate a preventive war against China anytime soon. Although China is catching up with the USA in terms of economic and military power, it takes much longer to cultivate and accumulate non-material aspects of power, such as the powers of influence and agenda setting. For instance, China's Belt and Road Initiative has received skepticism and occasional setbacks, revealing the difficulties of transforming China's material strengths to substantial influence and even admiration. As Yan Xuetong observes, China still lacks “high-quality friends” which he believes is the core of competition with the USA.<sup>87</sup>

Nonetheless, the expansion of power dimensions suggests that states can confront each other with costly non-militarized tools. The preventive technology war that emerged during the Trump administration has endured, as the Biden administration remains concerned about China's rising technology power. Preferring the term “competition,” the White House suggests that the technology competition with China is “one of the administration's main focuses.”<sup>88</sup> In a *Foreign Affairs* article, then-candidate Biden emphasized the need of getting tough with China who would dominate “the technologies and industries of the future” by stealing US technology and subsidizing state-owned enterprises.<sup>89</sup>

The Biden administration has maintained and will continue the preventive technology war against China albeit in a more patient and measured way. First, after reviewing Trump's China policies, the Biden administration revoked or put a halt on several aggressive moves against Chinese companies. For instance, the Trump administration cited the national security threat to force the sale of TikTok's American operations to US firms and ban the Chinese social media app WeChat from accessing mobile app stores and essential internet services in the USA. In June 2021, President Biden signed an executive order which revoked Trump's bans on WeChat and other Chinese “connected software applications” and called for more “rigorous, evidence-based analysis.”<sup>90</sup> Similarly, the Department of Justice officially ended the China Initiative in March 2022, due to its increasing controversy in targeting Chinese researchers in the USA. The Department of Justice also dropped five cases against Chinese researchers accused of visa fraud. Yet, the Biden administration has continued Trump's strategies of export controls and investment screening to prevent China's access to US technologies. In August 2023, Biden signed an executive order, restricting or prohibiting US investment in China in sensitive technologies such as “semiconductors and microelectronics, quantum information technologies, and artificial intelligence sectors.”<sup>91</sup> Citing the concerns

<sup>87</sup> Ali Wyne, “Does China Need More Friends in Asia?” *The National Interest*, 20 March 2016, <https://nationalinterest.org/feature/chinas-next-move-build-alliances-15550>.

<sup>88</sup> Bob Davis and Gordon Lubold, “Biden, China's Xi Hold Talks Over Human Rights, Trade, Climate,” *Wall Street Journal*, 11 February 2021, <https://www.wsj.com/articles/biden-to-launch-a-pentagon-review-of-china-strategy-11621979574>.

<sup>89</sup> Joe Biden, “Why America Must Lead Again: Rescuing US Foreign Policy after Trump,” *Foreign Affairs*, Vol. 99, No. 2 (2020), pp. 64–76.

<sup>90</sup> The White House, “FACT SHEET: Executive Order Protecting Americans' Sensitive Data from Foreign Adversaries,” 9 June 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/09/fact-sheet-executive-order-protecting-americans-sensitive-data-from-foreign-adversaries/>.

<sup>91</sup> The White House, “Executive Order on Addressing United States Investments in Certain National Security Technologies and Products in Countries of Concern,” 9 August 2023, <https://www.whitehouse.gov/briefing-room/>

posed by China's MCF strategies, BIS announced further export controls on advanced chips and semiconductor manufacturing equipment to China.<sup>92</sup>

Second, the Biden administration pursues the so-called "clear-eyed strategy" with a stronger focus on enhancing domestic strengths to compete against China. During his interview with the *CNN*, Sullivan described the clear-eyed strategy as investments in the sources of domestic strength to "more effectively compete with China on technology and innovation."<sup>93</sup> Biden pushed forward the Build Back Better Bill with massive funding for social welfare and critical infrastructure, a formula his administration believes would help the USA outperform China in the long run. To strengthen domestic capacity of semiconductor manufacturing, Biden held talks with major semiconductor companies—Taiwan Semiconductor Manufacturing Company (TSMC), Samsung, and Intel—about building chip factories in the USA, and recently urged the Congress to pass the Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America Act, which includes \$52 billion fund for semiconductor manufacturing and research. In sum, while the Trump administration attempted to quickly disrupt China's technological development overwhelmingly through sanctions and bans, the Biden administration appears to play a long game, mixing preventive measures such as investment bans and export controls with strategies of strengthening domestic competitiveness.

Regardless of tactical changes from the US side, China will continue to invest in technological development with greater emphasis on self-reliance. China is years behind the top tier of chip manufacturers and decades behind in terms of research and design.<sup>94</sup> After Trump escalated the technology war by blocking Chinese companies from acquiring chips using US technology, the inability of designing and building cutting-edge chips put China's seemingly powerful 5G technology at a vulnerable position, forcing Beijing to accelerate the development of the semiconductor industry. In October 2019, Beijing launched a second national semiconductor fund of RMB 204.2 billion. Even though Biden's clear-eyed strategy may relax sales restrictions on low-tech chips, these tactical changes cannot obscure the ongoing competition and the bipartisan consensus on China's threat. On the same day of the 2020 US election, the CCP issued the outlines for the 14th Five-Year Plan (2021–25) and the 15-year plan (2021–35).<sup>95</sup> For the first time, the Five-Year Plan prioritized "technological innovation" among 12 key missions and emphasized that innovation occupied the "core position" in driving China's modernization. The CCP also pledged to make "major breakthroughs in key core technologies" and become a global leader in innovation by 2035.<sup>96</sup>

In addition, China will continue to compete with the USA in setting international technical standards to increase influence in the global market. With the emergence of new technologies, Beijing sees a great opportunity for China's industrial standards to take the lead, as "global technical standards are still in the process of being formed."<sup>97</sup> In January 2018, Beijing launched the "China Standards 2035" initiative, a blueprint in setting

presidential-actions/2023/08/09/executive-order-on-addressing-united-states-investments-in-certain-national-security-technologies-and-products-in-countries-of-concern/.

<sup>92</sup> Bureau of Industry and Security (BIS), US Department of Commerce, "Commerce Strengthens Restrictions on Advanced Computing Semiconductors, Semiconductor Manufacturing Equipment, and Supercomputing Items to Countries of Concern," 17 October 2023, <https://www.bis.doc.gov/index.php/documents/about-bis/newsroom/press-releases/3355-2023-10-17-bis-press-release-acs-and-sme-rules-final-js/file>.

<sup>93</sup> Zakaria, "Interview with National Security Adviser Jake Sullivan."

<sup>94</sup> Paul Triolo and Kevin Allison, "The Geopolitics of Semiconductors," *Eurasia Group*, September, 2020, <https://www.eurasiagroup.net/files/upload/Geopolitics-Semiconductors.pdf>.

<sup>95</sup> The full text was released in March 2021.

<sup>96</sup> Danson Cheong, "CCP Sets Course for China to Become Tech Power by 2035," *Strait Times*, 30 October 2020, <https://www.straitstimes.com/asia/east-asia/ccp-sets-course-for-china-to-become-tech-power-by-2035>.

<sup>97</sup> Valentina Pop, Sha Hua, and Daniel Michaels, "From Lightbulbs to 5G, China Battles West for Control of Vital Technology Standards," *Wall Street Journal*, 8 February 2021, <https://www.wsj.com/articles/from-lightbulbs-to-5g-china-battles-west-for-control-of-vital-technology-standards-11612722698>.

standards in advanced technologies such as big data, artificial intelligence (AI), and cloud computing. As the tensions with the USA escalated, Beijing dropped the China Standards 2035 (and the MIC 2025) in public and focused on the standardization plan domestically. Nonetheless, the battle for international technical standards continues quietly. According to a Chinese private think tank, China's submissions to the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) have recently increased by 20% annually. In 2019, China submitted 830 technical documents related to telecommunication to the International Telecommunication Union (ITU), ranking the top and surpassing the total submissions of the following three countries—South Korea, the USA, and Japan.<sup>98</sup>

## Alternative Explanations

Two alternative views merit discussion. The first one emphasizes the role of domestic politics particularly in the trade war. A general argument is that domestic politics in the USA matters the most as the trade war was mainly initiated by the USA with China being responsive to it. As mentioned earlier, domestic factors certainly contributed to the growing divergence of interests between the USA and China. There was widespread dissatisfaction within the USA over the loss of jobs attributed to China's trade practices and currency manipulations. This dissatisfaction was a significant factor in President Trump's election, where he pledged to reduce trade deficits and bring jobs back to the USA.<sup>99</sup> Furthermore, US businesses and trade associations expressed concerns that the Chinese market was increasingly closed off to foreign companies, arguing that the sectors with heavy government procurement increasingly favored state-owned enterprises over foreign-invested companies. Such concerns added to the domestic pressure on the US government to adopt a tougher stance towards China.<sup>100</sup>

While domestic politics plays a critical role in shaping the conflicting interests between states and can determine who benefits or loses from international outcomes, this perspective is less useful in explaining why conflicting interests sometimes escalate into costly outcomes, which require an examination of strategic interactions between two governments. In the context of the US–China trade relations, although domestic frustrations regularly surfaced in the US presidential elections and previous administrations responded with specific and yet modest measures, these tensions never led to a full-scale trade war prior to the Trump administration. Even after Trump came to power, domestic preferences alone cannot fully explain the dynamics and outcomes of bilateral negotiations, such as how the governments communicated their positions and when they decided to carry out their threats or accepted compromises. The fact that China was responsive to the US initiative does not diminish but highlight the importance of examining the strategic interactions between

<sup>98</sup> Jeffrey Ding, "China Standards 2035—Coming Soon," *ChinAI Newsletter*, 21 December 2020, <https://chinai.substack.com/p/chinai-124-china-standards-2035-coming>.

<sup>99</sup> Tao Liu and Wing Thyee Woo, "Understanding the U.S.–China Trade War," *China Economic Journal*, Vol. 11, No. 3 (2018), pp. 319–40.

<sup>100</sup> Wang, "Interpreting US-China Trade War Background, Negotiations and Consequences," pp. 111–25. The domestic attitude about trade policy and rival competitions is a complex topic that requires a more comprehensive analysis which is beyond the scope of this paper. Recent studies have highlighted the role of various domestic actors, including interest groups, political parties, mass media, and the general public. See Hua, *The Political Logic of the US-China Trade War*; Tanja Schweinberger, "How Promise Breaking in Trade Rhetoric Shapes Attitudes toward Bilateral US-China Trade Cooperation," *Business and Politics*, Vol. 24, No. 4 (2022), pp. 463–90; Ka Zeng et al., "Bilateral Tensions, the Trade War, and US-China Trade Relations," *Business and Politics*, Vol. 24, No. 4 (2022), pp. 399–429; David Bulman, "Instinctive Commercial Peace Theorists? Interpreting American Views of the US-China Trade War," *Business and Politics*, Vol. 24, No. 4 (2022), pp. 430–62; Yongai Jin, Shawn Dorius, and Yu Xie, "Americans? Attitudes toward the US-China Trade War," *Journal of Contemporary China*, Vol. 31, No. 133 (2022), pp. 17–37; Sijong Lim and Seiki Tanaka, "Why Costly Rivalry Disputes Persist: A Paired Conjoint Experiment in Japan and South Korea," *International Studies Quarterly*, Vol. 66, No. 4 (2022), pp. 1–13.

the two governments. China's reactions were influenced by its expected calculations about what the Trump administration wanted, how much it could afford to concede, and how long it could endure a costly trade war. By analyzing these strategic interactions, we gain a deeper understanding of the underlying dynamics that led to the trade war and its eventual outcomes.

In short, while domestic politics is essential to understanding the evolution of diverging interests between the USA and China, analyzing strategic interactions between the governments is crucial to understanding how these differences escalated into costly wars. This paper aims to focus on the latter by exploring the differences in US–China strategic interactions between the trade war and the technology war, including the use of tariffs and technology restrictions.

The second alternative perspective involves the international context, suggesting that the explanation for the disparity in the US government's approach to the technology war versus the trade war should include the role of multilateral cooperation. The argument is based on the notion that technology issues hold greater significance as a multilateral concern than the trade war: the US can decrease Chinese imports on its own, but it cannot prevent China entirely from accessing advanced technology without multilateral cooperation.

While a detailed analysis is beyond the scope of this paper, the necessity of multilateral cooperation depends more on the scope of policy objectives than on the issues themselves. If an objective has a narrow focus, multilateral cooperation may not be necessary. For example, the USA may be able to reduce Chinese imports on its own. Similarly, if the goal is to mitigate national security risks posed by Chinese technology, the USA can independently accomplish this objective by blocking Huawei's access to the US market. However, if an objective is more aggressive, such as preventing China from accessing critical advanced technologies entirely, multilateral cooperation becomes essential. In fact, this logic applies to trade issues as well. If the goal is to cut off China from international trade, the USA would also require cooperation from other countries. Regardless, the need for multilateral cooperation is not the key factor that distinguishes the technology war from the trade war.

Even though the need for multilateral cooperation may be significant in technology areas, adding such discussion would not alter my main argument. For instance, when the US government persuaded other countries to adopt similar export restrictions on China on semiconductor technologies, some governments, such as South Korea, have been reluctant to follow the US practice, as they do not face the same commitment problem. Recently, other governments, like the Netherlands, agreed to impose export restrictions on China, either partially sharing Washington's concerns due to the commitment problem or under enormous pressure (even threats) from US officials. The reactions from other countries either align with the prediction of the commitment problem or stem from other considerations beyond the scope of this paper.

## **Conclusion**

How can we understand the initiation and progression of the “economic war” between the USA and China? This article focuses on two aspects of recent US–China economic confrontations: the trade war featured with retaliatory tariffs and the technology war featured with restrictions on China's access to US technology. Building on the literature of bargaining and war, I argue that the trade war and the technology war were initiated for different origins. The outbreak of the trade war was mainly attributed to the information problem due to mutual uncertainty and ineffective communication between China and the USA. On the other hand, the outbreak of the technology war was driven by the dynamics of power shifts over time. Washington was concerned about the commitment problem raised

by China in the technology area and thus adopted preventive measures to disrupt China's progress towards a technology giant. Since Biden came to office, the information problem has declined in the bilateral relationship as the Biden administration presents greater familiarity to Beijing and vice versa. Nonetheless, the Biden administration continues to view China as the most important competitor in advanced technology. Thus, the trade war is likely to cool down whereas the technology war continues albeit in a more measured and patient way.

My research contributes to the existing literature by exploring the interaction and relative importance between the information problem and the commitment problem in the realm of economic conflicts. There has been increasing attention in examining the interaction between the two problems in interstate conflicts, civil war, and regime changes.<sup>101</sup> I complement these growing efforts by extending their scope to the political economy of great power competition. The trajectory of US–China economic confrontations resonates with two patterns identified in the literature. First, the dynamics of international conflicts often emerge as an interplay between the information problem and the commitment problem despite the predominance of one over the other at various stages. Second, as illustrated in the trade war, a conflict initiated due to informational asymmetries can gradually transition to being dominated by commitment issues, therefore perpetuating the duration and complexity of the conflict. By applying a well-established theory of interstate militarized conflict and expanding the scope of bargaining and war to the field of international political economy, I contribute to a growing literature that links conflict studies and international political economy.<sup>102</sup>

The theoretical framework established in this paper provides a foundation for exploring the multifaceted nature of US–China competition beyond the trade and technology conflicts. We can anticipate similar patterns of the information and commitment problems as the competition extends into the financial sector. Currently, the USA holds a dominant position in global finance, particularly in currency leadership, whereas China is rapidly emerging as a significant player. Future research could explore how information asymmetry and commitment challenges in financial policies affect their economic competitions and the global financial stability. Infrastructure development and foreign aid, while not direct battlegrounds between the USA and China, play crucial roles in their global influence strategies. These initiatives are closely tied to the commitment and information problems facing recipient countries, which are uncertain about the intentions behind these projects. Effectively addressing these problems will allow a great power to significantly boost its influence. By uncovering how these dynamics influence geopolitical strategies, future research can provide insights into the strategic use of non-military tools for global influence.

Another potential area for future research is to reexamine whether a rising power or a declining power is satisfied with the existing international order. One of the key assumptions in the commitment problem is that the rising power—dissatisfied with the existing international order—seeks to change the existing order that has benefited the declining power most. The recent development of China–US relations may suggest the opposite. On the one hand, some scholars suggest that China has become more committed to defending the prevailing international order,<sup>103</sup> whereas others argue that China is changing the norms and rules

<sup>101</sup> Brandon K. Yoder, “Retrenchment as a Screening Mechanism: Power Shifts, Strategic Withdrawal, and Credible Signals,” *American Journal of Political Science*, Vol. 63, No. 1 (2019), pp. 130–45; Michael G. Findley, “Bargaining and the Interdependent Stages of Civil War Resolution,” *Journal of Conflict Resolution*, Vol. 57, No. 5 (2013), pp. 905–32; Alexander B. Downes and Lindsey A. O’Rourke, “You Can’t Always Get What You Want: Why Foreign-Imposed Regime Change Seldom Improves Interstate Relations,” *International Security*, Vol. 41, No. 2 (2016), pp. 43–89.

<sup>102</sup> David A. Lake, “Open Economy Politics: A Critical Review,” *The Review of International Organizations*, Vol. 4 (2009), pp. 219–44; Thomas Oatley, “The Reductionist Gamble: Open Economy Politics in the Global Economy,” *International Organization*, Vol. 65, No. 2 (2011), pp. 311–41.

<sup>103</sup> Chan, Hu, and He, “Discerning States’ Revisionist and Status-quo Orientations,” pp. 613–40.

of the international order, for instance, with the provision of “no string attached aid.”<sup>104</sup> On the other hand, even though the Biden administration pledges to promote human rights and clean energy, the USA remains dissatisfied with the existing economic order, which it believes has been unfairly exploited by China, and calls for a new economic order ruled by like-minded countries.<sup>105</sup> When will a rising power be committed to preserving the existing international order, whereas a declining power seeks to revise it? Addressing this question requires further exploration of the concept of revisionism and the different dimensions of the international order.<sup>106</sup>

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<sup>104</sup> Moises Naim, “Rogue Aid,” *Foreign Policy*, No. 159 (2007), pp. 95–6.

<sup>105</sup> Kurt M. Campbell and Jake Sullivan, “Competition without Catastrophe: How American Can Both Challenge and Coexist with China,” *Foreign Affairs*, Vol. 98, No. 5 (2019), pp. 96–110.

<sup>106</sup> For constructivism, please see Kai He et al., “Rethinking Revisionism in World Politics,” *Chinese Journal of International Politics*, Vol. 14, No. 2 (2021), pp. 159–86. For the international order, see Jessica Chen Weiss and Jeremy L. Wallace, “Domestic Politics, China’s Rise, and the Future of the Liberal International Order,” *International Organization*, Vol. 75, No. 2 (2021), pp. 1–30.

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