



## RESEARCH PAPER

### Geopolitics of Climate Change: US and China are Reciprocal Contenders

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PAPER INFO	ABSTRACT
<p><b>Received:</b> June 29, 2021</p> <p><b>Accepted:</b> September 20, 2021</p> <p><b>Online:</b> September 23, 2021</p> <p><b>Keywords:</b> China, Climate Change, Geopolitics, Strategic Rivalry, United States</p> <p><b>*Corresponding Author:</b></p> <p>soniyarajpout@gmail.com</p>	<p>The United States and China are anticipated to have major impacts on global temperature change. The United States was the nation that transmits the most greenhouse gases throughout the previous century. Since that time, the primary component of greenhouse gases, carbon dioxide, has lingered in the atmosphere for about 100 years. This article illustrates how climate change is a geopolitical issue. It demonstrates how lowering greenhouse gas emissions affect spatial politics. Without consideration of deeper geopolitical dynamics in the larger international system, it is impossible to comprehend the complicated politics of climate change. The resurgence of "great-power politics" is between China and the US as well as the two countries' inability to socialize with one another and integrate into international governance frameworks. An effective global climate regime can only be established through cooperation between the USA and China. Recent US-China climate change relations reveal a divergent trend of constructive bilateral cooperation and combative interactions in multilateral climate negotiation. The overwhelming size and impending climate change deadline would not be possible without the state's heavy lifting and capacity to influence behavior on a national scale. Climate mitigation and adaptation are impractical without the state's heavy lifting and its capacity as a national body to inspire behavioral change. Hence, it concludes that currently, both divisive actors are more focused on geopolitical competition rather than combating with climate change crisis. The paper goes on to say that if these reasons are essentially true, the field of international relations has to concentrate considerably more on the climate crisis and reconnect with its state-related traditions of thought.</p>

## Introduction

The term "Geopolitics" all the while represents the rivalry of states; the role of geographical settings in human matters, in international politics specifically; and the methods of information and portrayal that shape related political discourse and policy formulation (flint, 2006). At present, geopolitics is concerned about who gets how much in the race over the accessible 'carbon space'. The possible outcomes of the current phase of consideration and scholarly knowledge couldn't be more serious. An incredible dispute between the United States and the world lies not in extremism or even in regional discord. In fact, it lies in the longer-term crash of interests between the US and an arising, powerful China. The United States and China both are locked into a long-term rivalry for economic supremacy. Today, China is the more modest challenger and is developing much faster than the more advanced economic mechanism of the United States. This powerful change is creating the conditions to take over the control in the future expected to be somewhere in

the range of 2025 and 2035. Our observational work shows that under states of equality, harmony is accomplished when the two players are satisfied. But if the challenger is seemed to be dissatisfied, the possibility of war increases significantly (Tammen&Kugler, 2006).

### **Climate Change: As a Nature of the Global Threat**

Climate change is a global threat. Centralizations of greenhouse gases in the environment are higher than ever in human history and rising pointedly. The most remarkable of these appraisals is a report charged by the US Department of Defense that contends that climate change might 'actually undermine the international climate, prompting conflict, confrontation, and even war because of asset requirements' (Schwartz & Randall, 2003). In this world, there is a possibility of war even nuclear war too if the temperature will rise to 2 to 3 degrees Celsius. Climate Change causes the deficiencies of food, water, and disturbed admittance to energy as being key effects that may trigger war, and talks as far as 'conveying limit', 'old hatreds' and 'battles for access'. At the focal point of the most recent international struggle are the US and China, the two driving logical information makers of the world (CCPI, 2019). Since the new Covid was distinguished, the two nations' exchange war has swelled into what some are alluding to as the "new cold war". As the pandemic keeps on taking a huge number of lives, the US and China are edging into a new cold war (Ashford, 2020). The conflict between Washington and Beijing could be the beginning of another ideological showdown or the inescapable fallout from a power transition.

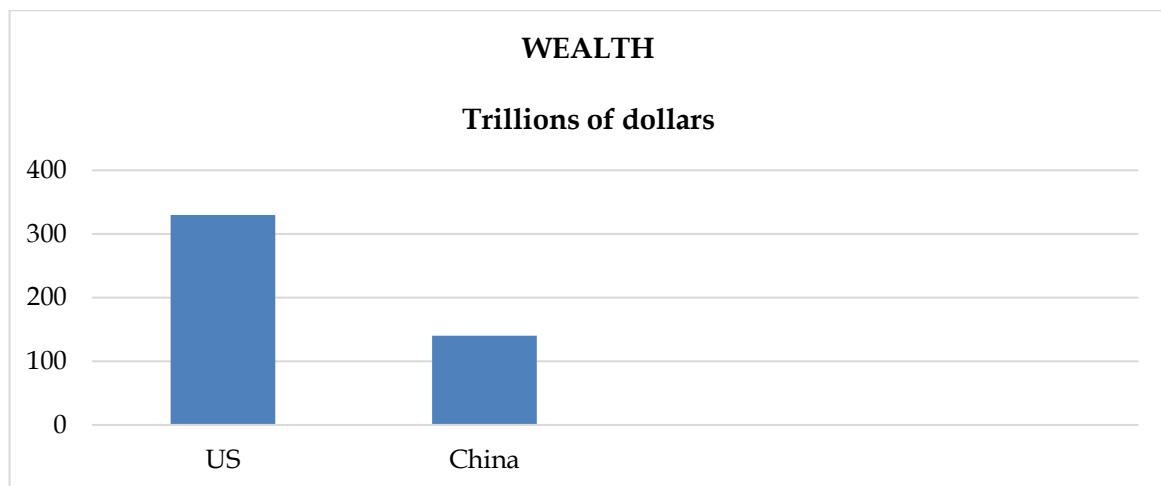
### **A Shift from Climate Change Issue to Geo-Political Rivalry**

The United States and China assume focal parts in a worldwide temperature alteration. On the basis of regular observation, during the previous century, the United States was responsible to transmit more greenhouse gases than any other country. Since then, carbon dioxide which is the main substance of greenhouse gases remained in the atmosphere for around 100 years. While in 2007, China might have outperformed the United States as the yearly world's top producer of carbon dioxide. Together, the two nations are liable for more than 40% of the greenhouse gases delivered into the climate every year. (Garnaut, 2008) Indeed, US-China relations presently face a paradox. Numerous Chinese accept that the United States is too zero-sum in its perspective on the world to acknowledge China's ascent as a helpful turn of events. China agitated when the US withdraw itself from the Paris Agreement because it is considered that it is not an international political issue in fact it is a global tragedy for people. That's why the US withdrawal from the Paris Agreement is not a "huge surprise" for China, India, Europe, or any other country, in fact, it's a major problem for everyone. This withdrawal deteriorated the diplomatic situation towards US-China climate diplomacy taking steps to be eclipsed by what the United States sees as Beijing's threatening approaches toward Hong Kong, Taiwan, and the South China Sea, struggle over common freedoms and exchange, and US cases of Chinese reconnaissance. Both countries have numerous perspectives on how the world should work. While the US performing its system of democracy and China observing its autocracy, they want to promote their own vision of governance. The United States considers Taiwan as an independent nation and its identity or everything by its own name. But China considers Taiwan differently as a renegade province. On another aspect, the US wants one open global internet. While China wants every country to be able to censor the internet as it sees fit. South China sea is also an area of dispute because this is the world's major international waterway. China-US political relations worsened in the administration of Donald Trump. Donald Trump was really the first president of the United States who had a forceful spectrum of competition with China. He has overseen the deployment of US military forces to East Asia. Since the end of World War II, only Donald Trump has used tariffs against China in such an aggressive manner. The policy was quite direct and aggressive. In the meantime, Chinese

authorities were upset with regard to the limitations forced by the Trump organization on the exchange, innovation, Chinese media, and students in the US, and the State Department's announcement which abominations against China's Muslim minorities as a "genocide." (Tiezzi, 2015) It is analyzed that Trump is not the sole architect of the shift in the US-China relationship in actual it's a part of action over reaction towards China's own rise in international aggression as China becomes a more active, muscular, and authoritarian country over the last decade. It is anticipated that this trend will also continue even during the Joe Biden administration when Biden warns China that they will face 'extreme competition from the US. (Times, 2021) When Biden's team also talks tough on China which shows policies won't differ sharply from Trump's. (CNBC, 2021) In a wide variety of ways, the economies of the US and China are linked. Does a new Cold War between these two nations have the potential to start? Although every nation is working to develop its own technology, those technologies won't be compatible. There is decoupling (the separation of previously linked systems) between the two economies. Both nations are seeking different solutions to the trade dispute between them. Although they are not fully free of one another, they are at least making an effort to roll back some of their economic restraints. (Hsiang, & Kopp,2018) A new president who is focused on battling the rising temperature of the earth and advancing clean energy will inevitably go to China to look for enormously upgraded collaboration on this issue.

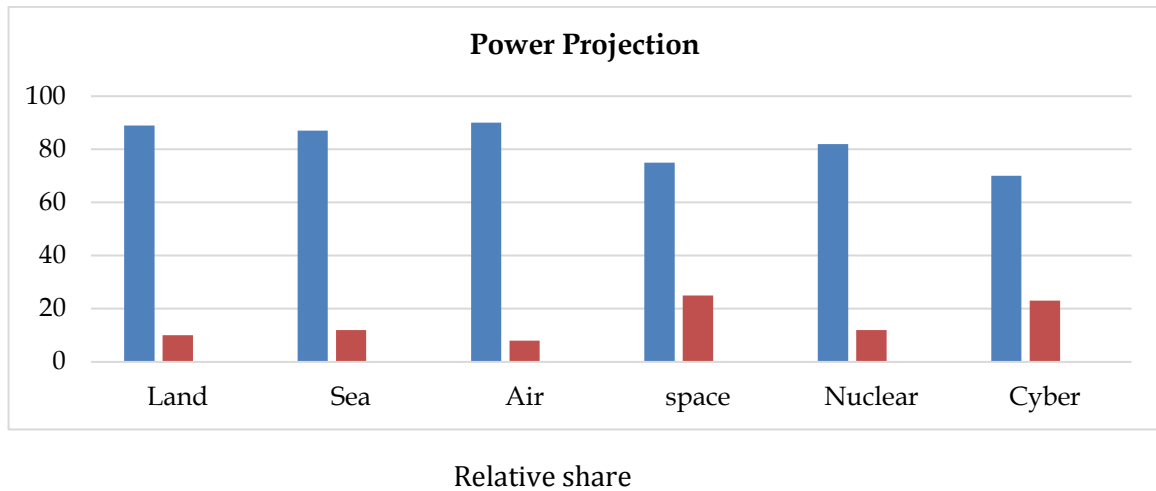
### **A Perspective of Competitiveness between the US and China**

What makes a country powerful, analysts asked? which essentially comprises of three parts: First, wealth, where the government requires a lot of money to acquire powerful companies and fund technological advancement. Second, states require a sizable military in case conditions deteriorate and it becomes necessary to use force to redress the situation. Third, states must create a global narrative, a story to tell, or an ideology that will help them recruit allies and collaborators for their cause.



Source: World Bank

For all of these reasons, even though China is a very important nation, it still trails the US in terms of money and military force projection, having only allied with North Korea while the US has seventy allies.



- U.S.
- China

Source: Data on platforms from international institutes for strategic studies. Data on cyber capabilities from the Economist intelligence unit.

And US dollar is represented as the world's reserved currency which is used in 90% of international financial transactions while China's currency is only utilized for about 2%. Hence, the US still ranks above than China. That's why the gap is really enormous in between money and muscles and allies and partners to become dominant over the US. (Beckley, 2011)

### **Epitome of contributing factors of the 21<sup>st</sup> century that can stir US-China relations:**

As the worldwide population has expanded in 1900 from 1.6 billion to 7.2 billion today, while the absolute creation of worldwide energy has expanded from 23 exajoules (EJ) to 548 EJ. Whereas the population is projected to increment to 10.9 billion (9.6-12.3 billion) by 2100 absolute energy requests will keep on ascending also. (Gerland, 2014),

Only twenty years prior, it was hard to predict an existence where China would have a larger number of warships than the US. Today, it is reality. China has arisen as the world's biggest shipbuilder and is producing warships quicker than some other countries. While heading to turning into the biggest economy on the planet, China is quickly arising as an innovative forerunner in many fields. Its submarine fleet is changing subjectively. It shows up firmly while heading to satisfying its public vital goals of the reunification of Taiwan, getting its energy supplies, and arising as an incredible power with worldwide economic interests. (Ray, 2022)

In 1999, the US Public Academies of Science, Engineering, and Medicine detailed that America would stay the single biggest determinant of future information as it stayed in the twentieth century in applying the previous science and fiction advancements like animal cloning, talking electronic guides, and strong computers as little as a bunch of cigarettes. The standard way of thinking about the time in the future when China scarcely made a difference. The image was starting to change by 2010. China had developed a minimal expense-producing site for global organizations. Today, China's fast ascent to challenging US strength of innovation has caught America's consideration. The contention in innovation is a fundamental field for rivalry with China as said by the previous Director of CIA.

## **US and China competition: Emerging Strategic Technologies**

China has uprooted the US as the manufacturer of the world's top high-tech field, delivering 250 million computers, 1.5 billion smartphones, and 25 million cars in 2020. Beyond turning into an assembling force to be reckoned with, China has turned into a genuine rival in the central advances of the 21st century including computerized intelligence, 5G, the science of quantum data, semiconductors, biotechnology, and efficient power energy. In certain races, it has proactively become Number One. In its current direction, it will overwhelm the US in the following ten years. One of America's most regarded forerunners in progressing and applying innovation, Eric Schmidt, who drove Google to become one of the world's driving innovation organizations, has said that numerous Americans actually have an obsolete vision of China. In his evaluation: "Except if these patterns change, during the 2030s US will rival a country that has a greater economy, more innovative work speculations, better examination, more extensive sending of new advancements, and more grounded figuring foundation. To consider the condition of the innovation race, the Belfer Center for Science and International Affairs of Harvard Kennedy School has distributed a report itemizing the headway up until this point made by the US what's more, China in each vital innovation of things to come. Let's audit them individually.

Artificial intelligence is the most trendsetting innovation and is probably going to greatest effect on financial matters and security in the ten years to come. The previous CEO of Google Eric Schmidt states unambiguously: that China is currently a "full-range peer competitor. "Indeed, China has proactively overwhelmed the US to turn into the world's undisputed Number One in many fields of Artificial intelligence (AI). In discourse innovation, Chinese firms are leading over the American firms in each language especially English also included in it. The world's top voice acknowledgment startup, China's iFlytek has 700 million clients, double the quantity of individuals who address Apple's Siri.

In 5G, as indicated by the Pentagon's Defense Innovation Board, "China is on a track to rehash in 5G what occurred with the United States in 4G. In spite of the benefits of 5G guidelines and chip configuration, America's 5G framework rollout is a long time behind China's, giving China a first-mover advantage in fostering the 5G time's foundation.

In quantum registering, quantum correspondence, and quantum detecting three weighty subfields inside quantum data science customarily driven by American analysts China is getting up to speed and, at times, has proactively overwhelmed America. As a central component to numerous regular innovations, including AI, computers, and cars, from there, semiconductors are a fundamental broadly useful driver in the US-China tech contest. The US holds its predominance of the semiconductor business that it has had for close to 50 years, yet this position has been step by step disintegrated by domestic underinvestment and rising abroad rivalry. Looking towards this future, the US is the undisputed forerunner in biotech, however, China is contending furiously across the full biotech R&D range, and in certain occurrences, in any event, winning.

## **Advancement in Climate Change Mitigation Actions**

In the competition to saddle 'Green Energy,' the US has been the essential innovator of new advancements throughout the course of recent many years; however, China has started to lead the pack in assembling and conveying those advances permitting it to rule various connections of the environmentally friendly green energy production network. To

be sure as energy international affairs master Daniel Yergin expressed, in environmentally friendly green energy, China has proactively reached "the made in China 2025" goal of a predominant job in the century's new businesses. The development of green energy in the worldwide energy mix promises to be as problematic in the 21st century as oil was in the twentieth century. Monetary business sectors as of now reflect these real factors: clean energy ventures came to \$500 billion interestingly last year and will add up to \$16 trillion over the course of the following ten years. China has run in front of the US and different nations to overwhelm the critical connections of the green tech inventory network, including equipment production, raw components and energy stockpiling. Studio of the world China is presently the prevailing producer of equipment for creating renewable energy. From delivering under 1% of solar panels in 2000, China currently supplies 70% of solar energy chargers universally. By correlation in a dazzling inversion, America's share tumbled from 30% in 2000 to under 1% today. Four of the world's main ten wind turbine makers are Chinese and control 40% of the worldwide market, versus 12% for the US. These benefits in manufacturing have situated as China the biggest maker of solar and wind energy, with multiple times the limit of the US in sunlight based and twice in wind. With these new components China has a close to restraining infrastructure more than a few of the key information sources essential for solar panels, batteries, and other green tech, incorporating synthetic lithium with half of the worldwide creation polysilicon with 60% interesting earth metals with 70% normal graphite with 70% cobalt refining with 80% and uncommon earth refining with 90% of worldwide creation and where China needs assets locally, it has gotten them abroad. Chinese organizations own 8 of the 14 biggest cobalt mines in the Democratic Republic of the Congo representing about a third of worldwide results and a 51% stake in the planet's biggest lithium hold in the interim the US imports 40% of its lithium 80% of its Cobalt and 100 percent of its graphite. It could require 20-30 years only for the US to find China in obtaining natural substances. In energy capacity, Bloomberg's new energy standpoint assesses that China controls 80% of battery natural substance refining, 77% of cell limit, and 60% of battery part production. Evaluation expresses that, "Chinese producers, as Catl, have come from nothing to being world-driving in under 10 years," while the US mopes in 6th spot in 2020." Over the following decade, almost 75% of new lithium-particle battery plants will be underlying China. What's more, as the world's biggest makers of hydrogen, China, and the EU both lead in green hydrogen advancement. The two aggregately burn through \$2 Billion yearly in R&D, in excess of multiple times the US branch of energy's \$150 million yearly allotment. The uses of these innovations will be groundbreaking in fields from insight and military capacity to economic development and governance. (Miltech, 2022)

China's military chiefs need to accomplish automation and make "significant advancements" toward informatization by 2020, in front of the principal century objective. They likewise try to arrive at an objective of "essential modernization" by 2035 and become a top-notch military, which could be deciphered as "peer ability" with the US military, constantly centennial objective in this century. (Office of the Secretary of Defense 2018, 45)

## **Conclusion**

A hitherto entirely devoid of an empirical challenge has been posed by climate change to society as a whole: if catastrophic harm is to be avoided and the human race is to continue to maintain even a minimal level of control over its planetary environment, carbon emissions must be decreased by 2030 and achieved carbon neutrality by 2050. At the end of the day, rather than constantly fighting, the US and China need each other more than before. They are dependent on one another in order to address major international issues like climate change and control the world economy. China has emerged as a true friend rival in the fundamental advancements of the 21st century and is likely going to be a pioneer in these by the end of this decade, even though the US has driven the past 50 years of technological development and still maintains predominance in a few other innovative fields. I've argued in my conclusion that, given the issue of climate change and the unprecedented normative political response needed to address it, the field of international relations (IR) and its future must embrace a mindset of extreme optimism. This mindset persistently works within the current political and economic governing institutions to effect the significant change it believes is still attainable. Another obvious and immediate "danger" that eventually results from the seductive geo-economic discourses offering market-based, technology-driven solutions to climate change, in my opinion, is the capacity of securitization, a strategy used by the dominant actors and interests in support of the pursuit of primacy (and defense of a particular "way of living"), to successfully depoliticize issues relating to environmental degradation and global warming. The lack of new political agreement on tangible power structures, normative beliefs, and the maintenance of the status quo among the major powers is to blame for the slow development of the climate change negotiations, not just the political issue itself. Without such a comprehensive political agreement, the climate change regime is only likely to ever move piecemeal. Such an agreement may be endorsed by a conference of major economies, whose broad-based mandate would go beyond specific issues.

The most influential people who reside in the wealthiest countries have the most influence over changing the political and economic systems that support the problem of climate change. This more subaltern and class-based vision of climate geopolitics is hidden by the widespread geopolitical fiction that sees climate change as a "global" and environmental issue that must be addressed by the community states. It is the responsibility of more potent and critical geopolitics of climate change to demonstrate how climate change is a local and social problem that cannot be managed without the purposeful use of political and economic decisions made by people in wealthy countries.

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