## 1 – Xi DA

#### Xi’s regime is stable now, but its success depends on strong growth and private sector development.

**Mitter and Johnson 21** [Rana Mitter and Elsbeth Johnson, [Rana Mitter](https://hbr.org/search?term=rana%20mitter&search_type=search-all) is a professor of the history and politics of modern China at Oxford. [Elsbeth Johnson](https://hbr.org/search?term=elsbeth%20johnson&search_type=search-all), formerly the strategy director for Prudential PLC’s Asian business, is a senior lecturer at MIT’s Sloan School of Management and the founder of SystemShift, a consulting firm. May-June 2021, "What the West Gets Wrong About China," Harvard Business Review, [https://hbr.org/2021/05/what-the-west-gets-wrong-about-china accessed 12/14/21](https://hbr.org/2021/05/what-the-west-gets-wrong-about-china%20accessed%2012/14/21)] Adam

In China, however, growth has come in the context of stable communist rule, suggesting that democracy and growth are not inevitably mutually dependent. In fact, many Chinese believe that the country’s recent economic achievements—large-scale poverty reduction, huge infrastructure investment, and development as a world-class tech innovator—have come about because of, not despite, China’s authoritarian form of government. Its aggressive handling of Covid-19—in sharp contrast to that of many Western countries with higher death rates and later, less-stringent lockdowns—has, if anything, reinforced that view.

China has also defied predictions that its authoritarianism would inhibit its capacity to [innovate](https://hbr.org/2011/06/what-the-west-doesnt-get-about-china). It is a global leader in AI, biotech, and space exploration. Some of its technological successes have been driven by market forces: People wanted to buy goods or communicate more easily, and the likes of Alibaba and Tencent have helped them do just that. But much of the technological progress has come from a highly innovative and well-funded military that has invested heavily in China’s burgeoning new industries. This, of course, mirrors the role of U.S. defense and intelligence spending in the development of Silicon Valley. But in China the consumer applications have come faster, making more obvious the link between government investment and products and services that benefit individuals. That’s why ordinary Chinese people see Chinese companies such as Alibaba, Huawei, and TikTok as sources of national pride—international vanguards of Chinese success—rather than simply sources of jobs or GDP, as they might be viewed in the West.

Thus July 2020 polling data from the Ash Center at Harvard’s Kennedy School of Government revealed 95% satisfaction with the Beijing government among Chinese citizens. Our own experiences on the ground in China confirm this. Most ordinary people we meet don’t feel that the authoritarian state is solely oppressive, although it can be that; for them it also provides opportunity. A cleaner in Chongqing now owns several apartments because the CCP reformed property laws. A Shanghai journalist is paid by her state-controlled magazine to fly around the world for stories on global lifestyle trends. A young student in Nanjing can study propulsion physics at Beijing’s Tsinghua University thanks to social mobility and the party’s significant investment in scientific research.

#### Xi has committed to the commercial space industry as the linchpin of China’s rise – the plan is seen as a complete 180 AND the US arbitrarily imposing hegemony on China

**Patel 21** [Neel V. Patel, Neel is a space reporter for MIT Technology Review. 1-21-2021, "China’s surging private space industry is out to challenge the US," MIT Technology Review, <https://www.technologyreview.com/2021/01/21/1016513/china-private-commercial-space-industry-dominance/> accessed 12/14/21] Adam

Until recently, China’s space activity has been overwhelmingly dominated by two state-owned enterprises: the China Aerospace Science & Industry Corporation Limited (CASIC) and the China Aerospace Science and Technology Corporation (CASC). A few private space firms have been allowed to operate in the country for a while: for example, there’s the China Great Wall Industry Corporation Limited (in reality a subsidiary of CASC), which has provided commercial launches since it was established in 1980. But for the most part, China’s commercial space industry has been nonexistent. Satellites were expensive to build and launch, and they were too heavy and large for anything but the biggest rockets to actually deliver to orbit. The costs involved were too much for anything but national budgets to handle.

That all changed this past decade as the costs of making satellites and launching rockets plunged. In 2014, a year after Xi Jinping took over as the new leader of China, the Chinese government decided to treat civil space development as a key area of innovation, as it had already begun doing with AI and solar power. It issued a policy directive called [Document 60](https://archive.md/o/bc9l4/www.cpppc.org/en/zy/994006.jhtml) that year to enable large private investment in companies interested in participating in the space industry.

“Xi’s goal was that if China has to become a critical player in technology, including in civil space and aerospace, it was critical to develop a space ecosystem that includes the private sector,” says Namrata Goswami, a geopolitics expert based in Montgomery, Alabama, who’s been studying China’s space program for many years. “He was taking a cue from the American private sector to encourage innovation from a talent pool that extended beyond state-funded organizations.”

As a result, there are now 78 commercial space companies operating in China, according to a[2019 report by the Institute for Defense Analyses](https://archive.md/o/bc9l4/https:/www.ida.org/-/media/feature/publications/e/ev/evaluation-of-chinas-commercial-space-sector/d-10873.ashx). More than half have been founded since 2014, and the vast majority focus on satellite manufacturing and launch services.

For example, Galactic Energy, founded in February 2018, is building its Ceres rocket to offer rapid launch service for single payloads, while its Pallas rocket is being built to deploy entire constellations. Rival company i-Space, formed in 2016, became the first commercial Chinese company to make it to space with its Hyperbola-1 in July 2019. It wants to pursue reusable first-stage boosters that can land vertically, like those from SpaceX. So does LinkSpace (founded in 2014), although it also hopes to use rockets to deliver packages from one terrestrial location to another.

Spacety, founded in 2016, wants to turn around customer orders to build and launch its small satellites in just six months. In December it launched a miniaturized version of a satellite that uses 2D radar images to build 3D reconstructions of terrestrial landscapes. Weeks later, it [released the first images taken by the satellite](https://archive.md/o/bc9l4/https:/spacenews.com/spacety-releases-first-sar-images/), Hisea-1, featuring three-meter resolution. Spacety wants to launch a constellation of these satellites to offer high-quality imaging at low cost.

To a large extent, China is following the same blueprint drawn up by the US: using government contracts and subsidies to give these companies a foot up. US firms like SpaceX benefited greatly from NASA contracts that paid out millions to build and test rockets and space vehicles for delivering cargo to the International Space Station. With that experience under its belt, SpaceX was able to attract more customers with greater confidence.

Venture capital is another tried-and-true route. The IDA report estimates that VC funding for Chinese space companies was up to $516 million in 2018—far shy of the $2.2 billion American companies raised, but nothing to scoff at for an industry that really only began seven years ago. At least 42 companies had no known government funding.

And much of the government support these companies do receive doesn’t have a federal origin, but a provincial one. “[These companies] are drawing high-tech development to these local communities,” says Hines. “And in return, they’re given more autonomy by the local government.” While most have headquarters in Beijing, many keep facilities in Shenzhen, Chongqing, and other areas that might draw talent from local universities.

There’s also one advantage specific to China: manufacturing. “What is the best country to trust for manufacturing needs?” asks James Zheng, the CEO of Spacety’s Luxembourg headquarters. “It’s China. It’s the manufacturing center of the world.” Zheng believes the country is in a better position than any other to take advantage of the space industry’s new need for mass production of satellites and rockets alike.

Making friends

The most critical strategic reason to encourage a private space sector is to create opportunities for international collaboration—particularly to attract customers wary of being seen to mix with the Chinese government. (US agencies and government contractors, for example, are barred from working with any groups the regime funds.) Document 60 and others issued by China’s National Development and Reform Commission were aimed not just at promoting technological innovation, but also at drawing in foreign investment and maximizing a customer base beyond Chinese borders.

“China realizes there are certain things they cannot get on their own,” says Frans von der Dunk, a space policy expert at the University of Nebraska–Lincoln. Chinese companies like LandSpace and MinoSpace have worked to accrue funding through foreign investment, escaping dependence on state subsidies. And by avoiding state funding, a company can also avoid an array of restrictions on what it can and can’t do (such as constraints on talking with the media). Foreign investment also makes it easier to compete on a global scale: you’re taking on clients around the world, launching from other countries, and bringing talent from outside China.

Although China is taking inspiration from the US in building out its private industry, the nature of the Chinese state also means these new companies face obstacles that their rivals in the West don’t have to worry about. While Chinese companies may look private on paper, they must still submit to government guidance and control, and accept some level of interference. It may be difficult for them to make a case to potential overseas customers that they are independent. The distinction between companies that are truly private and those that are more or less state actors is still quite fuzzy, especially if the government is a frequent customer. “That could still lead to a lack of trust from other partners,” says Goswami. It doesn’t help that the government itself is often [very cagey about what its national program is even up to](https://archive.md/o/bc9l4/https:/www.bbc.com/news/science-environment-54076895).

And Hines adds that it’s not always clear exactly how separate these companies are from, say, the People’s Liberation Army, given the historical ties between the space and defense sectors. “Some of these things will pose significant hurdles for the commercial space sector as it tries to expand,” he says.

#### Shifts in regime perception threatens CCP’s legitimacy from nationalist hardliners – the US fiating China follows something does this

Weiss 19 Jessica Weiss 1-29-2019 “Authoritarian Audiences, Rhetoric, and Propaganda in International Crises: Evidence from China” <http://www.jessicachenweiss.com/uploads/3/0/6/3/30636001/19-01-24-elite-statements-isq-ca.pdf> (Associate Professor of Government at Cornell University)//Elmer

Public support—or the appearance of it—matters to many autocracies. As Ithiel de Sola Pool writes, modern dictatorships are “highly conscious of public opinion and make major efforts to affect it.”6 Mao Zedong told his comrades: “When you make revolution, you must first manage public opinion.”7 Because autocracies often rely on **nationalist mythmaking**,8 success or failure in defending the national honor in international crises could burnish the leadership’s patriotic credentials or spark opposition. **Shared outrage at the regime’s foreign policy failures could galvanize street protests or elite fissures, creating intraparty upheaval** or inviting military officers to step in to restore order. Fearing a domestic backlash, authoritarian leaders may feel compelled to take a tough international stance. Although authoritarian leaders are rarely held accountable to public opinion through free and fair elections, fears of popular unrest and irregular ouster often weigh heavily on autocrats seeking to maximize their tenure in office. Considering the harsh consequences that authoritarian elites face if pushed out of office, even a small increase in the probability of ouster could alter authoritarian incentives in international crises.9 A history of nationalist uprisings make Chinese citizens and leaders especially aware of the linkage between international disputes and domestic unrest. The weakness of the PRC’s predecessor in defending Chinese sovereignty at the Paris Peace Conference in 1919 galvanized protests and a general strike, forcing the government to sack three officials and reject the Treaty of Versailles, which awarded territories in China to Japan. These precedents have made Chinese officials particularly sensitive to the appearance of hewing to public opinion. As the People’s Daily chief editor wrote: “History and reality have shown us that public opinion and regime safety are inseparable.”10 One Chinese scholar even claimed: “the Chinese government probably knows the public’s opinion better and reacts to it more directly than even the U.S. government.”11

#### Xi will launch diversionary war to domestic backlash – escalates in multiple hotspots

Norris 17, William J. Geostrategic Implications of China’s Twin Economic Challenges. CFR Discussion Paper, 2017. (Associate professor of Chinese foreign and security policy at Texas A&M University’s Bush School of Government and Public Service)//Elmer

Populist pressures might tempt the **party leadership** to encourage **diversionary nationalism**. The logic of this concern is straightforward: the Communist Party might seek to **distract a restless domestic population** with **adventurism abroad**.19 The **Xi** administration wants to **appear tough** in its **defense of foreign encroachments** against China’s interests. This need stems from a long-running narrative about how a weak Qing dynasty was unable to defend China in the face of European imperial expansion, epitomized by the Opium Wars and the subsequent treaties imposed on China in the nineteenth century. The party is **particularly sensitive** to **perceptions of weakness** because much of its **claim to legitimacy**—manifested in **Xi’s Chinese Dream** campaign today—stems from the party’s claims of leading the **restoration of Chinese greatness**. For example, the May Fourth Movement, a popular protest in 1919 that helped catalyze the CPC, called into question the legitimacy of the Republic of China government running the country at that time because the regime was seen as not having effectively defended China’s territorial and sovereignty interests at the Versailles Peace Conference. **Diversionary nationalist frictions** would likely occur if the Chinese leadership portrayed a foreign adversary as having made the first move, thus forcing Xi to stand up for China’s interests. An example is the 2012 attempt by the nationalist governor of Tokyo, Shintaro Ishihara, to buy the Senkaku/Diaoyu Islands from a private owner.20 Although the Japanese central government sought to avert a crisis by stepping in to purchase the islands—having them bought and administered by Ishihara’s Tokyo metropolitan government would have dragged Japan into a confrontation with China—China saw this move as part of a deliberate orchestration by Japan to nationalize the islands. Xi seemingly had no choice but to defend China’s claims against an attempt by Japan to consolidate its position on the dispute.21 This issue touched off a period of heated tensions between China and Japan, lasting more than two years.22 Such dynamics are not limited to Japan. Other possible areas of conflict include, but are not necessarily limited to, **Taiwan**, **India**, and the **South China Sea** (especially with the **Philippines** and **Vietnam**). The Chinese government will use such tactics if it believes that the costs are relatively low. Ideally, China would like to appear tough while avoiding material repercussions or a serious diplomatic breakdown. Standing up against foreign encroachment—without facing much blowback—could provide Xi’s administration with a tempting source of noneconomic legitimacy. However, over the next few years, Xi will probably not be actively looking to get embroiled abroad. Cushioning the fallout from slower growth while managing a structural economic transition will be difficult enough. Courting potential international crises that distract the central leadership would make this task even more daunting. Even if the top leadership did not wish to provoke conflict, a smaller budgetary allotment for security could cause **military interests** in China to **deliberately instigate trouble** to **justify** their **claims over increasingly scarce resources**. For example, an air force interested in ensuring its funding for a midair tanker program might find the existence of far-flung territorial disputes to be useful in making its case. Such a case would be made even stronger by a pattern of recent frictions that highlights the necessity of greater air power projection. Budgetary pressures may be partly behind a recent People’s Liberation Army reorganization and headcount reduction. A slowing economy might cause a further deceleration in China’s military spending, thus increasing such pressures as budgetary belts tighten. Challenges to Xi’s Leadership Xi Jinping’s efforts to address economic challenges could fail, unleashing consequences that extend well beyond China’s economic health. For example, an **economic collapse** could give rise to a Vladimir **Putin–like redemption figure** in China. Xi’s approach of centralizing authority over a diverse, complex, and massive social, political, and economic system is a **recipe for brittleness**. Rather than designing a resilient, decentralized governance structure that can gracefully cope with localized failures at particular nodes in a network, a highly centralized architecture **risks catastrophic**, **system-level failure**. Although centralized authority offers the tantalizing chimera of stronger control from the center, it also puts all the responsibility squarely on Xi’s shoulders. With China’s ascension to great power status, the consequences of internecine domestic political battles are increasingly playing out on the world stage. The international significance of China’s domestic politics is a new paradigm for the Chinese leadership, and one can expect an adjustment period during which the outcome of what had previously been relatively insulated domestic political frictions will likely generate **unintended international repercussions**. Such dynamics will influence Chinese foreign policy and security behavior. Domestic arguments over ideology, bureaucratic power struggles, and strategic direction could all have **ripple effects abroad**. Many of China’s party heavyweights still employ a narrow and exclusively domestic political calculus. Such behavior increases the possibility of international implications that are not fully anticipated, **raising the risks** of **strategic miscalculation** on the world stage. For example, the factional power struggles that animated the Cultural Revolution were largely driven by domestic concerns, yet manifested themselves in Chinese foreign policy for more than a decade. During this period, China was not the world’s second largest economy and, for much of this time, did not even have formal representation at the United Nations. If today’s globally interconnected China became engulfed in similar domestic chaos, the effects would be felt worldwide.23 Weakened Fetters of Economic Interdependence If China successfully transitioned away from its export-driven growth model toward a consumption-driven economic engine over the next four or five years, it could no longer feel as constrained by economic interdependence. To the extent that such constraints are loosened, the U.S.-China relationship will be more prone to conflict and friction.24 While China has never been the archetypal liberal economic power bent on benign integration with the global economy, its export-driven growth model produced a strong strategic preference for stability. Although past behavior is not necessarily indicative of future strategic calculus, China’s “economic circuit breaker” logic seems to have held its most aggressive nationalism below the threshold of war since 1979. A China that is both comparatively strong and less dependent on the global economy would be a novel development in modern geopolitics. As China changes the composition of its international economic linkages, global integration could place fewer constraints on it. Whereas China has been highly reliant on the import of raw materials and semifinished goods for reexport, a consumption-driven China could have a different international trade profile. China could still rely on imported goods, but their centrality to the country’s overall economic growth would be altered. Imports of luxury goods, consumer products, international brands, and services may not exert a significant constraining influence, since loss of access to such items may not be seen as strategically vital. If these flows were interrupted or jeopardized, the result would be more akin to an inconvenience than a strategic setback for China’s rise. That said, China is likely to continue to highly depend on imported oil even if the economic end to which that energy resource is directed shifts away from industrial and export production toward domestic consumption.

#### US–China war goes nuclear – crisis mis-management ensures conventional escalation - extinction

Kulacki 20 [Dr. Gregory Kulacki focuses on cross-cultural communication between the United States and China on nuclear and space arms control and is the China Project Manager for the Global Security Program at the Union of Concerned Scientists, 2020. Would China Use Nuclear Weapons First In A War With The United States?, Thediplomat.com, https://thediplomat.com/2020/04/would-china-use-nuclear-weapons-first-in-a-war-with-the-united-states/] srey

Admiral Charles A. Richard, the head of the U.S. Strategic Command, recently told the Senate Armed Service Committee he “could drive a truck” through the holes in China’s no first use policy. But when Senator John Hawley (R-MO) asked him why he said that, Commander Richard backtracked, described China’s policy as “very opaque” and said his assessment was based on “very little” information. That’s surprising. **China** has been exceptionally **clear** **about** its **intentions** **on** the possible **first** **use** **of** **nuclear** **weapons**. On the day of its first nuclear test on October 16, 1964, China declared it “will never at any time or under any circumstances be the first to use nuclear weapons.” That **unambiguous** **statement** **has** **been** a **cornerstone** **of** **Chinese** **nuclear** **weapons** policy for 56 years and has been repeated frequently in authoritative Chinese publications for domestic and international audiences, including a highly classified training manual for the operators of China’s nuclear forces. Richard should know about those publications, particularly the training manual. A U.S. Department of Defense translation has been circulating within the U.S. nuclear weapons policy community for more than a decade. The commander’s comments to the committee indicate a familiarity with the most controversial section of the manual, which, in the eyes of some U.S. analysts, indicates there may be some circumstances where **China** **would** **use** **nuclear** **weapons** **first** **in** a **war** **with** **the** **U**nited **S**tates. This U.S. misperception is understandable, especially given the difficulties the Defense Department encountered translating the text into English. The language, carefully considered in the context of the entire book, articulates a strong reaffirmation of China’s no first use policy. But it also reveals **Chinese** military planners are **struggling** **with** **crisis** **management** **and** **considering** **steps** **that** could **create** **ambiguity** **with** **disastrous** **consequences**. Towards the end of the 405-page text on the operations of China’s strategic rocket forces, in a chapter entitled, “Second Artillery Deterrence Operations,” the authors explain what China’s nuclear forces train to do if **“**a strong military power possessing nuclear‐armed missiles and an absolute advantage in high‐tech conventional weapons is carrying out intense and continuous attacks against our major strategic targets and we have no good military strategy to resist the enemy.**”** The military power they’re talking about is the United States. The authors indicate China’s nuclear missile forces train to take specific steps, including increasing readiness and conducting launch exercises, to “dissuade the continuation of the strong enemy’s conventional attacks.” The manual refers to these steps as an “adjustment” to China’s nuclear policy and a “lowering” of China’s threshold for brandishing its nuclear forces. Chinese leaders would only take these steps in extreme circumstances. The text highlights several triggers such as U.S. conventional bombing of China’s nuclear and hydroelectric power plants, heavy conventional bombing of large cities like Beijing and Shanghai, or other acts of **conventional** **warfare** **that** “**seriously** **threatened**” the “safety and **survival**” of the nation. U.S. Misunderstanding Richard seems to believe this planned adjustment in China’s nuclear posture means China is **preparing** **to** **use** **nuclear** **weapons** first under these circumstances. He told Hawley that there are a “number of situations where they may conclude that first use has occurred that do not meet our definition of first use.” The head of the U.S. Strategic Command appears to assume, as do other U.S. analysts, that the **Chinese** would **interpret** **these** types of U.S. conventional **attacks** **as** **equivalent** **to** a **U.S. first use** **of** **nuclear** **weapons** against China. But that’s not what the text says. “Lowering the threshold” refers to China putting its nuclear weapons on alert — it does not indicate Chinese leaders might lower their threshold for deciding to use nuclear weapons in a crisis. Nor does the text indicate Chinese nuclear forces are training to launch nuclear weapons first in a war with the United States. China, unlike the United States, keeps its nuclear forces off-alert. Its warheads are not mated to its missiles. China’s nuclear-armed submarines are not continuously at sea on armed patrols. The manual describes how China’s nuclear warheads and the missiles that deliver them are controlled by two separate chains of command. Chinese missileers train to bring them together and launch them after China has been attacked with nuclear weapons. All of these behaviors are consistent with a no first use policy. The “adjustment” Chinese nuclear forces are preparing to make if the United States is bombing China with impunity is to place China’s nuclear forces in a state of readiness similar to the state the nuclear forces of the United States are in all the time. This step is intended not only to end the bombing, but also to convince U.S. decision-makers they cannot expect to destroy China’s nuclear retaliatory capability if the crisis escalates. Chinese Miscalculation Unfortunately, alerting Chinese nuclear forces at such a moment could have terrifying consequences. Given the relatively small size of China’s nuclear force, a U.S. president might be tempted to try to limit the possible damage from a Chinese nuclear attack by destroying as many of China’s nuclear weapons as possible before they’re launched, especially if the head of the U.S. Strategic Command told the president China was preparing to strike first. One study concluded that if the United States used nuclear weapons to attempt to knock out a small fraction of the Chinese ICBMs that could reach the United States it may kill tens of millions of Chinese civilians. The authors of the text assume alerting China’s nuclear forces would “create a great shock in the enemy’s psyche.” That’s a fair assumption. But they also assume this shock could “dissuade the continuation of the strong enemy’s conventional attacks against our major strategic targets.” That’s highly questionable. There is a **substantial** **risk** **the** **U**nited **S**tates **would** **respond** **to** this implicit **Chinese** **threat** **to** **use** **nuclear** **weapons** **by** **escalating**, rather than halting, its **conventional** **attacks**. If China’s nuclear forces were targeted, it would put even greater strain on the operators of China’s nuclear forces. A **slippery** **slope** **to** **nuclear** **war** Chinese military planners are aware that attempting to coerce the United States into halting conventional bombardment by alerting their nuclear forces could fail. They also know it might trigger a nuclear war. But if it does, they are equally clear China won’t be the one to start it. Nuclear attack is often preceded by nuclear coercion. Because of this, in the midst of the process of a high, strong degree of nuclear coercion we should prepare well for a nuclear retaliatory attack. The more complete the preparation, the higher the credibility of nuclear coercion, the easier it is to accomplish the objective of nuclear coercion, and the lower the possibility that the nuclear missile forces will be used in actual fighting. They assume if China demonstrates it is well prepared to retaliate the United States would not risk a damage limitation strike using nuclear weapons. And even if the United States were to attack China’s nuclear forces with conventional weapons, China still would not strike first. In the opening section of the next chapter on “nuclear retaliatory attack operations” the manual instructs, as it does on numerous occasions throughout the entire text: According to our country’s principle, its stand of no first use of nuclear weapons, the Second Artillery will carry out a nuclear missile attack against the enemy’s important strategic targets, according to the combat orders of the Supreme Command, only after the enemy has carried out a nuclear attack against our country. Richard is wrong. There are no holes in China’s no first use policy. But the worse-case planning articulated in this highly classified military text is a significant and deeply troubling departure from China’s traditional thinking about the role of nuclear weapons. Mao Zedong famously called nuclear weapons “a paper tiger.” Many assumed he was being cavalier about the consequences of nuclear war. But what he meant is that they would not be used to fight and win wars. U.S. nuclear threats during the Korean War and the Taiwan Strait Crisis in the 1950s – threats not followed by an actual nuclear attack – validated Mao’s intuition that nuclear weapons were primarily psychological weapons. Chinese leaders decided to acquire nuclear weapons to free their minds from what Mao’s generation called “**nuclear** **blackmail**.” A former director of China’s nuclear weapons laboratories told me China developed them so its leaders could “sit up with a straight spine.” Countering nuclear blackmail – along with compelling other nuclear weapons states to negotiate their elimination – were the only two purposes Chinese nuclear weapons were meant to serve. Contemporary Chinese military planners appear to have added a new purpose: compelling the United States to halt a conventional attack. Even though it only applies in extreme circumstances, it **increases** the **risk** **that** a **war** between the United States and China **will** **end** **in** a nuclear exchange with unpredictable and **catastrophic** **consequences**. Adding this new purpose could also be the first step on a slippery slope to an incremental broadening the role of nuclear weapons in Chinese national security policy. Americans would be a lot safer if we could avoid that. The United States government should applaud China’s no first use policy instead of repeatedly calling it into question. And it would be wise to adopt the same policy for the United States. If both countries declared they would never use nuclear weapons first it may not guarantee they can avoid a nuclear exchange during a military crisis, but it would make one far less likely.

## 2 – Regulations CP

#### CP text: The United States federal government should:

#### A] Fund a public-private partnership for deep space exploration

#### B] Triple NASA’s budget and earmark increased funding for cooperative deep space exploration

Galeon 17 [(Dom, writer for Futurism), “SpaceX Asks the U.S. To Fund a Public-Private Partnership for Deep Space Exploration,” July 14, 2017, <https://futurism.com/spacex-asks-the-u-s-to-fund-a-public-private-partnership-for-deep-space-exploration>] TDI

SpaceX Asks the U.S. To Fund a Public-Private Partnership for Deep Space Exploration The best chance of success could come from pooling our resources. / Off World/ Deep Space Exploration/ NASA/ Public Private Partnerships SpaceX/Flickr Image by SpaceX/Flickr WORKING TOGETHER Some 10 years back now, the National Aeronautics and Space Administration (NASA) decided to work with private space companies to ferry people and cargo to the International Space Station (ISS). At the time, the space agency perhaps didn’t expect that it was heralding in a new era in space exploration. Both NASA and private agencies like SpaceX and Blue Origin have benefited from the collaboration. The former is able to save on costs, while the latter get to pursue their own individual programs, such as perfecting their reusable rocket technologies for commercial use. Without this partnership, these companies would not have been able to grow and develop at the same rate. Thus far, the joint missions have been limited to just orbital and near-orbit launches, like the Commercial Orbital Transportation Services (COTS) program, but SpaceX wants that to change. At a hearing of the U.S. Senate’s Subcommittee on Space, Science, and Competitiveness on Thursday, SpaceX’s senior vice president for global business and government affairs Tim Hughes asked the U.S. government to open up deep space exploration for similar public-private partnerships. “The principles applied in past programs for low Earth orbit capability can and should be applied to deep space exploration,” he said, referencing the COTS program. ADVERTISEMENT A DEEP SPACE FUTURE In order for the U.S. and for humankind to establish a more permanent presence in space, Hughes asserts that the government should fund a COTS-like program for deep space. It won’t really be a matter of funding the competition, he argued, because the program could run parallel to NASA’s existing deep space exploration plans, such as the Space Launch System (SLS) and the Orion spacecraft. Living Off The Land: A Guide To Settling Mars [Infographic] Click to View Full Infographic “I think [these] can be readily supplemented with public-private partnerships to allow us to sustain a permanent presence in space,” said Hughes. NASA could impose “high level requirements” for this deep space partnership, just like it does with COTS, Hughes added. The partnership could prove particularly beneficial for NASA right now given the recent reports saying it doesn’t have the funding needed for its Mars mission. Of course, as with any change, push back is to be expected. For one, more established aerospace firms that already work with NASA — Lockheed Martin and Boeing, among others — might not be in favor of this idea. The important thing, however, is to realize that deep space exploration is an entirely different ballgame than missions in near-Earth orbit, and the best chance of success may come from pooling our resources.

#### The CP turns the aff and prevents stifling of innovation – k2 climate tech.

Van Burken 20 [(Rebecca, technology policy analyst at Reason Foundation) “Biden Can Utilize Space Companies and Public-Private Partnerships,” December 14, 2020 https://reason.org/commentary/biden-can-utilize-space-companies-and-public-private-partnerships/] TDI

Biden Can Utilize Space Companies and Public-Private Partnerships The commercial space industry is making NASA's operations more cost-effective and encouraging innovation. By Rebecca van Burken December 14, 2020 President-elect Joe Biden will predictably distance himself from many of the Trump administration’s policies and positions, but its openness to commercial space partnerships should not be among them. The expansion of public-private space partnerships that began during the Obama administration has continued during the Trump administration. These public-private partnerships have helped lead to many major space successes, including crewed-launches returning to American soil through SpaceX and the first-ever civilian passenger on a private suborbital spaceflight as part of Virgin Galactic’s 2019 VSS Unity SpaceShipTwo launch. These successes, and others, reflect positively on the U.S. space sector. However, they would not have happened without the entrepreneurial nature of commercial space. Unlike government engineers and scientists, commercial space operations are not constrained by government bureaucracy nor reliant on taxpayer funding. This allows commercial space companies to explore some seemingly far-fetched ideas, like 3D printing of small rockets, a concept being pioneered by the small start-up Relativity. Commercial space companies must also develop and maintain a competitive edge to survive in the market. Significant competition ultimately creates less-costly services that give NASA more bang for its buck when developing new technology. Competitive market pressures have created inspiring innovation exemplified by SpaceX’s reusable rocket technology and proposals for recycling and turning discarded orbiting tanks into space stations. Without the federal government’s continued openness to commercial space, innovation, and invention in the U.S. space industry could be stifled. Commercial space continues to show up when the government needs new services. Over the last few years, we have seen amazing new technologies developed to track environmental and climate concerns. This is, in part, because NASA has entered into deals with private companies like Planet that are able to analyze data collected by satellite imagery. Planet has stakes in defense satellite imagery but has expanded its portfolio to collect data for climate scientists and researchers to use. Its constellation of 120 satellites is at work photographing every portion of the world at least once a day, which provides constant and up-to-date environmental information. By maintaining deals like that with commercial satellite companies, NASA can avoid the costs of creating its own satellite constellation and other remote sensing technology. Additionally, NASA does not need to focus its energies on updating technologies to keep up with new software and technological capabilities. Companies that worry about competition in the market naturally reassess their services and the burden of doing this should be put on private industry, not on the government. Biden’s team should seek out the most effective private partners, hiring new talent in civil programs to use these systems. This would also free up funding for crewed space exploration. In addition to looking to develop new partnerships for space-related efforts, a Biden administration should reassess the government’s old partnerships. Prior to the election, Reuters reported that some Biden associates believe he may try to continue funding the International Space Station (ISS) beyond its planned termination in 2025. Reuters reported: …Biden, on the other hand, would likely call for a delayed moonshot and propose a funding extension for the International Space Station if he wins the White House, according to people familiar with the fledging Biden space agenda.Pushing back the moon mission could cast more doubt on the long-term fate of Boeing Co’s Space Launch System (SLS) rocket, just as Elon Musk’s SpaceX and Jeff Bezos’ Blue Origin scramble to bring rival rockets to market as soon as next year. Extending support for the space station for a decade would also be a major boost for Boeing, whose $225 million annual ISS operations contract is set to expire in 2024 and is at the depths of a financial crisis caused by the COVID-19 pandemic and the 737 MAX grounding after fatal crashes. This directly contradicts the Trump administration’s efforts to cease funding for the archaic space station by 2025. If Biden were to continue funding this aging facility via NASA it would drain funds that could be used for more important space activities, including manned missions. Commercial companies are primed and ready to take over the space station’s functions, and NASA should allow them to do so. If Biden has taxpayers and NASA continue to fund the ISS, it would most likely continue to contract with a company that famous for draining government money—Boeing. The partnerships with Boeing are the types of space policies the incoming Biden administration should be reviewing. It should ask Congress for a Government Accountability Office audit of Boeing’s work on the Space Launch System (SLS). The contract is for the development of a rocket with heavy-lift capacities that is designed to bring humans and cargo to the moon and back. Unfortunately, it has had numerous delays and cost overruns and is still not ready for a test flight, as Bloomberg reported in August: Boeing Co.’s Space Launch System, the largest rocket in NASA’s history, will carry a price tag of at least $9.1 billion — or 30% more than the previous estimate for a key element in the agency’s plan to return to the moon. Additionally, the costs for new ground infrastructure at Florida’s Kennedy Space Center to support the deep-space exploration program has jumped to $2.4 billion, Kathy Lueders, NASA’s associate administrator for human spaceflight, said in a blog post Wednesday. That’s also a 30% increase, the National Aeronautics and Space Administration said in an email Thursday. While we wait for Boeing to reuse obsolete space shuttle hardware on SLS, companies like Blue Origin and SpaceX are continually reusing entire launch boosters. Biden’s administration needs a real review of whether it would be more cost and time effective to work with companies like SpaceX or Blue Origin. SLS is estimated to cost NASA $1 billion or more for each launch, after having already consumed $18.3 billion since 2010. By contrast, SpaceX has had its self-funded heavy-lift rocket Starship in development since 2012 and has been doing successful prototype tests since 2019. Another space entity that will be a key issue for the Biden administration is the military agency, U.S. Space Force, created by President Trump. Reason magazine had detailed the numerous reasons a Space Force should not have been created. Now that it does exist, the Space Force should be viewed as an agency that does not need to spend taxpayers’ money to create its own technology for its missions. Instead, it should use the readily available market of commercial partners ready to contract services. Space News recently reported that Space Force is just now learning of the private sector’s capabilities: [Gen. John “Jay”] Raymond said in years past the only commercially viable services have been space launch and communications provided by geosynchronous satellites. But the Space Force is now becoming aware of other capabilities that are being offered commercially such as space tracking data, weather data and on-orbit satellite servicing. Raymond, chief of operations for Space Force, has previously committed to working closely with commercial satellite companies for space-related missions. Col. Michael “Hopper” Hopkins, commander of NASA’s SpaceX Crew-1 mission, was commissioned into the Space Force and began a new line of Space Force officers expected to launch to the ISS. To facilitate continued partnerships between Space Force and private enterprise, the Biden administration could back an initiative currently proposed to Congress that Space Force acquisitions be “speedy and agile.” Flexibility for Space Force would include pushing acquisition power to the lowest level of management and removing bureaucracy to make its programs more efficient. We are at a pivotal moment in the space industry’s history. The federal government has the opportunity to partner with space industry innovators like Elon Musk, Jeff Bezos, and Richard Branson, and ensure there’s the opportunity for new space startups to emerge and add value to the market. The other path, a government and NASA-centric approach to space, would likely stifle technological developments and breakthroughs by private companies, cost taxpayers a lot more money, and cause the United States to fall behind other nations in a number of key areas.

#### It’s competitive – they ban private space flight. NASA and the govt contract things out. Things like NASA using spaceX satellites, etc.

#### Solves internal links –

## Case

### Circumvention

**Circumvention means no solvency but Xi still backlashes – Jakhu and Pelton 17** Jakhu, R. S., & Pelton, J. N. (Eds.). (2017). *Global Space Governance: an international study*. Springer International Publishing. pg 129-132

The paramount issue in regard to the adequacy of the current governance system for commercial space activities lies at the nexus of international space law and the national laws and regulations that implement international rights and obligations. **International space laws were developed in the 1960s and early 1970s**, **in a bi-polar world** **dominated by Cold War concerns** and characterized by much less commercial space activity. **The result was a broad, amorphous body of laws that are nowadays somewhat outdated, particularly given the proliferation of trans-national, commercial activities** and an evolving global market for space-based and space-related products and services. The issue is how to reconcile State legislation and regulations across borders to create interoperability and compatibility in what is an inherently international activity. **Internationally, there has been somewhat of a cessation of lawmaking**. This is par- tially attributable to the inability of the Legal Subcommittee of the UNCOPUOS to advance and make relevant the basic principles of public international law articulated in the space treaties with commercial space activities of the 21st century. Without further development of the public international space law, States can only resort to nebulous principles when implementing international obligations. Often, the result is regulation that impedes and confuses activities rather than facilitating them. Specifically, let us consider the following gaps in the current governance system. With regard to registration, the Registration Convention requires registration only when “a space object is launched into Earth orbit or beyond” [Registration Convention, art. II]. As suborbital flights are not intended to, and never actually enter, Earth orbit, they are, strictly speaking, exempt from the registration require- ments [Gerhard, 2011, p. 290]. This could cause a gap in the existing space law treaty regime whereby a significant proportion of space objects would be exempt from the international registration requirement. As the retention of jurisdiction and control over a space object is, under international law, directly tied to the object’s entry on a national registry, this registration gap also potentially creates a significant issue with regard to the basis upon which a State may exercise jurisdiction and con- trol over such objects [Outer Space Treaty, art. VIII]. Secondly, **the patchwork of national regulations is beginning to cause critical problems and induce so-called “forum shopping**.” For example, **when Bigelow Aerospace sought permission to launch its Genesis I and II orbital habitats, it was turned away by every entity in the United States that issues licenses** for outer space activities. The problem was one of an inadequate implementation of Article VI of the Outer Space Treaty. U. S. law allows for launch and re-entry licenses to be issued by the FAA, a telecommunications license to be issued by the FCC, and a remote sensing license to be issued by NOAA. Because Bigelow’s proposed activi- ties fell outside of those spheres, none of those entities was capable of issuing a license. **Bigelow’s only alternative was to approach Russia, which would consider launching its payloads as a purely commercial endeavor** and, thus, would not be inclined to insist on any specific licensing requirement other than mitigating the potential third party damage. Subsequently, Bigelow was able to build an inflatable habitat to be tested on the International Space Station under the auspices of NASA. This inconsistency of domestic regulations has also led to problems, such as “paper satellites,” as addressed in Chapter 6. **There is currently, as a generalized matter, tension being created in international space law due to the inability of the Legal Subcommittee of the UNCOPUOS, the Committee itself, and ultimately the United Nations, to successfully advance the basic principles of public international law as articulated in the space treaties in such way that is responsive to the demands and interests of space activities in the 21st century.** As a result, we are seeing a proliferation of national laws that are endeavoring to implement nebulous and amorphous principles. As mentioned, **this can often result in regulation that impedes and confuses space activity rather than facilitating it.** National concern about international liability has often led to delay, uncertainty, and confusion. This can result in efforts to shop for States that provide the best provisions related to taxation, liability, and the licensing of launches that are not tied down by strict provisions related to orbital debris or environmental protections. To rectify this problem, the United States has developed what it calls an “enhanced payload review,” where the FAA, in conducting its normal payload review for a launch license, coordinates with other government agencies to vet pro- posed activities. The applicant, in turn, provides additional information and prom- ises to update such information, thereby allowing authorization and continuous supervision. The FAA then issues a license if all of the concerned agencies deter- mine that it is appropriate under the circumstances. In 2016, this process was employed to issue a license to Moon Express for the launch of a commercial rover to the Moon. **This problem of inconsistent rules is likely to become a bigger issue as technologies and business plans continue to evolve. Given the current state of development of space transportation, effective national regulations, which can foster both the development of the sector without undue hindrance and, simultaneously, public trust, are critical for the functioning of this industry.** Although the lack of development of international law has rendered a nebulous and amorphous regime, leaving States without clear direction for implementation, the development of new international space law that might hinder and complicate activities is equally an issue of concern. Take, for instance, the UNIDROIT Space Assets Protocol. Although the protocol is a well-intentioned addition to private inter- national law that attempted to establish a new legal regime for the reconciliation of security interests, its effect was to add another layer onto national laws. There have been concerns as to whether this protocol has led to overlap, duplications and, in some areas, possible obscuring of established principles.It is important to note that, in the short term, “[m]any of the currently planned space tourism projects will operate from one and the same territory. As long as the intended vehicles will ‘take off’ and ‘land’ in that territory, the likelihood of cross- border damage is limited, and in principle that State’s national law will apply, whether it concerns orbital or suborbital flight” [Masson-Zwaan & Freeland, 2010, p. 1,600]. Although there is a plethora of suborbital travel endeavors planned, none of those that have significantly progressed in their development are prepared to serve as point-to-point transportation between two States. Thus, for the time being, these activities are more likely to be governed by national laws rather than the bilat- eral or multilateral agreements, acknowledging, of course, that these activities must be performed in conformity with the governing treaty law and customary interna- tional law. The questions of legal liability will rise in prominence and complexity as we move closer to cross-border space transportation. The necessity for a liability regime that can both promote the growth of the space industry and adequately pro- tect consumers cannot be overestimated. Although regulations may only govern the activities with regard to a particular State, it is still necessary for such regulations to be carefully drafted and easily comparable to the regimes of other States. Wholly separate from the issue of reconciling international and national space laws, however, is the effect of national laws of general application to extraterritorial activity (export control, taxation, intellectual property, secured lending and finance, ownership, etc.). This is a relevant topic for governance since the impact on national activities, whether private or State-sponsored, can be profound. As space tourism and stratospheric activities in the protozone expand in future years, these extrater- ritorial issues should also be considered. Already the issue of the European value added tax (VAT) has impacted the planning of where space tourism flights might be conducted from.

1] **Probability – 0.1% chance of a collision.**

**Salter 16** [(Alexander William, Economics Professor at Texas Tech) “SPACE DEBRIS: A LAW AND ECONOMICS ANALYSIS OF THE ORBITAL COMMONS” 19 STAN. TECH. L. REV. 221 \*numbers replaced with English words] TDI

The probability of a collision is currently low. Bradley and Wein estimate that the maximum probability in LEO of a collision over the lifetime of a spacecraft remains below one in one thousand, conditional on continued compliance with NASA’s deorbiting guidelines.3 However, the possibility of a future “snowballing” effect, whereby debris collides with other objects, further congesting orbit space, remains a significant concern.4 Levin and Carroll estimate the average immediate destruction of wealth created by a collision to be approximately $30 million, with an additional $200 million in damages to all currently existing space assets from the debris created by the initial collision.5 The expected value of destroyed wealth because of collisions, currently small because of the low probability of a collision, can quickly become significant if future collisions result in runaway debris growth.

#### 2] Reject evidence not in context of space mining – Scoles is in context of Asteroid redirection and Intaligiata says nothing to how minig causes small debris – aff has burden of directly explaining how space mining causes this

#### 3] Public sector mining thumps - they’ll just continue after the Moon treaty is passed

NASA 19 [“NASA Invests in Tech Concepts Aimed at Exploring Lunar Craters, Mining Asteroids,” NASA, June 11, 2019, <https://www.nasa.gov/press-release/nasa-invests-in-tech-concepts-aimed-at-exploring-lunar-craters-mining-asteroids>] TDI

NASA Invests in Tech Concepts Aimed at Exploring Lunar Craters, Mining Asteroids Robotically surveying lunar craters in record time and mining resources in space could help NASA establish a sustained human presence at the Moon – part of the agency’s broader [Moon to Mars exploration](https://www.nasa.gov/specials/moon2mars/) approach. Two mission concepts to explore these capabilities have been selected as the first-ever Phase III studies within the [NASA Innovative Advanced Concepts](https://www.nasa.gov/niac) (NIAC) program. “We are pursuing new technologies across our development portfolio that could help make deep space exploration more Earth-independent by utilizing resources on the Moon and beyond,” said Jim Reuter, associate administrator of NASA’s Space Technology Mission Directorate. “These NIAC Phase III selections are a component of that forward-looking research and we hope new insights will help us achieve more firsts in space.” The Phase III proposals outline an aerospace architecture, including a mission concept, that is innovative and could change what’s possible in space. Each selection will receive as much as $2 million. Over the course of two years, researchers will refine the concept design and explore aspects of implementing the new technology. The inaugural Phase III selections are: Robotic Technologies Enabling the Exploration of Lunar Pits William Whittaker, Carnegie Mellon University, Pittsburgh This mission concept, called Skylight, proposes technologies to rapidly survey and model lunar craters. This mission would use high-resolution images to create 3D model of craters. The data would be used to determine whether a crater can be explored by human or robotic missions. The information could also be used to characterize ice on the Moon, a crucial capability for the sustained surface operations of NASA’s Artemis program. On Earth, the technology could be used to autonomously monitor mines and quarries. [Mini Bee Prototype to Demonstrate the Apis Mission Architecture and Optical Mining Technology](https://www.nasa.gov/directorates/spacetech/niac/2019_Phase_I_Phase_II/Mini_Bee_Prototype) Joel Sercel, TransAstra Corporation, Lake View Terrace, California This flight demonstration mission concept proposes a method of asteroid resource harvesting called optical mining. Optical mining is an approach for excavating an asteroid and extracting water and other volatiles into an inflatable bag. Called Mini Bee, the mission concept aims to prove optical mining, in conjunction with other innovative spacecraft systems, can be used to obtain propellant in space. Thse proposed architecture includes resource prospecting, extraction and delivery.

#### 6] Miscalc scenario has no internal link—just says that it “might cause armed conflict” which in no way reaches the level of warranting nuclear war—nuclear conflict is something that countries take extremely seriously so you should have a high threshold for warranting.

#### 7] Multiple early warning sats exist, no reason one going down causes nuke war, they will look via others or deploy spacecraft

#### 8] ISS and other space stations can moniter satellites, and see what causes sats to explode

#### 9] Debris will get sucked into mars not earth

#### 10] just put more satellites out- solves- theres so much research says debris is out now which also means no miscalc