

US–China Geopolitical Tensions: Implications for Universities and Science

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While the advancement of knowledge often necessitates mobility and collaborations among scientists across borders, geopolitical tensions can sometimes interrupt or even halt the process for many. The United States and China are two leading research producers and cocollaborators. Yet, conflicts between these two countries are heightening. There is also a wave of anti-Asian hate incidents and sentiments entering US academia. As our recent study demonstrates, Chinese scientists' full participation in scientific research in the United States is under threat, and the future of US–China scholarly exchanges and collaborations is uncertain as well.

The US–China Geopolitical Tensions

US–China geopolitical tensions are at least partly attributable to federal regulations and policies in the United States that specifically target China as a threat to US national security. In 2018, the visa stay of Chinese students in certain high-tech majors was shortened from five years to one. Two years later, Proclamation 10043 banned entry to the United States for Chinese students and scholars with military ties. While these two immigration regulations limited the mobility of certain scientists from China, the US Department of Justice's China Initiative, launched in 2018, had a broader impact on the scientific community. The China Initiative sought to protect national security and specifically targeted China, portraying China as an intellectual threat that, according to the Federal Bureau of Investigations (FBI), needs a "whole-of-society response." In short, the China Initiative disproportionately accuses scientists of Chinese descent of being potential spies.

The Consequences of the China Initiative

In collaboration with the Committee of 100, a nonprofit organization of Chinese Americans, we conducted a national survey among 1,949 STEM faculty members, postdocs, and graduate students at top US universities in order to examine the impact of the China Initiative on the scientific community. We asked about their perceptions and experiences related to collaboration with China and the China Initiative itself, and about future plans. Nearly half of the survey sample (46 percent) self-identified as Chinese.

Racial profiling among Chinese scientists was particularly salient. Forty-two percent of the Chinese scientists reported feeling racially profiled by the US government, compared to only 9 percent of non-Chinese scientists. Fifty-one percent of the Chinese scientists felt fear/anxiety of being surveilled by the US government, compared to 12 percent of the non-Chinese scientists. In addition, more Chinese scientists experienced difficulty in obtaining research funding in the United States as a result of their race/nationality/country of origin, compared to non-Chinese scientists (38 percent vs. 14 percent). Also, Chinese scientists were more likely to experience professional challenges (i.e., promotion, professional recognition) as a result of their race/nationality/country of origin than their non-Chinese counterparts (38 percent vs. 16 percent).

Negative stereotypes about China and Chinese scientists were also evident. Although a significant number of China Initiative cases were dropped or dismissed, as well as exonerated, 75 percent of the non-Chinese scientists believed that the United States should be tougher on China to prevent theft of intellectual property, and 44 percent believed that academic espionage and intellectual theft by Chinese scientists in academia was a serious issue. In spite of little evidential basis for such views, such stereotypes are concerning, as they not only affect individual scientists but also the US scientific enterprise.

Abstract

Based on recent findings from a national survey involving about 2,000 faculty members, postdocs, and graduate students at top US universities, this article discusses the negative impact of US–China geopolitical tensions on the scientific community, including perceptions of equity, research collaboration, and scientist mobility.

Even though the US–China geopolitical tensions have triggered stereotypes about China, scientists' belief in collaboration—a fundamental component of scientific research—remains strong.

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We also found that US–China research collaborations were inhibited due to scientists' perceptions of potential research risk and added hassle. Among 43 percent of the scientists who conducted international collaborative research involving China over the past three years, 16 percent prematurely or unexpectedly ended/suspended research collaborations with scientists in China. The main reason cited was that they wanted to distance themselves from collaborators in China due to the China Initiative. In addition, 28 percent of these scientists (who conducted international collaborative research involving China over the past three years) limited communication with collaborators in China, 17 percent decided not to involve China in future projects, and 16 percent decided not to work with collaborators in China in future projects.

Lastly, the United States may suffer from potential talent loss. Forty-two percent of the Chinese scientists who are non-US citizens indicated that the FBI investigations and/or the China Initiative affected their plans to stay in the United States. The scientists who reconsidered their future in the United States included Chinese international graduate students seeking to start their careers as well as established professors who had lived in the United States for decades. If US–China geopolitical tensions continue, the US may suffer as a result of Chinese scientists leaving the country.

Scientists Continue to Value Collaboration with China

Although US–China geopolitical tensions have led to numerous negative consequences, our findings also suggest that scientists, nevertheless, recognize the value of international collaboration, including scholarly engagement with China. Scientists in our survey overwhelmingly emphasized that Chinese scientists made important contributions to research and teaching programs in their field (95 percent), that the United States should build stronger research collaboration with China (87 percent), and that having collaborations with Chinese scientists was important to their own scholarly research (80 percent). In addition, the vast majority of the scientists believed that limiting collaboration with China would have a negative impact on academia (93 percent), their academic discipline (93 percent), and their respective research projects (94 percent). There were no significant differences between Chinese and non-Chinese scientists on these views. Even though the US–China geopolitical tensions have triggered stereotypes about China, scientists' belief in collaboration—a fundamental component of scientific research—remains strong, and this value does not appear to have been affected by current geopolitics.

Overall, our survey revealed that although scientists in the United States highly value scholarly collaborations between the United States and China, geopolitical tensions between these two countries have interfered with their scientific knowledge production. In other words, the current China Initiative and anti-China climate have made international collaboration less worthwhile (and in some cases highly risky) for many scientists, despite a shared belief about its importance. As our research has shown, racial profiling among Chinese scientists, withdrawal from research collaborations with China, as well as scientific talent loss are just some of the possible consequences when geopolitics interfere with academic science. ▲