
CASE STUDY

How Is Geopolitical Change Reconfiguring Canada–China Research Collaboration?

Canadians United Against Modern Exclusion

Qiang Zha and Ya Xuan Wang Faculty of Education, York University

Abstract

This study examines how geopolitical tensions impact Canadian researchers. Drawing from survey and bibliometric data, we show that, while Canadian academics value international collaboration, security measures aligned with the US have created a chilling effect. Beyond formal restrictions, we find that researchers, particularly those of Chinese origin, are intentionally limiting their collaboration with China. This decline in Canada-China engagement has negative implications for Canadian research productivity and reveals a paradox: national strategies seek global talent, while at the same time fostering a climate that constrains minority academics. Our findings highlight the risks posed by the securitization of research collaboration and emphasize the importance of maintaining openness and global engagement as foundations of innovation.

Introduction

Worldwide, research and development (R&D) is gaining ground in any nation's priority agenda and benefits from international collaboration, particularly for middle and small states whose domestic scientific capacities are increasingly constrained. Yet, these same states tend to be highly sensitive to geopolitical shifts that alter the risks, incentives, and legitimacy of cross-border scientific engagement. Canada offers an instructive case. For decades, Canada profited from a strong alliance with the United States (US) while also enjoying strong higher education ties with China. These ties were built in the 1980s

and 1990s, when Canada and Canadian universities effortfully aided and facilitated the modernization and transformation of Chinese universities. Since the advent of the 21st century, Canada has reaped the reciprocal fruits, with large increases in the number of Chinese students in Canada and with Chinese-origin scholars emerging as a highly productive and important segment of Canada's research workforce. However, as Canada has followed the US in restricting research collaboration with China in the name of national security, some of these scholars have responded with fear-based self-censorship, resulting in negative consequences for their academic contributions and career development. This culture of suspicion and fear, which affects scholars on the basis of identity rather than actions, has parallels to broader patterns of modern exclusion.

To analyze these patterns, we draw on findings from two empirical studies. The first is a questionnaire survey primarily of Chinese-origin professors in Canadian universities administered between November 2022 and February 2023. The second is a bibliometric analysis of 115,673 Canada-China co-publications from 2012-2023. Together, the two studies show that collaborative research with scholars in China is important to Canadian academics and that recent geopolitical changes have resulted in Canadian scholars' limiting such collaborations. Our findings pose a paradoxical situation whereby Canada intends to attract global research talent on one hand, such as through the recently launched International Talent Attraction Strategy and Action Plan, while simultaneously fostering an academic environment of constraint on the other. The evolution of Canada-China research collaboration and the experiences of ethnic-Chinese Canadian academics could provide useful lessons for implementing this new initiative in a growingly complex multipolar world.

Professors across diverse backgrounds agree on the value of cross-national engagement

Canada prides itself as a multicultural mosaic, where people of diverse heritage and ethnicity are cherished for their participation in and contributions to Canadian society. Ethnic Chinese scholars have a strong presence in the Canadian research force. They account for 6% of Canada Research Chairs, 10% of NSERC Chairs, 16% of IEEE-Canada Fellows, and 17% of Canadian Academy of Engineering Fellows, even though they comprise only 4.7% of the national population. Chinese-origin scholars have thus contributed greatly to Canada's innovation ecosystem and are arguably central to Canada's scientific engagement with China.

In our survey, we examined the perspectives of close to 200 Chinese-origin professors working at Canadian universities, with another sample of around 230 non-Chinese professors used as a control group. The findings show 66.0% of the Chinese professors and 40.6% of the non-Chinese professors believed that having collaboration with scholars in China was important to their research. Hence, 64.2%

of the Chinese professors reported that limiting research collaboration between Canada and China would have a negative impact on their own research projects, while 39.0% of the non-Chinese professors held the same view. Further, such collaboration is quite common: 63.5% of Chinese-origin professors and 31.7% of non-Chinese professors conducted collaborative research with scholars in China over the past three years. Such findings shed light on the fact that the Chinese-origin scholars play an anchoring role in facilitating Canada-China research collaboration, which certainly adds to the broader value of sustaining cross-national scholarly engagement.

Security fears and policy ambiguity chill Canada-China research collaboration

After decades of active academic engagement with China, Canada recently introduced new policies and guidelines to protect university research in response to national security concerns. These changes reflect similar developments in the US, reframing China as a hostile actor and legitimizing the adoption of more assertive research security measures. Such policies and guidelines ushered in both actual restrictions and a chilling effect, which in turn prompted Canadian researchers to consciously or unconsciously limit collaboration with China. This includes changes such as adjusting the focus or approach of their current research projects, reducing communication with collaborators in China, and/or opting not to involve collaborators in China in future projects. Notably, 11.3% Chinese professors prematurely or unexpectedly ended or suspended research collaboration with scholars in China over the past three years, and 15.1% non-Chinese professors chose to do so. These behaviour changes could be linked to the emergence of modern exclusion if Chinese-origin researchers are adjusting their actions in response to a pervasive culture of suspicion potentially grounded in identity rather than actions. Our survey results suggest this may be the case, as 30.6% of Chinese-origin professors who are not Canadian citizens considered leaving Canada due to the current geopolitical tensions and concomitant racial profiling experience.

The individual-level responses are reflected in the trends of joint publications between Canada and China. Our bibliometric analysis shows that ethnic Chinese Canadian scholars played a predominant role in China-Canada joint research publications. Around 60% of Canada-China joint publications involved at least one ethnic Chinese Canadian scholar, which indicates consistency with the survey findings that over 60% Chinese-origin professors relied on working with counterparts in China. Such composition is considered high, especially compared to the pattern in Japan, Germany and France, where co-authorship with domestic scholars of Chinese origin typically hovers around 30%. In the Canadian context, where collaboration with China is highly mediated through ethnic Chinese scholars, a decline in Canada-China research engagement is likely to adversely affect the research output and performance of

the ethnic Chinese Canadian scholars and their peers as well.

Self-censoring undermines Canada's research productivity

Since 2018, the Chinese-origin scholars' participation in Canada-China joint publications has declined drastically due to rising concerns over the securitization of research collaboration. Given that China is now a focal point in Canada's research security measures and risk assessment exercise, the waning of involvement in joint publications by Chinese-origin Canadian researchers stems from their conscious decision to distance themselves from collaborators from China in fear of intensified security scrutiny. Consequently, our publication analysis uncovers that Canada-China co-publication rates have fallen since 2022, a pattern that seems to affect Canada more adversely than China. While Canada-China co-publications never made up more than 2.0% of China's total publications, and this ratio has been falling in recent years, the proportion of Canadian publications involving Chinese researchers grew from 4.2% in 2012 to 10.4% in 2023.

The impact of the shift is uneven across disciplines. Fields in which Canada has traditionally relied more heavily on international collaboration, especially those with China, are likely to be more affected. A large portion (roughly 35%) of Canada-China joint research publications come from the fields of engineering and computer sciences, followed by some other STEM areas like chemistry, material sciences, physics, telecommunication technology, energy technology, which are all related to the areas of sensitive technology research alerted by Government of Canada as concerning national security while being important to Canada's innovation capacity as well. The consequences for Canadian research productivity are further exacerbated by the fact that domestic research expenditure as a share of national GDP has fallen since 2000. This means that Canada has limited capacity to offset reduced international collaboration via domestic investment.

Concluding Thoughts

Amid current geopolitical changes, Canada has been following the US steps with respect to research security policies and measures. However, recent news suggests that Canada is now determined to seek an independent pathway to development, such as the introduction of a new International Talent Attraction Strategy and Action Plan to boost the country's R&D capacity. Investing \$1.7 billion CAD over 12 years, it is one of Canada's largest and most ambitious top-talent recruitment programs, and endeavours to optimize the country's gain via working beyond geopolitical divisions. However, this ambition sits uneasily alongside a research environment where existing minority academics remain cautious, often self-censoring their international collaboration due to fears of being targeted. As such, our analysis of Chinese-origin professors' experience helps illuminate a potential paradox in a broad

sense: how can Canada reinvent international talent initiatives and expect profound research productivity without systemically getting rid of a culture that allows attaching suspicion to scholars in Canada solely based on their identity? The findings from our empirical studies underscore the need for a more balanced approach, one that protects national security while preserving the openness, diversity, and global engagement essential to a thriving research ecosystem.

References

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2. Wang, Ya Xuan and Zha, Qiang. (2025). “Geopolitical Tensions: Impact on and Trajectory of Canada-China Joint Research Publications.” **Higher Education**. <https://doi.org/10.1007/s10734-025-01530-z>.
3. “Canada falling behind in R&D, report warns.” **University Affairs**, <https://universityaffairs.ca/news/canada-falling-behind-in-rd-report-warns/>
4. This question might be particularly relevant and important as Canada is currently experiencing a new record of brain emigration: <https://betterdwelling.com/canadians-flee-in-record-volumes-a-warning-seen-only-twice-before>.