# Intellectual Property Theft and Research Preservation

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## Intellectual Property Theft and Research Preservation

The growth in the international economy relies on technological innovations that fuel intellectual property (IP) development, innovation, research, and intellectual capital development. The reliance on IP has become the most valuable responsibility where organizations can potentially invest. In the past, the United States has been the universal leader in exploration and novelty. Nonetheless, with the emergence of countries like China, the position once held by the U.S. is challenged. Critics argue that IP loss and theft and the economic situation held by the U.S. is becoming a challenge for businesses and how student research teams are funded. Therefore, it is critical that every action taken should safeguard IP loss and further scientific studies and information sharing. However, significant enough is to ensure that no more destruction is associated with the creation of intellectual capital. To warrant that such actions are realized, decision-makers and contributors have to acknowledge the challenge of IP theft by providing thoughtful responses on how intellectual security concerns are addressed.

## Scope of the Problem

The effects attributed to IP theft are overwhelming, significantly when the problem is associated with intellectual property theft and foreign entities' capital loss among research universities. The economic loss encountered by the U.S. has amounted to billions of dollars due to IP theft and loss. Haas (2018) argues that the financial loss has been exacerbated by China surpassing the U.S. as an economic powerhouse by developing its principal intellectual stores. In 2017, the National Bureau of Asian Research’s IP Commission Report showed a probable $225 billion got missing due to IP theft-related actions like imitated products and copied software (National Bureau of Asian Research, 2017). Another $600 billion has been attributed to trade secret theft.

With the economic challenges linked to IP theft and loss, there have been long-lasting outcomes to the ability to share information and academic research freely. Unless measures are taken, the negative impacts associated with IP theft are exacerbated research talent shortage and a decline in government-funded research. Other associated negative impacts are limitations on foreign researchers' ability to partake in management-funded examinations and a decrease in educational engineering, math, science, and technology.

## Foreign IP Theft

The challenge with foreign IP theft is costly, and among universities in the U.S., intellectual property theft has been associated with foreign entities. With this comes the need for stricter foreign student screening, hindering the intent to gain access to academic research institutions. The worldwide students' number on American campuses has to be constrained to diminish IP theft jeopardy; however, this results in extra costs (Lieber, 2018). While the IP theft threat comes with international students, limiting the number will result in severe financial outcomes for higher learning institutions, domestic students in these institutions, and the country's economy. Loudenback (2016) shows that by reducing the international students' number in higher education institutions in the U.S., recovering the lost global student revenue would mean the institutions are passing the cost to domestic students.

The other influence that IP theft has is the ongoing and active academic visas evaluation for students. Based on Ambrose (2018), curbing educational visas for Chinese undergraduates, in particular, has been attributed to the acceptance that China is common for cyber-related breaches, which have resulted in IP theft. With the knowledge, government stakeholders in the country, alongside lawmakers, are involved in creating security restrictions on research projects that are federally funded. In filling a visa application, a student must provide additional information on their

future jobs, family, and finances that would exist after achieving the degree ("F1 student visa," n.d.). In this way, their opportunities are determined by a combination of external and internal factors.

When international students apply for their academic visas, eliminating bad actors requires an appropriate time allotment that thoroughly vets student applications and traces financial support before being admitted to the U.S. By swinging the pendulum too far, the academic visa restrictions might be difficult or too costly to overcome. Edwards (2016) shows that fighting the IP theft problem using this approach at research institutions is challenging since it endangers the scholarly precepts fundamental to academic research and freedom. Combating IP theft in such a way may also adversely affect how some higher learning institutions will be willing to participate in research initiatives funded by the government. How university research programs relate to the federal governments is a subject that is still under evaluation. However, the relationship has been a fundamental tenet that academic researchers use as the basis for their freedom. Therefore, basic research has been driven by the need to generate scientific discoveries and educate the workforce, and interfering with the relations could have drastic outcomes even if for national security issues.

## Issues Surrounding the Problem of IP Theft

### American Graduate Student Disappearance

Many students in American universities comprise international students, and more than one million of these individuals are enrolled in higher education programs. Leiber (2018) shows that approximately 5 percent of all the people in higher learning institutions are from other places. Attracting global talent to work in the research programs in the U.S. is critical in the country. In 2018, the percentage of international students applying for positions in American universities declined by 11 percent. The trend raised concerns due to the existing shortage in the number of graduate research talent. The impossibility of engaging international students in this area can

undermine the capacity of the American initiatives of higher learning institutions towards innovation (Thomas et al., 2019). Furthermore, this circumstance could worsen the ability to generate intellectual property and, consequently, be detrimental to the value of corresponding efforts.

**Shortage of Research Talent**

The idea that the U.S. encounters a decline in a scientific investigation has been a decade-long issue, with suggestions calling for the need for advanced-degree graduate holders in STEM-associated fields. The absence of curiosity in entering postdoctoral courses in the investigation has been linked to two main issues: time to secure the appointment and low salary associated with postdoctoral jobs. While the U.S. has been long involved in the massive successful recruitment of international scientists since the Second World War, the trend has changed over the years. Guarino et al. (2018) show that the recruitment trend changes have been linked to other nations giving foreign-born scientists higher salaries and additional incentives. Comparing China with the U.S., China has been attracting foreign-born scientists by funding large-scale science projects and with this offering better remuneration packages for scientists over the U.S.

Throughout the world, hard science skills and research talent are highly sought after. With respect to academia, all other sectors are looking for computer scientists. With the national shortage of computer scientists in the U.S., the wages of these professionals are, on average, five times higher (Thomas et al., 2019). The challenge with computer scientists has had tremendous outcomes in most universities offering computer science programs resulting in an additional burden to the small pool of computer scientists.

**Cyber Security**

Most people are aware of the growing challenge associated with cyber security. However, not all are aware of the problem's significance and the expense associated with it. Fighting the

situation requires that people have to be mindful of its existence and that it is being solved appropriately. The scale of cyber security issues makes the problem an explosive subject. Profit is the main motive that most cyber criminals conduct the crime, and the offense is undoubtedly profitable (Osborne, 2018). Advanced persistent and insider threats become two significant issues when it comes to safeguarding intellectual property and intellectual capital.

Insider threats are associated with individuals within an organization, which are the common cyber security attack targets. When compromised, individual users give a high access level based on their classes within organizations (Crowd Research Partners, 2018). Combating this insider threat makes organizations take proactive measures like deterrence methods, awareness and training, and data and user monitoring. On the other hand, advanced persistent threats allow for wide-ranging and profound computer system access and organizations (Thomas et al., 2019). Data thefts can go undetected for a long time, and criminals can steal information from more than one organization of computer systems at once.

## Conclusion

Intellectual property theft and intellectual capital loss are significant issues in the U.S. Among the countermeasures to safeguard IP theft and capital loss have been associated with limiting the ability to use international research talent. If the challenge goes unnoticed, the outcomes attributed to IP theft and loss have a significant impact on research abilities in universities. Therefore, academic stakeholders have the mandate of addressing the problem with the government to change the security of institution information.

## References

Ambrose, M. (2018, March 16). *US confronting threat of Chinese exploitation of intellectual property*. The American Institute of Physics. https://www.aip.org/fyi/2018/us-confronting-threat-chinese-exploitation-intellectual-property

Crowd Research Partners. (2018). *Insider threat.* https://crowdresearchpartners.com/wp-content/uploads/2017/07/Insider-Threat-Report-2018.pdf

Edwards, J. (2016, May 20). *U.S. targets spying threat on campus with proposed research clampdown*. Reuters. https://www.reuters.com/article/us-usa-security-studentsidUSKCN0YB1QT

*F1 student visa.* (n.d.). International Student. Retrieved November 17, 2021, from https://www.internationalstudent.com/immigration/f1-student-visa/

Guarino, B., Rauhala, E. & Wan, W. (2018, June 3). *China increasingly challenges American dominance of science.* The Washington Post. https://www.washingtonpost.com/national/health-science/china-challenges-american-dominance-of-science/2018/06/03/c1e0cfe4-48d5-11e8-827e-190efaf1f1ee_story.html

Haas, L.J. (2018, March 6). *Global power is shifting from the U.S. to China.* The U.S. News. https://www.usnews.com/opinion/world-report/articles/2018-03-06/global-power-is-shifting-from-the-us-to-china

Lieber, N. (2018, November 8). *Visa headaches discourage foreign applicants to U.S business schools.* Bloomberg. https://www.bloomberg.com/news/articles/2018-11-08/visa-headaches-discourage-foreign-applicants-to-u-s-b-schools

Loudenback, T. (2016, September 17). *International students are now 'subsidizing' public American universities to the tune of $9 billion a year.* Business Insider.

https://www.businessinsider.com/foreign-students-pay-up-to-three-times-as-much-for-tuition-at-us-public-colleges-2016-9

Osborne, C. (2018, August 24). *Iranian hackers target 70 universities worldwide to steal research.* ZDNet. https://www.zdnet.com/article/iran-hackers-target-70-universities-in-14-countries/

The National Bureau of Asian Research. (2017). *Update to the IP Commission report.* http://ipcommission.org/report/IP_Commission_Report_Update_2017.pdf

Thomas, E, J., Alicia, W, Jonathan, Dobbins, & Ronnie, R. (2019, April 21). *Addressing IP theft while preserving research.* The Bush School of Government & Public Service. https://bush.tamu.edu/wp-content/uploads/2020/02/PSAA-676-Cap-2-AAU-Report-Final-Draft-Spring-2019-Gamache.pdf