

The Devastating Economic Consequences of Pushing Foreign Students out of the Country

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International students enrolled in academic or vocational programs in the United States generally enter the country on an F-1 or M-1 visa, respectively. On July 6, 2020, United States Immigration and Customs Enforcement (ICE, 2020) announced that for the Fall 2020 semester, “F-1 and M-1 students attending schools operating entirely online may not take a full online course load and remain in the United States.” Moreover, ICE prohibited international students from taking more than one online class (or three credit hours) from schools offering a mix of online and in-person instruction. Individuals who fail to comply with these policy changes may face immigration consequences including deportation. This abrupt and arbitrary change to migration and education policy will inflict lasting and unnecessary damage to international students, and risk massive economic losses to US higher education and to the US economy overall. The following policy brief highlights some of the immediate and long-term consequences of the most recent ICE directive.

The Immediate effects on Universities and Local Economies

A first, obvious consequence of this policy change is that it will discourage international students from studying in the United States. Enrollment may fall dramatically, as new students will be prevented from entering, and continuing students will be required to leave. Even in a scenario where campuses fully reopen for in-person instruction, students may no longer perceive the US as a welcoming environment and decide to study elsewhere. Unwelcoming policies can strongly dissuade international students from studying in the US, and threatening deportation in the midst of a global health pandemic represents a sizable deterrence.

The loss of international students will have immediate negative consequences. US education is an extremely valuable [service export](#), roughly equivalent to total exports of wheat, corn, coal, and natural gas. International students -- who are not eligible for financial aid and pay full-sticker price tuition -- are a critical source of tuition revenues for public and private American Universities. The Institute of International Education (IIE, 2019) records that over 430,000 foreign undergraduate students studied in the US in 2018/19, 83.5% of whom listed “Personal and Family” financial support as their primary funding source. While overall they comprise 5% of enrollment in higher education, their representation varies tremendously across fields and levels -- for example, [50-70%](#) of all master’s degree recipients in Computer Science, Engineering, Physics, and Economics are from abroad. Losing international students is a direct threat to the existence of many academic programs, and already [some have closed](#) citing falling international enrollment as the primary factor. Khanna et al (2020) estimate US universities will already lose roughly \$1.15 billion in tuition revenue from the ongoing US-China trade war, as Chinese student enrollment falls. The losses from this exclusionary ICE directive, which applies to international students from all countries, will compound.

Academic research supports the economic benefits of international student enrollment for the US economy. Shih (2017), for example, argues that foreign students help to increase college enrollment of native-born Americans. Most American students receive subsidies and financial aid, and on average pay [40-50%](#) of sticker price tuition rates. Full-sticker price tuition revenue from international students helps to provide more subsidies for American students. International students also help universities buffer against declines in government funding that have occurred for several decades. Bound et al. (2020) demonstrate that public research universities rely upon tuition dollars from foreign undergraduates when state appropriations for university education fall. Studies like these demonstrate how important foreign students are for the financial health of the US higher education sector, and how they can benefit American students.

Different from traditional exports of manufactured goods, international students must travel to and live in the United States to consume higher education services. In addition to providing tuition revenue, their physical presence here means they also contribute to local demand for goods and services. [NAFSA: Association of International Educators \(2020\)](#) reports that foreign students contributed \$41 Billion dollars to the US economy and supported over 450,000 jobs in 2018/19. [Basso & Peri \(2016\)](#) estimate that the 10 states with the most international students -- which, in addition to New York and California, actually mostly consist of heartland states, such as Ohio, Illinois, Michigan and Pennsylvania -- stand to gain nearly \$8.3 billion in wages and \$283 million in state taxes. The ICE directive penalizes these exports in the present, discourages them in the future, and has substantial immediate consequences for universities and the local economies surrounding them.

The Long-Term effects on Innovation and Economic Growth

The consequences of pushing international students away from American Universities grow more dire when one considers the long-term implications. Most directly, US universities have been leaders in knowledge creation and innovation, which in turn are key for long-term, sustained, economic growth. Black and Stephan (2010) estimate that nearly 75% of the country's science and engineering research articles were written in universities, and international students play a large role in this process, accounting for almost 60% of graduate student first-authors in papers published in Science. Stuen, Mobarak and Maskus (2012) argue that international graduate students are a crucial input to university innovation. In the institution they studied, each international student increases the number of high quality scientific publications by one per year. This ICE directive will therefore push away international students and their contributions to technological growth and innovation.

Beyond the university, many of the successful international students stay in the country and continue to generate new knowledge long after graduation. Hunt (2011) finds that college-educated immigrants are 3.2 percentage points more likely to have published a book or paper than native-born Americans, and that among those who have published, immigrants have generated 44% more publications. They are also twice as likely to have patented an invention and to have commercialized that patent. Much of this can be explained by immigrants' higher

propensity to earn Science, Technology, Engineering, and Mathematics (STEM) degrees -- a factor that also explains immigrants' disproportionate contributions to technology and productivity growth (see Kerr and Lincoln 2010 and Peri et al. 2015).

Unfortunately, we know that immigration restrictions are already deterring many of the best and brightest foreign students from studying in the United States. Shih (2016) and Kato and Sparber (2013) found that when the US reduced the cap on H-1B visas -- work permits for foreign-born skilled college-educated workers -- it also reduced the number of students interested in US education. The decline was most severe among the top quintile of the SAT distribution, resulting in a 1.5% decline in overall SAT scores and a 2.8% decline in the grade point averages of prospective students. More recently, Chen et al. (2020) find that anticipated F-visa restrictions caused 40% of high-scoring international SAT takers to forgo a US college education. This ICE directive will similarly push away the best and brightest from abroad, who will take their talents to more welcoming nations.

Because callous and dismissive policies towards international students harm universities, the US may also lose many of the external benefits from a robust higher education sector. Universities provide skilled labor and know-how to both local companies, thereby stimulating the broader communities around them. Economists have long recognized these effects and have analyzed how they generate local spillover effects that improve regional economic activity: Kantor and Whalley (2014), for instance, argue that a \$1 increase in university spending causes an \$0.89 increase in local non-education labor income. Lee (2019) finds that the opening of a large research university generates an up to 13% increase in local employment, especially in local services. Moreover, better universities create a higher-skilled workforce, which improves the productivity of U.S. companies and benefits other workers (Moretti (2004a, 2004b)). Weaker educational institutions over the long-run will also diminish a range of positive externalities that come with a well-educated workforce, such as better medical facilities, cultural institutions, and civic engagement.

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Summary

In summary research clearly shows that international students significantly contribute and enrich US society:

- They spend tuition dollars that help to fund universities and subsidize the cost of enrollment for American-born students.
- They generate spillovers that improve the performance of local economies.
- They specialize in providing STEM skills and are crucial for scientific technological innovation, which in turn sustains most of the US's long-term economic growth.

Preventing international students from remaining in the US will have disastrous consequences for the country's economy in both the short and long run: its most competitive sectors of higher education, and technological and scientific innovation will suffer. Not to mention that the directive is a capricious, cruel, and discriminatory response to the COVID-19 pandemic -- forcing students to travel in a time of uncertainty and distress.

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