

I want to thank Chairman Sessions, Ranking Member Schumer, and the members of the subcommittee for inviting me to testify today. My name is Chad Sparber. I am an associate professor and chair of the economics department at Colgate University. The economics of immigration has been my sole field of inquiry since I arrived to Colgate ten years ago.

A tremendous amount of economics literature has found that, on average, highly-educated immigrants increase American wages, employment, and productivity. There are at least two reasons for this effect:

- (1) Among highly-educated workers, immigrants have a comparative advantage in STEM work. Even within science fields, immigrants are more likely to earn a degree in engineering, computer science, and mathematics, whereas native-born Americans are more likely to major in life sciences and psychology. What this means is that (A) Immigrants and native-born Americans do not directly compete with each other for jobs in the same way that a lot of people might imagine, and (B) when foreign-born STEM workers enter the US labor force, it creates an opportunity for native-born workers to respond by doing other types of work including managerial occupations that often – though not always – pay higher wages.
- (2) Immigrants specialize in science and engineering work. Scientists and engineers are responsible for most of the technological progress in recent decades. Technology creates gains that spill over to many sectors of the economy, and is the key to generating long-term, sustained, economic growth. If you accept that chain of logic – and most economists do – then you can see that immigrants are vital to American economic growth. Quantitatively, immigrants were responsible for two-thirds of the growth of the STEM workforce between 1990 and 2010, and about one-third of the productivity growth of the American economy over the same period.

What this comes down to in terms of wage effects that my coauthors and I have estimated is that the rise in foreign STEM employment between 1990 and 2010 increased the inflation-adjusted wage growth rate of college-educated natives by about 3.7 percentage points above what it otherwise would have been. For context, that is equivalent to about one third of college-educated wage growth during that period.

I think that these figures alone attest to the problems associated with our current limits to high-skilled immigration, but there are other reasons to be concerned as well:

- (1) We know that immigrants are more entrepreneurial and innovative than native-born Americans in general. A lot of that is due to selection bias (innovative people want to immigrate to the United States), but even after controlling for educational attainment, immigrants are more likely than natives to start a company with more than 10 workers. 25 percent of high-tech companies founded between 1995 and 2005 had at least one immigrant founder. Over 40 percent of companies in the Fortune 500 in 2010 were founded by an immigrant or the child of an immigrant.
- (2) We know that H-1B workers increase patenting activity without crowding out natives. One way to think about it is this: A firm might have a project planned, and if they do not get the foreign workers that they want, they might scrap the project altogether, resulting in native employment and patenting activity losses.
- (3) H-1B reductions may have reduced immigrant quality as well. This has happened at the college level – the highest ability foreign students have been deterred from seeking US education because US labor markets are closed to them after graduation. This is a problem: Whatever immigration policy we put in place should be designed to bring the best into the country.
- (4) If you believe foreign workers are competing with Americans within our country's borders, they are certainly competing from abroad. Many countries have immigration policies favoring skilled workers. Simply put: if those workers do not produce goods and services here, they will do so in competing countries.

Importantly, while our work finds economic gains for the average worker and the economy as a whole, I do not mean to imply that immigration is a cost-free proposition. There is an important parallel in the case of technology. We know that, in recent years, technology has contributed to growing wage inequality. It boosts the wages of highly-educated workers, but has hurt or even replaced medium to low skilled workers. Technological development has distributional consequences. Yet very few people would advocate an end to technological progress. Instead, we try to think about redistribution or job retraining programs to help displaced workers. We can think of immigration in the same way: If some groups are negatively affected, we should develop ways to assist them. Reduced immigration is a counter-productive non-solution because it harms the country on average.

Thank you again for the invitation to testify today, and I look forward to answering your questions.