Census: Foreign-Born Getting STEM Degrees at Higher Rates than Native-Born

Jobs in science, technology, engineering, and math have grown quickly in recent years

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According to a new report from the Census Bureau, foreign-born Americans are earning STEM degrees in disproportionately large numbers, compared to the native-born U.S. population.

Foreign-born people account for 16.5 percent of the U.S. population 25 and older, and a similar proportion of the segment of that population with bachelor's degrees or higher (15.8 percent).

But 33 percent of all graduates with engineering degrees are foreign-born, along with 27 percent of graduates in computers, math, and statistics, and 24 percent in physical sciences.

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Altogether, nearly 21 percent of bachelor's holders who earned their degrees in what the Census classifies as "science and engineering fields" are foreign-born. Of these fields, the only ones in which native-born students lead their foreign-born counterparts are psychology, social sciences, and multidisciplinary sciences.

What is behind this gap? There is some evidence that the United States is not preparing its students as adequately as foreign counterparts. According to the OECD's 2011 Education rankings, the United States is average among OECD countries in mathematics and below average in science, according to 2009 data.

However, other powerful forces are at work. One of these is culture, says Nicole Smith, senior economist at Georgetown University's Center for Education and the Workforce. In many countries that send numerous students to the United States, "there's a high value on education, and a high amount of prestige especially on STEM [science, technology, engineering, and mathematics] education and STEM training." According to the Census, 57 percent of these students come from Asia, and a majority of those Asian students are from China or India.

In addition, foreign-born students have an incentive to study science and engineering that simply does not apply to native-born students: longer stays in the United States. Foreign students who graduate with bachelor's degrees are allowed to work in the country for 12 months after graduation, in a program called "optional practical training." Those with science and engineering degrees, however, are allowed to stay for an additional 17 months of that training.

Population size is also at work, says Smith. China and India are simply very large countries, with many high school graduates who want to study in STEM fields and come to the United States for that opportunity.

[See why middle-class neighborhoods are disappearing.]

Whatever the causes of the foreign-native gap in science and engineering, the effects can be a substantial leg up in a depressed labor market.

While the unemployment rate for people with bachelor's degrees is already low—4.4 percent as of October, compared to the national unemployment rate of 9.0 percent—science and engineering fields are booming in recent years. According to the Department of Commerce, the number of jobs in science and engineering grew at three times the rate of those in other fields over the last 10 years.

Educating native-born American students to be competitive in the labor force therefore means getting them into those STEM areas of study, says Domenic Giandomenico, director of education and workforce projects at the U.S. Chamber of Commerce's Institute for a Competitive Workforce. But he adds that, while improvements can be made in education, industries and businesses in science and engineering need to do more to make students aware of the opportunities in their fields. Many STEM graduates are diverted away from jobs in science and engineering and into the business and healthcare fields. Smith says that some companies in the business and healthcare fields put a higher wage premium on STEM-educated workers than those of other disciplines.

"Some of it's pay, [but] a lot of it is recruiting. We need more direct recruiting from companies," like job-shadowing and mentorship programs, says Giandomenico. "Wall Street is doing a great job of reaching out to these students, where not a lot of other companies have."

1 2 >

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