
Low Unemployment Rates in STEM Occupations Reaffirm that Foreign Born Workers with Advanced Degrees Complement United States STEM Workers

The Information Technology Industry Council, the Partnership for a New American Economy, and the U.S. Chamber of Commerce today released a new report, “Help Wanted: The Role of Foreign Workers in the Innovation Economy.” The report analyzes employment in the fields of Science, Technology Engineering, and Math (STEM) using data from the United States Census and the United States Department of Education Integrated Post-Secondary Education Data System (IPEDS), and gives evidence that foreign-born STEM workers are complementing—not displacing—their American counterparts, and that the American economy is facing a shortage of STEM talent. Congress is currently considering multiple bills to provide green-cards for foreign-students who earn advanced degrees from American universities in STEM fields. Past research has shown that each of these students who stays in the United States creates on average 2.62 jobs for American workers.

“The future of the American economy is in our ability to innovate,” said Partnership for a New American Economy Co-Chair and New York City Mayor Michael Bloomberg. “It is critical for our economic future that we not only educate and train more US workers in STEM fields, but that we also capitalize on the foreign-born STEM students currently being trained at our universities. Unfortunately, our antiquated immigration laws too often force these future job creators off our shores to compete against us.”

“Multiple sectors of the American economy rely on STEM professionals and many of the STEM occupations with the highest percentages of foreign born workers have the lowest unemployment rates for Americans,” said Thomas J. Donohue, president and CEO of the U.S. Chamber of Commerce. “The time has come for Congress to put a high skilled immigration system in place that will help ensure that skilled innovators, regardless of country of birth, will create new jobs and products here in America rather than elsewhere.”

“Our report reinforces a simple truth: Our country’s innovative potential depends on highly skilled, talented Master's and PhD graduates from U.S. colleges and universities — both U.S- and foreign-born,” said Dean Garfield, President and CEO of the Information Technology Industry Council. "The competition for talent is global, and the U.S. economy risks being on the wrong side of this global talent search, and its job-creating benefits, unless Congress takes action to reform our high-skilled immigration laws."

Among the report’s findings:

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There is full employment for US STEM workers with advanced degrees: While the current national unemployment rate hovers around 8 percent, the unemployment rate for United States citizens with PhDs in STEM is just 3.15 percent and 3.4 percent for those with master’s degrees in STEM. Given that the United States government has defined “full-employment” to be 4 percent, this suggests a skills shortage of STEM professionals with advanced degrees.

In many STEM occupations, unemployment is virtually non-existent: Unemployment is particularly low in STEM occupations such as Petroleum Engineers (0.1 percent), Computer Network Architects (0.4 percent), Nuclear Engineers (0.5 percent), Environmental Scientists and Geoscientists (1.2 percent), Database Administrators (1.3 percent), Statisticians (1.6 percent), Engineering Managers (1.6 percent), and Aerospace Engineers (1.9 percent).

STEM fields employ a far higher proportion of foreign workers than non-STEM fields: In STEM fields, 26.1 percent of workers with PhDs are foreign born, as are 17.7 percent of workers with master’s degrees. In comparison, in non-STEM fields, just 6.4 percent of doctoral workers and 5.2 percent of master’s workers are foreign born.

STEM fields with high percentages of foreign STEM workers have low unemployment rates for US workers: Although nearly 25 percent of medical scientists are foreign born, United States medical scientists enjoy an unemployment rate of just 3.4 percent, fully five percentage points lower than the non-STEM unemployment rate (8.4 percent). Similar stories exist for STEM occupations such as physical scientists and computer software designers, where immigrants make up more than 20 percent of the field and unemployment is just 4 percent. Unemployment across all STEM occupations is just 4.3 percent, and the unemployment rate is actually lower than that average in 10 of the 11 STEM occupations with the largest proportion of foreign workers.

Foreign-born STEM workers are paid on par with US STEM workers: There is no verifiable evidence that foreign-born STEM workers adversely affect the wages of American workers by providing a less expensive source of labor. The average STEM worker actually makes slightly more than his or her United States counterpart, earning on average $61 more per week.

About the Information Technology Industry Council

The Information Technology Industry Council (ITI) is the premier advocacy and policy organization for the world’s leading innovation companies. ITI navigates the constantly changing relationships between policymakers, companies, and non-governmental organizations, providing creative solutions that advance the development and use of technology around the world. We develop first-rate advocacy strategies and market-specific approaches. And we deliver results. Visit www.itic.org to learn more.

About the Partnership for a New American Economy

The Partnership for a New American Economy brings together more than 500 Republican, Democratic, and Independent mayors and business leaders who support immigration reforms that will help create jobs for Americans today. Visit www.renewoureconomy.org to learn more.

About the U.S. Chamber of Commerce

The U.S. Chamber of Commerce is the world’s largest business federation representing the interests of more than three million businesses and organizations of every size, sector, and region. Visit www.uschamber.com to learn more.

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