

**UPDATED ANALYSIS OF EMPLOYMENT DATA FOR
COMPUTER OCCUPATIONS**

The unemployment rate for individuals in computer occupations declined from 3% in January 2020 (before the pandemic spread in the U.S.) to 2.8% in April 2020, and declined again to 2.5% in May 2020, according to an analysis of the Bureau of Labor Statistics' Current Population Survey by the National Foundation for American Policy (NFAP).¹ The 2.5% unemployment rate in May 2020 for individuals in computer occupations is far lower than the 13.5% unemployment rate for all other occupations, indicating that new immigration restrictions based on a claim that computer occupations have been unduly harmed by the economic fallout from the coronavirus would be without a factual foundation.

**Table 1
U.S. Unemployment Rate in Computer Occupations**

OCCUPATIONS	JANUARY 2020	APRIL 2020	MAY 2020
Computer Occupations	3.0%	2.8%	2.5%
All Other Occupations	4.1%	15.0%	13.5%

Source: National Foundation for American Policy estimates using Bureau of Labor Statistics' Current Population Survey, January 2020, April 2020 and May 2020. Not seasonally adjusted. Computer occupations include Computer and information research scientist, Computer and information systems manager, Computer hardware engineer, Computer network architect, Computer programmer, Computer support specialist, Computer systems analyst, Database administrator and architect, Information security analyst, Electrical and electronics engineer, Network and computer systems administrator, Software developer, Software quality assurance analyst and tester, Web and digital interface designer and Web developer.

The data raise significant questions about the Trump administration's using the unemployment rate for computer professionals to justify the new restrictions on H-1B visa holders and international students working on Optional Practical Training (OPT). Another indicator that demand for high-tech skills remains strong among employers in the U.S. labor market: During the 30-day period ending June 9, 2020, there were over 639,000 active job vacancy postings advertised online for jobs in common computer occupations, including those most common to H-1B visa holders, according to Emsi Job Posting Analytics.² For example, there are over 260,000 active job vacancy postings advertised online for software developers (applications).

An April 22, 2020, [presidential proclamation](#) suspended the entry of most new immigrants for at least 60 days, and asserted the reason for the proclamation was that "we must be mindful of the impact of foreign workers on the United States labor market, particularly in an environment of high domestic unemployment and depressed demand for labor."

¹ Note: "The Current Population Survey (CPS) is a monthly survey of households conducted by the Bureau of Census for the Bureau of Labor Statistics," according to BLS.

² An examination of 12 computer occupations at <https://www.economicmodeling.com/job-posting-dashboard/>. The number of active job vacancy postings advertised online for jobs in common computer occupations is lower than 12 months ago but still a significant number of vacancy postings.

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The proclamation ordered a 30-day review to recommend additional measures on temporary visas. “The Trump administration is preparing to roll out another set of restrictions on legal immigration, citing the impact of the coronavirus pandemic, even as it argues for the reopening of the US economy, according to sources familiar with the deliberations,” reported CNN. “Despite a push from President Donald Trump to move past the pandemic, the administration is continuing to usher forward immigration measures, citing the outbreak and its toll on the economy.”³

The National Foundation for American Policy analysis of the Bureau of Labor Statistics’ Current Population Survey found U.S. professionals in computer occupations – in the same occupations as most H-1B visa holders – had a lower unemployment rate in May 2020 than in January 2020, a decline of about 17% or 0.5 percentage points. (January 2020 was prior to the coronavirus having a significant impact on the U.S. population.)

There are often fluctuations from month-to-month in employment numbers but the big picture is how individuals in computer occupations have fared compared to individuals in other occupations, reflecting the continued demand in the U.S. labor market for their technical skills and knowledge. Table 2 shows the unemployment rate for individuals in computer occupations in 2020 has been fairly consistent at 3% in January 2020, 2.4% in February, 1.9% in March, 2.8% in April and 2.5% in May.

**Table 2
U.S. Unemployment Rate in Computer Occupations**

OCCUPATIONS	JANUARY 2020	FEBRUARY 2020	MARCH 2020	APRIL 2020	MAY 2020
Computer Occupations	3.0%	2.4%	1.9%	2.8%	2.5%
All Other Occupations	4.1%	3.9%	4.7%	15.0%	13.5%

Source: National Foundation for American Policy estimates using Bureau of Labor Statistics’ Current Population Survey, January 2020, February 2020, March 2020, April 2020 and May 2020. Not seasonally adjusted. Computer occupations include Computer and information research scientist, Computer and information systems manager, Computer hardware engineer, Computer network architect, Computer programmer, Computer support specialist, Computer systems analyst, Database administrator and architect, Information security analyst, Electrical and electronics engineer, Network and computer systems administrator, Software developer, Software quality assurance analyst and tester, Web and digital interface designer and Web developer.

In contrast, the overall unemployment rate for individuals in all other occupations went from 4.1% in January 2020 to 15% in April and 13.5% in May due to the impact of businesses affected by the coronavirus, lockdowns and social distancing.

³ <https://www.cnn.com/2020/06/09/politics/immigration-limits-coronavirus/index.html>.

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In the NFAP analysis of government unemployment rate data, the computer occupations track those listed in the H-1B “characteristics report” for FY 2019 published by U.S. Citizenship and Immigration Services (USCIS). According to the USCIS report, 66% of H-1B beneficiaries in FY 2019 were in computer-related occupations.⁴ The computer occupations included in the NFAP analysis of Bureau of Labor Statistics data were Computer and information research scientists, Computer and information systems manager, Computer hardware engineer, Computer network architect, Computer programmer, Computer support specialist, Computer systems analyst, Database administrator and architect, Information security analyst, Electrical and electronics engineer, Network and computer systems administrator, Software developer, Software quality assurance analyst and tester, Web and digital interface designer and Web developer.

As discussed in the [NFAP analysis](#) of April’s data, there are several likely explanations for why professionals in computer occupations fared much better in April and May 2020 than workers in other occupations. The skills in computer occupations are those that generally can be performed remotely, an important characteristic during the coronavirus pandemic, according to labor economist and NFAP Senior Fellow Mark Regets. He notes the skills in computer occupations remain in demand today and are going to be in even higher demand in the future as work continues to move online.

This does not mean everything is ideal in the job market even for those in high-tech occupations, but the data show it would be false for government officials to cite the overall U.S. unemployment rate and claim individuals in computer occupations have been harmed in an extraordinary fashion by the economic fallout from the coronavirus.

Members of the Trump administration, including the president, have said the U.S. economy will continue to improve, further undermining the case for new immigration restrictions. In June 10, 2020, [Senate testimony](#), Treasury Secretary Steven T. Mnuchin said, “We remain confident that the overall economy will continue to improve dramatically in the third and fourth quarters.”

In [remarks on June 5, 2020](#), President Trump said, “I think we’re going to have a very good upcoming few months,” he said. “I think you’re going to have a very good August, a very good July, but a spectacular – maybe spectacular September, but a spectacular October, November, December. And next year is going to be one of the best years we’ve ever had, economically. And if you look at the numbers, they bear it out.” Chief economic adviser Larry Kudlow made [similar statements](#).

⁴ Table 8B, *Characteristics of H-1B Specialty Occupation Workers Fiscal Year 2019 Annual Report to Congress October 1, 2018 – September 30, 2019*, USCIS, March 5, 2020. NFAP included electrical and electronics engineers in the analysis of government unemployment rate data. Other occupations eligible for H-1Bs, such as accountants, appear in much lower numbers in the USCIS report.

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Economic research shows foreign-born individuals do not harm the labor market prospects of Americans. “H-1B visa holders do not adversely affect U.S. workers,” according to a May 2020 National Foundation for American Policy study by Madeline Zavodny, formerly an economist at the Federal Reserve Bank of Atlanta (and Dallas) and a professor of economics at the University of North Florida (UNF) in Jacksonville. “On the contrary, the evidence points to the presence of H-1B visa holders being associated with lower unemployment rates and faster earnings growth among college graduates, including recent college graduates. Further, the results suggest that, if anything, being in a field with more H-1B visa holders makes it more likely that U.S.-born young college graduates work in a job closely related to their college major. The results here should give pause to policymakers considering imposing additional restrictions on the H-1B program. There is little reason to think doing so will help American workers.”⁵

A [study](#) by economists Giovanni Peri, Kevin Shih, Chad Sparber and Angie Marek Zeitlin examined the last recession and found that denying the entry of H-1B visa holders due to the annual limits harmed job growth for U.S.-born professionals. “The number of jobs for U.S.-born workers in computer-related industries would have grown at least 55% faster between 2005-2006 and 2009-2010, if not for the denial of so many applications in the recent H-1B visa lotteries,” concluded the economists.⁶

[Research](#) by Britta Glennon, an assistant professor at the Wharton School of Business at the University of Pennsylvania, found new restrictions on H-1B visas are likely to push jobs out of the United States, concluding, “[A]ny policies that are motivated by concerns about the loss of native jobs should consider that policies aimed at reducing immigration have the unintended consequence of encouraging firms to offshore jobs abroad.”⁷

A [study](#) by Madeline Zavodny concluded, “There is no evidence that foreign students participating in the OPT [Optional Practical Training] program reduce job opportunities for U.S. workers. Instead, the evidence suggests that U.S. employers are more likely to turn to foreign student workers when U.S. workers are scarcer.” The study also found, “The relative number of foreign students approved for OPT is negatively related to various measures of the unemployment rate among U.S. STEM workers. A larger number of foreign students approved for OPT, relative to the number of U.S. workers, is associated with a lower unemployment rate among those U.S. workers.”⁸

⁵ Madeline Zavodny, *The Impact of H-1B Visa Holders on the U.S. Workforce*, NFAP Policy Brief, National Foundation for American Policy, May 2020.

⁶ Giovanni Peri, Kevin Shih, Chad Sparber and Angie Marek Zeitlin (June 2014), *Closing Economic Windows: How H-1B Visa Denials Cost U.S.-Born Tech Workers Jobs and Wages During the Great Recession*, Partnership for a New American Economy.

⁷ Britta Glennon, *How Do Restrictions on High-Skilled Immigration Affect Offshoring? Evidence from the H-1B Program*, Carnegie Mellon University, May 2019.

⁸ Madeline Zavodny, *International Students, STEM OPT and the U.S. Workforce*, NFAP Policy Brief, National Foundation for American Policy, March 2019.

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In March 2020, using a new electronic registration system, H-1B cap selection took place for FY 2021. Individuals selected cannot begin working in H-1B status in the U.S. until October 1, 2020 or later. The next set of new H-1B visa holders (for initial employment) will not be selected until March 2021 and cannot begin working in the United States on an H-1B until October 1, 2021. The annual H-1B limit for employers is, in effect, 85,000, which equals approximately 0.05% of the U.S. labor force.

As noted in the April analysis, it is not sensible to make long-term immigration policy by citing short-term employment situations affected by an unprecedented health crisis, particularly since numerous academic studies show foreign-born individuals do not adversely affect U.S. workers and the president has promised the unemployment picture will improve this year. The latest Bureau of Labor Statistics data show the U.S. unemployment rate in occupations most common for H-1B visa holders has declined, which makes it dubious to cite unemployment in these occupations as a reason for new restrictions on H-1B visas, international students on OPT and others.

Appendix – A Note on Methodology⁹

The analysis from the National Foundation for American Policy (NFAP) focused only on computer occupations in the Bureau of Labor Statistics (BLS) data and listed which occupations were examined in the analysis. The analysis tracked the same occupations for all 5 months of 2020. The computer occupations selected matched those as best as possible with the occupations in *Characteristics of H-1B Specialty Occupation Workers Fiscal Year 2019 Annual Report to Congress October 1, 2018 – September 30, 2019*, published by U.S. Citizenship and Immigration Services.

Focusing on “computer occupations” more closely aligns with the occupations filled by H-1B visa holders for which companies petition than the BLS “computer and mathematical occupations,” which includes mathematical occupations, such as actuaries, and does not include a number of computer occupations, such as electrical and electronics engineers. The occupations in the NFAP list are more accurately a group of computer occupations than the BLS “computer and mathematical occupations” list.

Each month the Bureau of Labor Statistics calculates its estimates of unemployment rates using the Current Population Survey (CPS), a monthly survey of about 120,000 individuals in 60,000 households. Each month, shortly after releasing its own data tables, BLS makes a public use data file available of individual CPS survey responses so that others can both replicate BLS’s numbers and perform analyses beyond BLS’s own monthly tables.

NFAP’s calculations of the unemployment rate in computer occupations are made using the monthly CPS public use files using the same individual sample weights as BLS and applying the same formula that BLS uses to calculate its own estimates of unemployment.

As noted above, BLS publishes an unemployment rate for “computer and mathematical occupations.” The National Foundation for American Policy’s estimates of unemployment rates in “computer occupations” differs from BLS’s estimates for “computer and mathematical occupations” in only two ways. First, NFAP includes several clear computer occupations that BLS excludes: computer and information systems manager, computer hardware engineer and electrical and electronics engineers. Second, NFAP excludes the mathematical occupations: actuaries, operations research analysts, statisticians and “other mathematical occupations.” (About 80% of the workers in NFAP’s “computer occupations” are also in BLS’s “computer and mathematical occupations.”)

⁹ The Appendix has been added to this updated version of the NFAP Policy Brief to expand upon the discussion of methodology contained in the study.

ABOUT THE NATIONAL FOUNDATION FOR AMERICAN POLICY

Established in 2003, the National Foundation for American Policy (NFAP) is a 501(c)(3) non-profit, non-partisan public policy research organization based in Arlington, Virginia, focusing on trade, immigration and related issues. Advisory Board members include Columbia University economist Jagdish Bhagwati, Cornell Law School professor Stephen W. Yale-Loehr, Ohio University economist Richard Vedder and former INS Commissioner James Ziglar. Over the past 24 months, NFAP's research has been written about in the *Wall Street Journal*, the *New York Times*, the *Washington Post*, and other major media outlets. The organization's reports can be found at www.nfap.com.
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