

## LABOR

# Hurting Americans in Order to Hurt Foreigners

*Benefit-cost analysis challenges the Trump administration's effort to end the H-4 EAD program.*

BY IKE BRANNON AND M. KEVIN MCGEE

In 2015, the Obama administration authorized temporary work permits for the spouses of H-1B visa holders who were awaiting green cards. Over 90,000 of these H-4 visa holders have since received a permit, known as an Employment Authorization Document (EAD), and three-fourths of them are gainfully employed.

In 2017, the Trump administration announced that it intended to repeal the rule providing this work authorization. This February the administration followed through on that announcement with a notice of proposed rulemaking. The administration's stated reason for repealing the rule is that it would create more jobs for U.S. citizens.

We believe a thorough benefit-cost analysis, as required under Executive Order 12866, would find this justification unfounded. Ending the ability of these workers—who are, by and large, well-educated and high-skilled—to hold jobs in the United States would at best have no net effect on Americans' employment and likely would reduce Americans' employment and wages. Further, ending EAD would hurt the U.S. economy and U.S. taxpayers.

## THE ECONOMICS OF SKILLED IMMIGRATION

The effect of any immigrant group on the U.S. economy depends on those immigrants' skills and educational attainment. Highly skilled, well-educated workers, both foreign-born and domestic, have high employment levels, are less likely to avail themselves of public services such as food stamps and welfare, and are more likely to be in occupations that are hard to fill. As a result, they boost U.S. tax revenues while having little effect on government spending.

These skilled foreign workers benefit U.S. economic growth and employment, both for skilled and unskilled American workers. One reason for this is that skilled foreign labor has a relatively small substitution effect on skilled domestic workers because skilled foreign workers are relatively mobile and go where there are many available jobs. In contrast, the U.S. labor force is not so flexible: geographic mobility has gradually diminished in the United States since the 1950s and has fallen by 10% in just the last two years. The chief reason for this trend is the rise in two-income households, which increases the cost of moving for one spouse's job.

Another reason that skilled foreign workers have a positive effect on domestic employment is that they create what economists call a "scale effect": they boost overall economic activity, creating more opportunities and jobs for both skilled and unskilled domestic workers. This effect outweighs the small substitution effect for skilled domestic workers. For example, a 2014 study by Giovanni Peri, Kevin Shih, Chad Sparber, and Angie Marek-Zeitlin showed that reducing the number of skilled foreign workers coming to a community significantly reduced the wages of college-educated, U.S.-born workers in those communities who work with computers.

Skilled foreign-born workers have an unambiguously positive effect on unskilled U.S.-born workers. Skilled workers and unskilled workers are, in general, complementary, just as skilled workers and capital are complementary—that is, an increase in the quantity of one increases the demand and price for the other. Hence, an increase in the supply of skilled foreign workers increases the amount of capital in the economy and—along with it—the demand for unskilled workers. This results in higher wage and employment levels for unskilled workers, even without the scale effect.

Highly skilled foreign workers are also more likely to create



new businesses than U.S. citizens with similar skills and education. Foreign-born workers in the United States are 30% more likely to start a new business than a native worker, and 25% of all startups in Silicon Valley have been founded by immigrants.

Workers currently holding an H-4 visa are almost exclusively skilled workers. Thus, eliminating their work authorizations would have a small negative effect on skilled domestic workers, a large negative effect on unskilled domestic workers, and a significant negative effect on new business formation in the United States.

### THE DATA

The American Immigration Lawyers Association distributed a questionnaire we prepared to its approximately 14,000 members, encouraging them to ask their H-1B and H-4 clients to complete the survey. At the same time, an H-4 advocacy group called Save H-4 EAD sent the survey to its members. The questionnaire had 25 questions pertaining to the immigrants' level of education and area of study, the type and extent of work experience both in the United States and abroad, family status, and the visa status of the respondent.

We received responses from 4,708 individuals currently holding H-4 visas, 90% of whom were female. Not surprisingly, our sample was highly educated. Recall that H-4 visa holders are spouses of H-1B visa holders, who are foreign workers in specialty occupations. H-1B recipients overwhelmingly have college degrees in science, technology, engineering, and mathematical (STEM) disciplines and are employed in occupations like engineering, computer science, bio-sciences, and other high-tech areas.

Their spouses, H-4 visa holders, tend to have similar educational backgrounds. Less than 1% of our sample had less than a college degree, and nearly 60% had a master's degree, doctorate, or other professional or postgraduate degree. Some 83% of our respondents currently hold EADs; 75% of those EAD holders are currently employed in the United States, and almost 7% of them report being self-employed.

Employed EAD holders typically have held an EAD for two years and earn about \$77,000 a year—an income that is above the U.S. median salary. Some 66% of them work in a STEM field, mostly in computer-related, engineering, or math or statistics jobs, earning on average about \$83,000 annually. Some common self-reported job titles in our survey include systems engineers,

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software developers, automation engineers, quality assurance analysts, and data analysts—all jobs that U.S. employers have trouble filling.

Another 16% of respondents report working in the Business, Finance, or Management fields: this group typically reports holding occupations such as project managers or product managers and average about \$73,000 annually.

An additional 8% of employed respondents report working in the Healthcare Practitioner or Healthcare Support fields, in such occupations as physician, dentist, pharmacist, nurse, physical therapist, and healthcare business analyst. Once again, these are areas of high economic value, reflecting the high level of education and training among these H-4 visa holders. The average earnings of this group is about \$76,000 a year.

**Self-employed EAD holders** / Most of the 7% of employed EAD holders who report being self-employed appear to be independent contractors—technically self-employed, but doing work for one company. However, 2% of all the individuals we surveyed operate businesses that employ both themselves and others.

About 22% of this cohort were in the Business, Finance, and Management fields, another 22% were in a STEM field, and about 23% were in the Healthcare Practitioner and Healthcare Support fields. These self-employed have on average worked longer in the United States than those who work for others; 84% of the self-employed got their EADs in 2015 or 2016, as compared to only 70% of those employed by others. The self-employed report an average income of about \$60,000 a year and employ five other people on average.

### THE COSTS AND BENEFITS OF REPEALING EAD FOR H-4 VISAS

The process for any administration to enact or rescind a rule is straightforward: it must formally publish its intent to do so, make the entirety of the proposed rule change available on its website, and allow at least 30 days for public comment. For a rule that has an estimated economic effect of at least \$100 million—either to the government, the wider economy, or both—it must also pass a benefit-cost analysis pursuant to E.O. 12886. The order tasks the Office of Information and Regulatory Affairs (OIRA) with determining if the rule does indeed pass a benefit-cost threshold.

There are approximately 91,000 H-4 workers with an EAD, and our estimates suggest that approximately 75% of this cohort are currently employed, with an average annual salary of \$80,000. The sample we obtained is both representative and quite large—approximately 4% of the population, an almost unheard-of ratio—which implies that our earnings estimate is likely quite close to

the true average. The arithmetic implies that this cohort's annual income—and its annual contribution to U.S. gross domestic product—is approximately \$5.5 billion, 55 times the \$100 million threshold for a benefit-cost test.

Our estimates show that rescinding the EAD for H-4 visa holders would reduce federal tax revenue as well as U.S. economic activity without creating any jobs on net for domestic workers.

**Economic and tax revenue effects** / The EAD program clearly affects the ability of American employers to hire and retain H-4 visa holders. Our estimate of \$5.5 billion in annual lost earning for this group provides a minimum estimate of their employers' lost output. However, the H-4 EAD program also affects the ability of American employers to hire and retain H-1B visa holders. Some 28% of our employed H-4 respondents reported that their EADs have been important in their families' decision to remain in the United States; an identical 28% of the H-4 respondents

*Our estimates show that rescinding the EAD program for H-4 visa holders would reduce federal and state tax revenue and U.S. economic activity without creating any jobs on net for domestic workers.*

who are not currently employed but want to work identify the EAD as important to their remaining in the United States. This suggests that rescinding EADs could result in the loss of up to 25,000 H-1B employees and the roughly \$2 billion in U.S. production that they contribute to the U.S. economy. Thus, a better estimate is that the rule rescission could reduce U.S. GDP by around \$7.5 billion per year.

We can improve our estimate of the annual cost to the federal government from ending EAD in terms of forgone tax revenues. H-4 visa holders earn about \$80,000 a year and they all must have employed H-1B spouses. After the \$24,000 standard deduction and one \$2,000 child tax credit, the H-1B spouse would have about \$54,000 in taxable income. At current tax rates, the H-4 spouse's income would result in an additional tax bill of \$15,300. To that we must add both the employee's and the employer's shares of the payroll tax, about \$12,200. Hence, each employed H-4 visa holder would, on average, pay \$27,500 in federal taxes annually. With roughly 68,000 H-4 visa holders currently employed, that means that ending their employment would result in a federal revenue loss of around \$1.9 billion annually. This estimate does not reflect the additional tax revenue that would be lost when American employers lose some of their H-1B employees.

We also estimate the state and local taxes paid by this cohort



by multiplying their total income of \$5.46 billion by the average proportion of income that states and localities assess, 9.75%, via income, sales, property, and other taxes. This results in a state and local tax revenue loss of \$530 million. This estimate is undoubtedly low because it assumes that the distribution of H-4 visa holders resembles that of the overall population; in fact, they disproportionately congregate in high-tax states like California. Further, our calculation ignores the effect of the EAD rescission on employers' ability to attract and retain H-1B workers.

**Employment effect /** A question basic to the motivation for rescinding the work permit is whether the jobs currently held by H-4 visa holders would subsequently be filled by U.S. citizens. This defies an easy or objective answer, but we can make a few relevant observations.

First, the education and training of typical H-4 visa holders mean that the jobs they occupy would be relatively difficult for employers to fill with American workers. Unemployment rates tend to fall steadily with educational attainment. In June 2018, the unemployment rate for people without a high school degree was 5.8%, two points above the national average, but 4.3% for those with a high school diploma and only 2.5% for college graduates. For those with professional degrees or doctoral degrees, the unemployment rates were 1.5% and 0.9% respectively. These numbers suggest that there is very little unused supply of U.S. labor with the ability to do the work of the typical H-4 worker with a postgraduate degree and several years of professional experience.

A second, complementary point is that, as we approach the 11th year of an economic expansion, the availability of unemployed workers at any skill or educational level willing and able to do the jobs currently held by H-4 visa holders is relatively slight. This is not to say that there is no pool of underemployed workers in the U.S. economy; the labor force participation rate, which measures the proportion of the adult non-institutionalized population that is active in the labor market, is 5–7 percentage points below where it was at the peak of the previous two business cycles. This suggests that there may be a pool of domestic workers willing to enter the labor market if the opportunity arose.

However, it is more likely that the labor force participation rate today does not have much room to increase: research published by Ike Brannon and Andrew Hanson finds that the gap between past rates and the current rate are due to demographics (a greater proportion of workers are above age 55), the crippling effects of opioid addiction, and the ongoing sluggishness of new home construction. None of these suggest that there is a sizable pool of unemployed college graduates with STEM degrees.

To reasonably approximate the number of H-4 visa-held jobs that would be filled by U.S. citizens, we began with the Bureau of Labor Statistics' unemployment rates by occupation for June 2018. We assumed that the frictional unemployment rate is roughly 2%, so any occupation with a 2% or lower unemployment


rate would have no excess workforce whatsoever: all the currently unemployed workers in that occupation would be in the process of searching for and moving to a new employer. On the other hand, we assumed that if the unemployment rate in an occupation is 8% or higher, there is sufficient slack to allow all the H-4 visa workers to be replaced. For occupational unemployment rates between 2% and 8%, we used linear interpolation: at a 4% unemployment rate, only one-third of the H-4 workers would be replaced, but at a 6% unemployment rate two-thirds would be replaced.

In our sample, over two-thirds of the employed H-4 EAD holders were in fields with a June 2018 unemployment rate below 2%: Management, Engineering, Legal, Healthcare Practice, and Computer and Mathematics. Interpolation suggests that only 8% of the H-4 EAD workers would be replaced by American workers if the H-4s lost their employment status—12% if we were to boost our slack estimates. We conclude that eliminating the employment status of 68,000 working H-4 visa holders would result in the employment of only 5,500 to 8,200 U.S. citizens.

Remember that 2% of our employed H-4 visa holders were self-employed, and they in turn employed an average of five workers. If the 68,000 employed H-4 EAD holders all lose their employment status, 6,800 U.S. citizens would also become unemployed when the H-4 business owners liquidate their businesses. This would almost exactly cancel out any employment gains accruing to U.S. citizens from H-4 job replacement. And this ignores the other employment-creating effects from high-skilled H-4 workers. Overall, ending the H-4 program will likely reduce overall employment and wages for American workers.

#### NO DISCERNIBLE ECONOMIC BENEFITS—AT BEST

Rescinding employment authorization for H-4 visa holders would result in substantial costs to the U.S. economy, to federal and state tax coffers, and to U.S. employers' ability to attract H-1B workers. There would be no employment or income gains by domestic workers to offset those losses because the relatively small gains to U.S. workers replacing H-4 workers would be offset by the jobs lost when self-employed H-4 workers were forced to close their businesses and dismiss their employees. Worse, the loss of these high-skilled foreign workers is likely to have a negative overall effect on Americans' employment and wages.

In short, rescinding H-4 visa holders' ability to work fails to meet any credible benefit-cost analysis. This proposal should thus be rejected by OIRA. 

#### READINGS

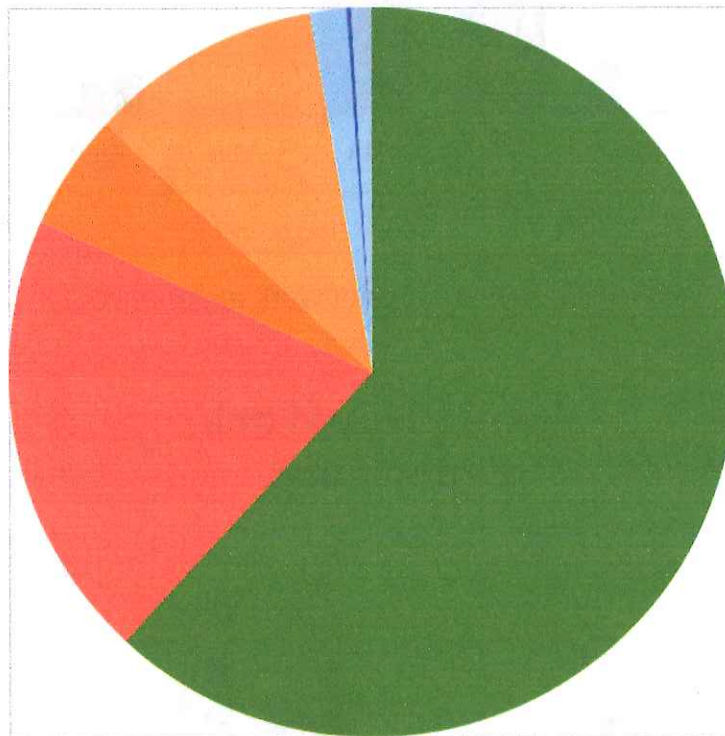
- "Closing Economic Windows: How H-1B Visa Denials Cost U.S.-born Tech Workers Jobs and Wages during the Great Recession," by Giovanni Peri, Kevin Shih, Chad Sparber, and Angie Marek-Zeitlin. Partnership for a New American Economy, June 2014.
- "Foreign Scientists and Engineers and Economic Growth," by Giovanni Peri, Kevin Shih, and Chad Sparber. *Cato Papers on Public Policy* 3: 107–184 (2014).
- "Wisconsin: A Blueprint for More Workers," by Ike Brannon and Andrew Hanson. Badger Institute, August 2018.

# Repealing H-4 Visa Work Authorization: A Cost-Benefit Analysis

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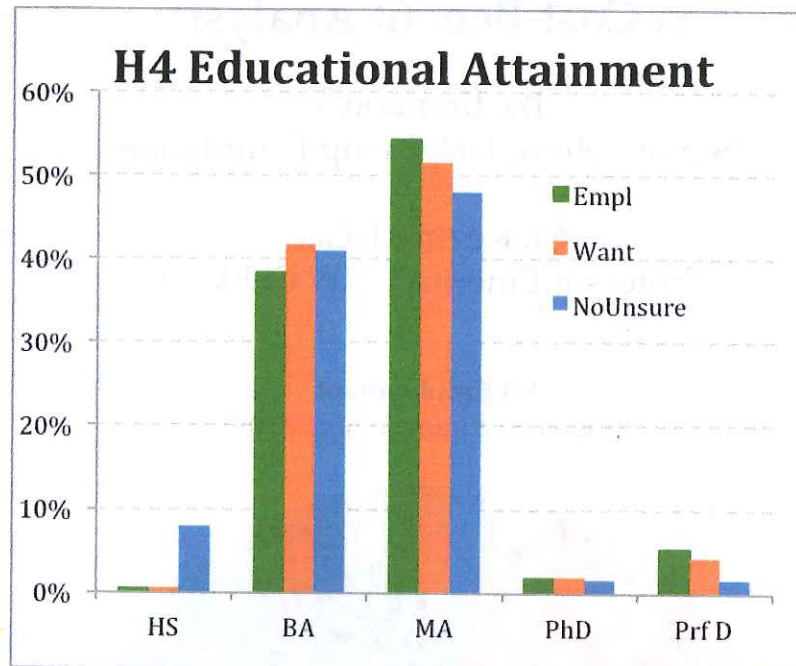
**H4 Employment**  
(Based on a sample of n=4708)



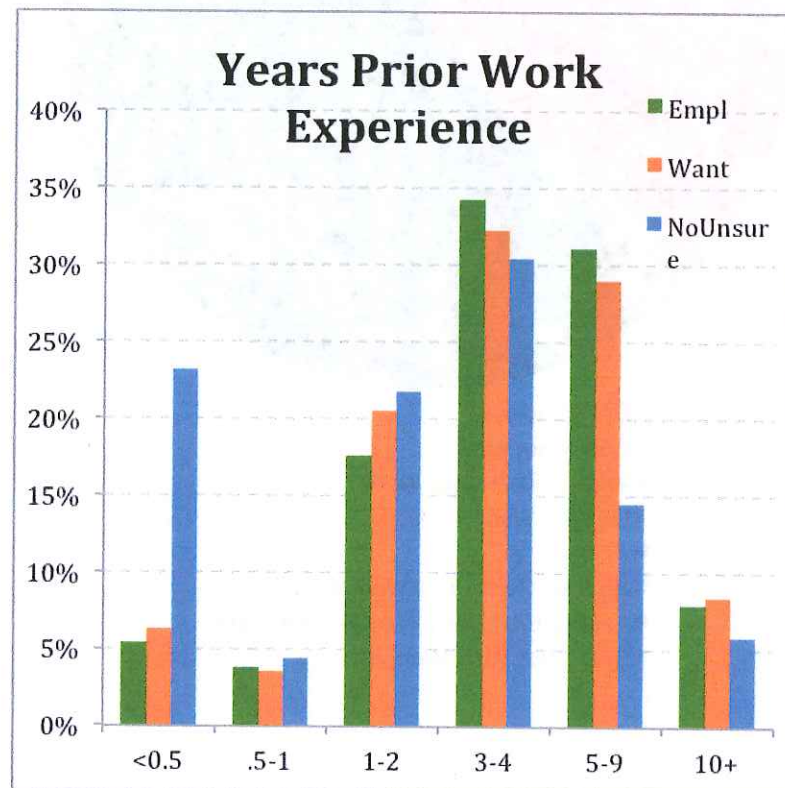
- EAD Employed
- EAD Want Work
- Applied EAD Want Work
- No EAD Want Work
- ???
- No EAD Don't Want Work \Unsure
- Applied EAD Don't Want Work \Unsure
- EAD Don't Want Work \Unsure



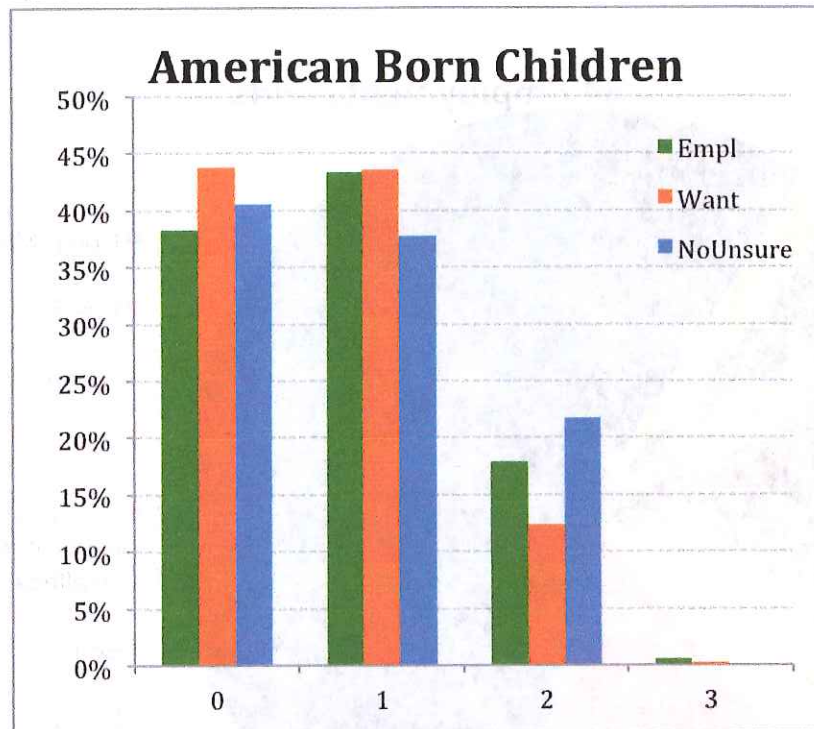
## The highly educated H4 population



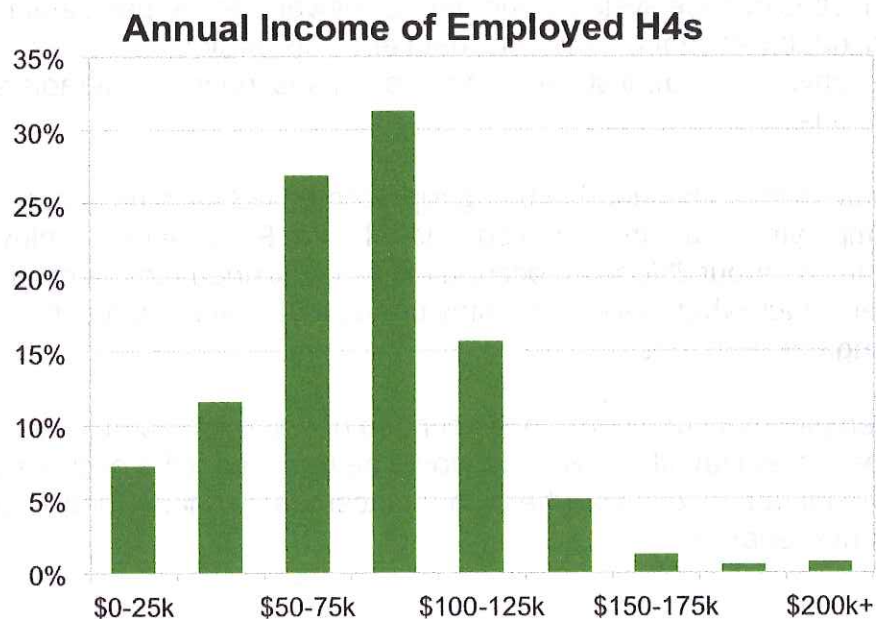
## Averaging 4 years of prior work experience



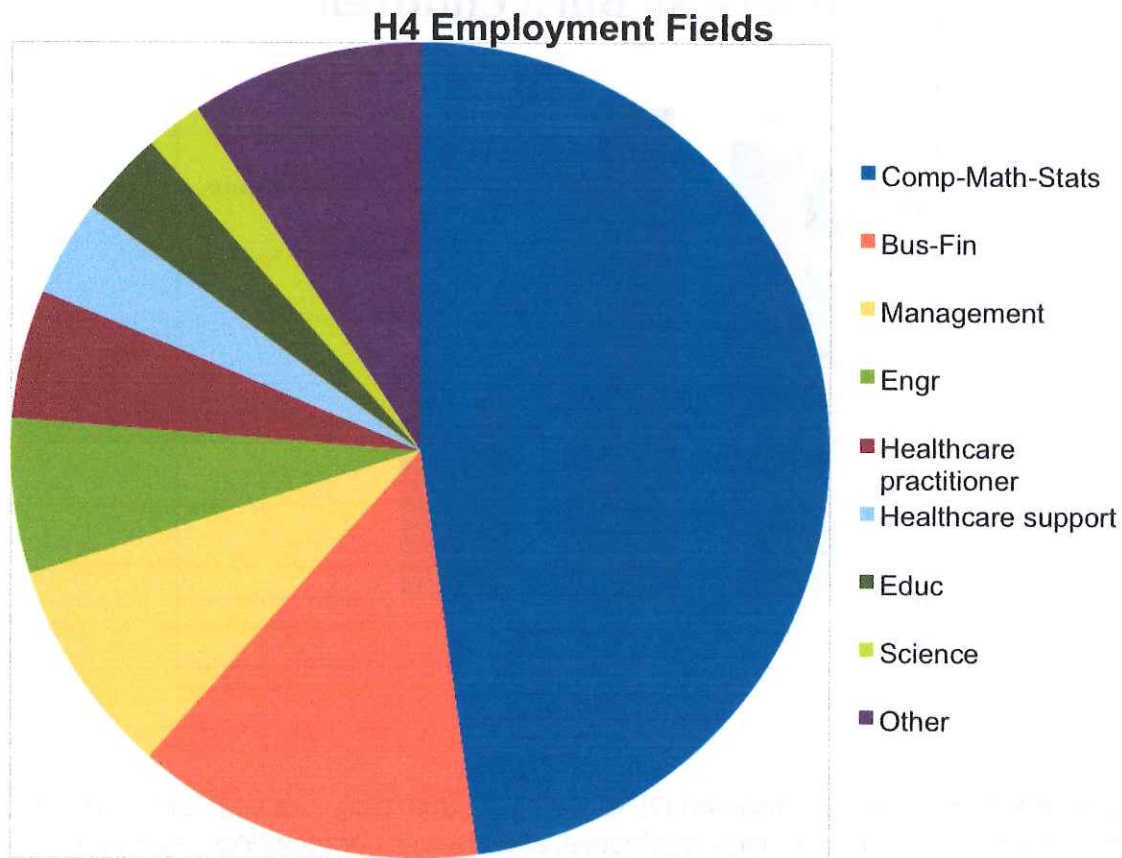
### Mostly parents of US citizens



62% of all H4 spouses are employed (75% of those with EADs). Not surprisingly, these highly educated workers are highly productive, and are well compensated, averaging around \$80,000 a year.



The overwhelming majority are employed in difficult to fill occupations, management, engineering, healthcare, science, computers and mathematics.



Typical job titles include systems engineers, software developers, automation engineers, quality assurance analysts, data analysts, project managers, product managers, physicians, dentists, pharmacists, nurses, physical therapists, and healthcare business analysts.

Our estimate of their likelihood of being replaced by US citizens is based on the 2018 unemployment rate in their occupational area. Frictional unemployment typically runs at about 2%, so an occupation with 2% unemployment has no employment slack whatsoever – the only unemployed workers are the ones transitioning between jobs.

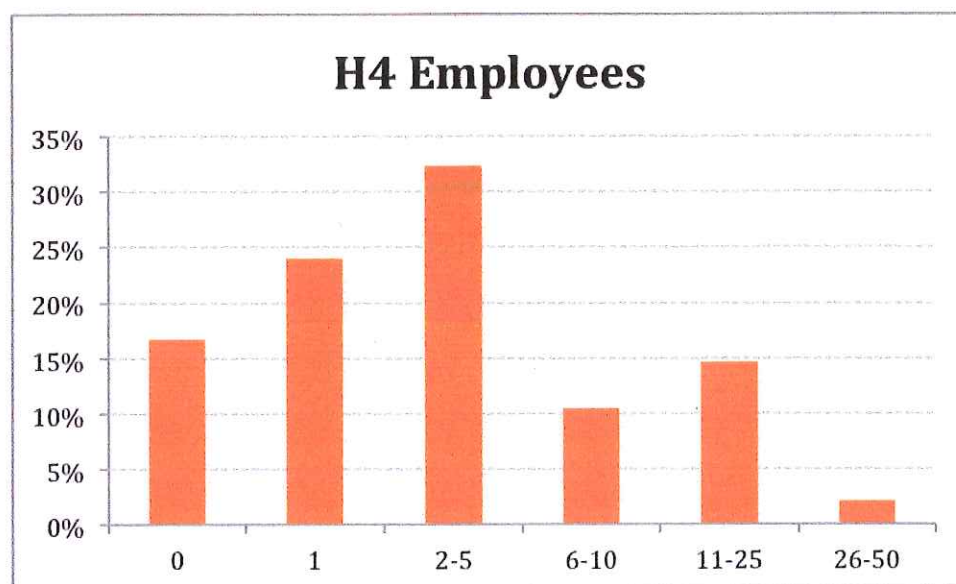
As the unemployment rate rises, the likelihood of being replaced rises. Our estimate assumes that all H4 workers would be replaced if the occupational unemployment rate rose to 6% (the high replacement scenario) or 8% (the low replacement scenario).



Occupational Area	n	%	2018	Replaced (low)		Replaced (high)	
			Unempl.	%	n	%	n
Comp-Math-Stats	1387	47.71%	2.13	2.2%	31	3.3%	46
Bus-Fin	401	13.79%	2.53	8.8%	35	13.1%	53
Management	249	8.57%	1.76	0.0%	0	0.0%	0
Engr	179	6.16%	1.77	0.0%	0	0.0%	0
Healthcare practitioner	148	5.09%	1.41	0.0%	0	0.0%	0
Healthcare support	110	3.78%	3.43	23.9%	26	35.8%	39
Educ	99	3.41%	3.07	17.8%	18	26.7%	26
Science	65	2.24%	2.00	0.0%	0	0.0%	0
Other	65	2.24%	3.90	31.7%	21	47.5%	31
Sales or related	43	1.48%	4.06	34.3%	15	51.5%	22
Office wk	35	1.20%	3.63	27.1%	9	40.6%	14
Manufacturing/production	31	1.07%	4.03	33.8%	10	50.6%	16
Art Design	27	0.93%	3.10	18.3%	5	27.5%	7
Personal care or services	17	0.58%	4.28	37.9%	6	56.9%	10
Legal	14	0.48%	1.62	0.0%	0	0.0%	0
Food prep/ serving	11	0.38%	6.05	67.5%	7	100.0%	11
Social services	9	0.31%	2.24	4.0%	0	6.0%	1
Construction or extraction	6	0.21%	5.98	66.4%	4	99.6%	6
Install or repair	5	0.17%	2.63	10.6%	1	15.8%	1
Transportation or material moving	3	0.10%	4.99	49.9%	1	74.8%	2
Bldg Maint	1	0.03%	5.49	58.2%	1	87.3%	1
Farming, fishing, or forestry	1	0.03%	9.23	100.0%	1	100.0%	1
Protective services	1	0.03%	2.73	12.1%	0	18.1%	0
	2907			6.6%	191	9.9%	287

We estimate that, under the low replacement scenario, less than 7% of H4 workers would be replaced by U.S. citizens. Even under the high replacement scenario, only 10% of H4 workers would be replaced.

But 2% of H4 workers are self-employed, employing 5 others on average. So for every 100 H4s that lose their work authorization, 10 US citizens will also lose their jobs.



Date		Time		Place		Remarks	
1901	Jan 1	10	15	10	15	10	15
1901	Jan 2	10	15	10	15	10	15
1901	Jan 3	10	15	10	15	10	15
1901	Jan 4	10	15	10	15	10	15
1901	Jan 5	10	15	10	15	10	15
1901	Jan 6	10	15	10	15	10	15
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1901	Jan 8	10	15	10	15	10	15
1901	Jan 9	10	15	10	15	10	15
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1901	Jan 11	10	15	10	15	10	15
1901	Jan 12	10	15	10	15	10	15
1901	Jan 13	10	15	10	15	10	15
1901	Jan 14	10	15	10	15	10	15
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1901	Jan 31	10	15	10	15	10	15

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EDIT POST

# At What Cost: Assessing the High Cost of Removing H-4 Visa Holders from the American Workforce



Ike Brannon Contributor ⓘ

Policy

*I write about fiscal and regulatory policy in Washington D.C.*

Late last month the Trump Administration [sent to the Office of Information and Regulatory Affairs for review](#) its proposed rule to terminate the work authorization of spouses of H-1B professionals who are patiently waiting in the extensive visa backlogs for their green cards. This policy, often referred to as H-4 EAD, has allowed tens of thousands of immigrant families to support themselves and contribute to their communities in America. Based on new research, we believe rescinding this rule will have significant economic and human costs.

In 2015, the Obama Administration authorized temporary work permits, called Employment Authorization Documents (EADs), for the spouses of H-1B visa holders who were awaiting green cards. These spouses hold H-4 status and according to DHS data, over 90,000 H-4 visa holders have received a work permit since that time, and our study suggests that about three-quarters of those currently hold gainful employment.

We are in the process of analyzing data from a nationwide survey we conducted of H-4 visa holders in which the sample we obtained is both representative and sufficiently large -- approximately four percent of the population, an almost unheard-of ratio. Our initial analysis leads us to conclude that the rule rescission

should not survive a thorough cost-benefit analysis, which is required for any new or rescinded rule.

Our initial analysis of the collected data shows that any rule change rescinding employment authorization for H-4 visa holders would result in substantial costs to the U.S. economy as well as Federal and State tax coffers. What's more, those losses would not be offset at all by any increase in employment and income by domestic workers. The survey data demonstrates that H-4 workers are highly skilled, highly educated, and tend to pursue employment in fields with extremely low unemployment rates. There are simply not enough available U.S. workers with the sufficient background and education to fill all of the jobs these H-4 workers are currently doing. Our data suggest that the relatively small gains to U.S. workers in replacing H-4 workers would be fully offset by the jobs lost by other employees if the self-employed H-4 workers were forced to close their businesses and lay off their employees.

Providing H-4 visa holders with the ability to obtain gainful employment has provided an economic and fiscal boost to the U.S. economy, strengthened by the fact that most of this cohort has a high level of education and a substantial level training and experience in skilled fields where compensation is high and unemployment rates are low, which threatens to inhibit future economic growth as well as employment growth--for high-skilled and low-skilled workers alike.

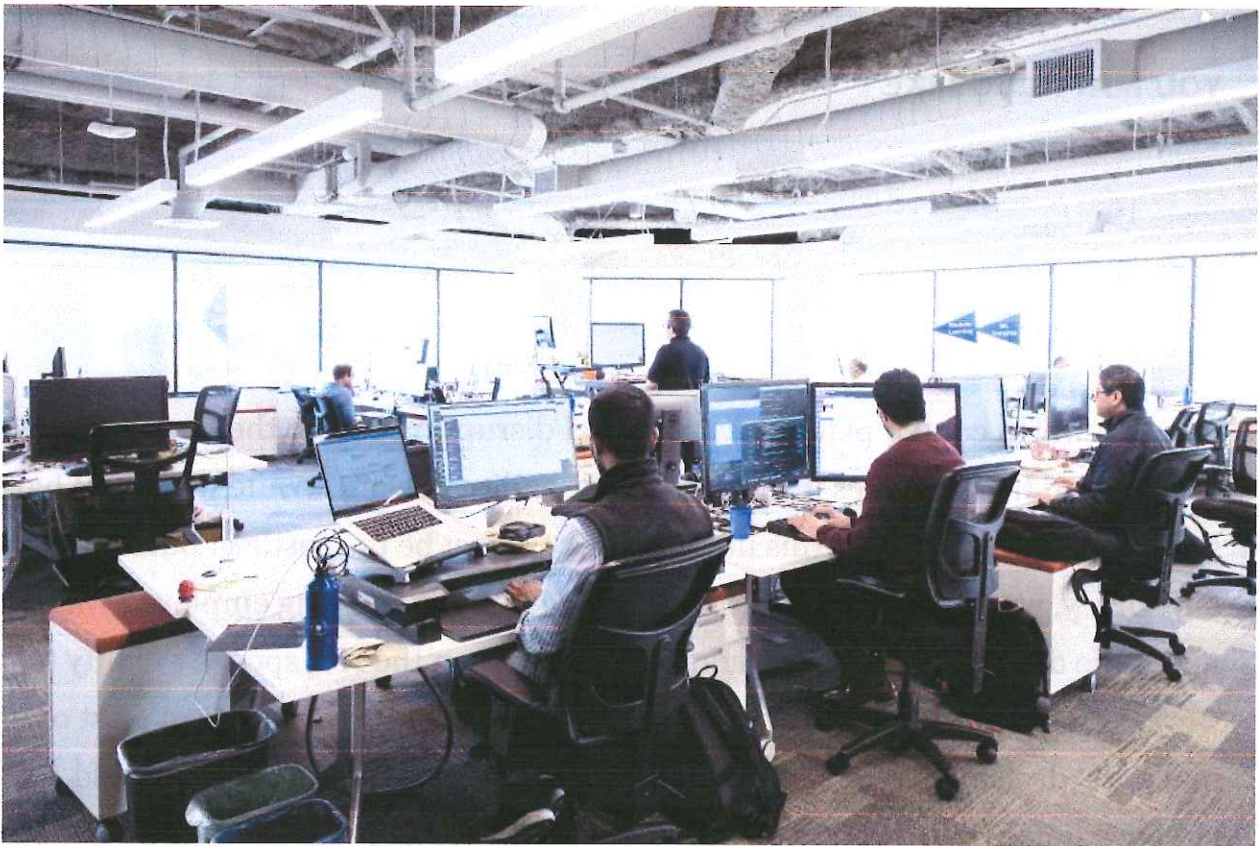
The near-record-low unemployment rates in the U.S.--especially for educated workers--put lie to the notion that H-4 holders displace domestic workers in the occupations and industries where they predominate. Our analysis suggest that the jobs created by the H-4 holders who start their own businesses more than offset any job displacement of domestic workers by other H4 holders.



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It is also worth contemplating the potential disruption cost to the H-4 visa holders and their families if we ended their ability to work. While we do not have sufficient data to quantify this impact it may in fact be the costliest outcome. In our survey, we asked the H-4 respondents who reported being employed what major life decisions they had made contingent upon the H-4 spouse's ability to work. Most of these families--nearly 7 out of 8--report having made at least one major life decision based on having obtained an EAD such as having a child, buying a home, or obtaining more education, and nearly half have made two or more such decisions. Over 90% of all respondents reported that the ability of the H-4 holder to work is very important to their family's decision to remain in the U.S. and pursue permanent residence.

It is hard to conceive how the government could find that rescinding the ability of H-4 visa holders to work could be judged as cost effective. Our survey reveals that the federal government would lose billions of dollars of tax revenue, the economy would see a drop in economic activity, and the families of H-4 visa holders would take a severe hit. Not only are the costs high but we also find no evidence at all that there would be any new jobs made available for U.S. citizens. Following through on this rule change would amount to a Pyrrhic



Employees work at the Workday Inc. office in San Francisco, California, U.S., on Thursday, Jan. 10, 2019. Workday makes applications that help companies with mundane tasks like keeping payroll, plotting expenses, tracking employee absences and managing job candidates. Photographer: Michael Short/Bloomberg

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victory for the Trump Administration.

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