

The H-1B Visa Controversy

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The H-1B visa and other foreign-worker programs, as currently structured, aren't in the US national interest. Fortunately, there are simple, easily implementable solutions, should the government find the political will to take action.

US policy on high-skilled immigration should be based on goals that benefit the nation as a whole. In large part, current policy does the opposite and is badly in need of reform.

Last year, Disney Corporation, the large utility Southern California Edison (SCE), and a few other firms made headlines amid accusations that they fired American (US citizen/permanent resident) IT specialists and replaced them with foreign workers holding the H-1B work visa. Such incidents had occurred numerous times over previous years, with little public comment. This time, though, the story about Disney in particular attracted attention due to the company's prominent role in the American imagination. Could Mickey and Minnie really be acting so callously? The short answer is yes—but also that they're being made scapegoats.

THE H-1B PROGRAM

The H-1B grants foreign workers temporary permission to work in US specialty positions “that normally require

a bachelor's degree.” The visa is limited to six years in duration, though it can be extended yearly after that if a green card, which confers US permanent resident status, is pending.

The H-1B was enacted in 1990, replacing the old H-1, a category titled Aliens of Distinguished Merit and

Ability, thus switching from a focus on outstanding talent to one of filling jobs. The current base cap for new visas is 65,000 workers per year. An additional category of 20,000, for foreign students graduating from US universities, was enacted in 2004, so the present total cap stands at 85,000.

Disney didn't deny the charge. The company correctly pointed out that it had acted in full accordance with the law. Indeed, Disney wasn't even the foreign workers' employer; instead, they were “rented” to Disney by large Indian IT services (IITS) firms such as HCL Technologies. SCE did the same, through the IITS firms Infosys and Tata Consultancy Services.

The new attention to the IITS industry revealed that most of the top companies using H-1B workers are from the IITS sector. That fact, and the Disney/SCE contretemps, led many to believe that while large IITS firms were abusing the H-1B program—employing cheaper foreign workers instead of qualified Americans—US technology (UST) companies were using the program responsibly. Some distinctions that have been drawn include:

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- › IITS firms import their workers directly from abroad, largely India, while UST companies hire foreign students graduating from US universities.
- › IITS firms hire their H-1B workers only temporarily, while UST companies sponsor their foreign workers for permanent residence (green cards).
- › IITS firms replace Americans with H-1B workers, but UST companies don't.
- › IITS firms use the H-1B program as a vehicle to ship work overseas, but UST companies keep the work here.

As we'll see, the first two bulleted items are correct but quite misleading. Indeed, green-card sponsorship itself is abused by UST companies. The third item is probably false—UST companies' replacement of workers is more subtle—but in any case irrelevant; whether a firm hires a foreign worker to *replace* an American or *instead of* an American, that job is unavailable to US workers. The last item is also irrelevant; whether a foreign worker is hired in the US or the job is shipped abroad, that job is unavailable to Americans.

Nevertheless, the idea that foreigners hired by UST companies are the "good" H-1B workers is quite appealing to politicians. The tech industry has enormous clout in Washington, so blaming IITS firms allows politicians to appear to support American workers while at the same time not offending UST companies. The fact that IITS firms are Indian rather than American further provides "safety" for the politicians, who benefit from UST firms' campaign donations.

Even some critics of the H-1B program (both individuals and organizations) have signed on to a "UST good, IITS bad" perspective. This is partly

due to lack of detailed knowledge of the labor market, but also to political considerations, such as not wanting to appear anti-immigrant.

Thus was born the so-called "staple a green card to their diplomas" approach. In other words, grant foreign STEM graduate students at US universities—the main source of H-1B workers for UST companies—an automatic green card upon graduation.

In addition to rewarding UST companies, other proposals seek to clamp down on IITS firms. These include banning the overt replacement of Americans by foreigners, and greatly restricting third-party companies' ability to hire and contract out H-1B workers.

But all these proposals are tragically misguided, as they're based on the false premise that employing cheap foreign workers in lieu of qualified Americans is limited mainly to IITS firms, when in fact the abuse pervades the entire tech industry. It's a classic case of applying a palliative (or even a placebo) rather than treating the disease.

WHY ARE FOREIGN WORKERS SO ATTRACTIVE TO EMPLOYERS?

To develop a national immigration policy that keeps the door open for top foreign talent without undermining US workers, we first must understand the underlying forces. Why are employers so anxious to hire foreign workers?

The popular image of abuse of the H-1B program is of employers' desire for cheap labor. But this is only one factor among several, and even that factor is more nuanced than is generally supposed. In regard to cost savings, we can define two types:

- › Type I: young foreign workers are on average paid *some-what* less than *comparable* Americans—meaning of the

same age and education, with the same skill set, and so on.

- › Type II: young foreign workers are on average paid a *lot* less than older Americans (35+) who are otherwise similarly qualified.

An important point is that H-1Bs create a compliant, immobile workforce. In other words, depending on their status, notably a pending green card, foreign workers are to various degrees de facto indentured servants.

Type I cost savings

Industry lobbyists claim that US employers are required to pay their foreign workers as much as comparable Americans. But in fact, the vast majority of underpayment of H-1B workers is fully legal. How is this possible?

For both the H-1B work visa and employer-sponsored green card, foreign workers must be paid the *prevailing wage*—legally defined as the average wage paid to all workers in a given occupation, at a given experience level, in a given geographical region. (There's also a requirement to pay the *actual wage*, but data shows that this is usually the same thing.¹)

On a petty level, this requirement can be gamed by, say, downgrading the foreign worker's job title. But such factors underlying the use of H-1B workers as cheap labor are minor. Instead, the largest factor by far in Type I underpayment of H-1B workers is that the prevailing wage doesn't count skill sets. It has been reported, for instance, that experience with cloud application development commands a wage premium of 20 to 40 percent on the open market.² But that isn't factored into the prevailing wage, so an employer can hire a cloud programmer but pay him or her a lower, non-cloud salary.

When discussing underpayment of H-1B workers, one must keep in mind that underpaid means "paid less than

TABLE 1. Median wage ratio for prominent UST companies.

Firm	Median wage ratio	Percent <1.05
Cisco	1.04	53.7
eBay	1.02	64.2
Google	1.17	22.4
Intel	1.10	38.2
Oracle	1.16	26.0
Qualcomm	1.00	87.4

market worth as a free agent in the marketplace” or, equivalently, “paid less than what a comparable American would command.” The key word here is “comparable”: because an American worker’s market value depends on geographical region, education, experience (with age as a proxy), and especially skill sets, these factors must be taken into account in any serious analysis of the H-1B program. Unfortunately, they usually aren’t.

Much-cited research that has been conducted at the Brookings Institution,³ for instance, claims that H-1B workers aren’t underpaid, but the analysis doesn’t adjust for region. As H-1B workers are concentrated in large, high-cost-of-living urban areas, analyses that don’t account for region will make H-1B wages look higher than they actually are. For example, the mean wage for the category of Applications Software Developers is \$123,900 in California but only \$99,830 in New Jersey.⁴ It must be added that Brookings’ annual reports, such as that for 2013,⁵ show that the organization is funded generously by Microsoft, Bill and Melinda Gates, Google, and other tech industry stakeholders, leading some to question Brookings’ impartiality.⁶ Most researchers defending the H-1B program have industry ties, such as Madeleine Zavodny of Agnes Scott College and Giovanni Peri of the University of California, Davis.

Unfortunately, data on a given worker’s skill set is generally unavailable. However, analysis can still account for skill sets. One way to do this is to actually exploit the fact that the

definition of prevailing wage doesn’t account for skill sets, with the following reasoning: because employers claim that they hire H-1B workers for rare skills, and those skills typically command wage premiums of at least 20 percent, the employers should be paying their H-1B workers at least 20 percent above the prevailing wage. My research¹ shows that they aren’t doing so; on the contrary, the vast majority of foreign workers being sponsored for green cards are paid either at or only slightly above the prevailing wage. I found the median wage ratio—the ratio of wage paid to prevailing wage—to be 1.00 for software engineers, 1.00 for electrical engineers, and 1.05 for computer scientists.

Note that this data is for UST companies, not IITS firms, as the latter almost never sponsor their foreign workers for green cards.⁷ As Table 1 shows, UST companies underpay many of their foreign workers if one assumes that the workers have rare skills as claimed. These companies do tend to hire a higher class of worker than do IITS firms—H-1B workers at UST companies typically have a master’s degree—but the fact remains that the companies are underpaying their foreign workers relative to market worth. To use a car analogy, UST companies are buying Toyota Camrys while IITS firms are buying Toyota Corollas, but they’re both getting 20 percent discounts in their respective categories.

An even better way to determine whether employers are underpaying their H-1B workers is to directly ask the employers, as two congressionally

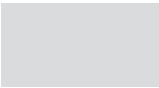
commissioned surveys did. The National Research Council (NRC) found that both UST companies and IITS firms admitted that their H-1B workers “received lower wages, less senior job titles, smaller signing bonuses, and smaller pay and compensation increases than would be typical for the work they actually did.”⁸ The Government Accounting Office (GAO) found that “some employers said that they hired H-1B workers in part because these workers would often accept lower salaries than similarly qualified U.S. workers; however, these employers said *they never paid H-1B workers less than the required wage.*”⁹ The italicized portion (emphasis added) illustrates my earlier point that the legal prevailing wage is well below the true market wage, largely due to lack of accounting for skill sets.

Basic economic theory also shows that H-1B workers are underpaid, at least if they’re being sponsored for a green card and are thus effectively immobile. Workers who can’t move freely about the labor market have no negotiating power, which negatively impacts their wages. A recent survey by tech career website Dice.com found that industry workers receive an average 23 percent pay increase by changing employers (<http://media.dice.com/report/2015-2016-dice-salary-survey>).

Type II cost savings

To a large extent, the H-1B issue revolves around age. Employers hire younger H-1B workers to avoid hiring older (35+) Americans. Younger workers are cheaper in terms of both wages and benefits. And because young foreign workers are even cheaper than young Americans, the employer reaps a double cost benefit. When SCE replaced its American IT workers with H-1B workers, the reported wage savings was \$40,000–50,000 per employee.¹⁰

The tech industry claims that older Americans aren’t employable, as they haven’t kept their skills up to date. Only young new graduates, the claim runs, possess modern skills such as



Python programming, which older workers allegedly don't have. This of course ignores the fact that those new graduates learned Python from old people like me.

The vast majority of tech workers enjoy learning new skills. In the Disney and SCE cases, American employees were forced to train their foreign replacements—a common occurrence. In other words, it was the foreign workers who lacked the skills, not the Americans. The skills issue is simply a red herring.

At Disney, the fired Americans were mainly in their 40s and 50s, while government data show that H-1B workers are typically in their 20s. One of the Americans let go, Leo Perrero, characterized the H-1B replacements as “extremely young.”¹¹

But again, this is a general phenomenon, which is just as strong in UST companies as it is in IITS firms. Introduction of the H-1B in 1990 fundamentally changed the American technical workforce's age composition.

Consider Microsoft, one of the largest UST employers of H-1B workers. According to a *Businessweek* article, “Senior Vice-President and Chief Technical Officer David Vaskevitch ... acknowledges that the vast majority of Microsoft hires are young, but that is because older workers tend to go into more senior jobs and *there are fewer of those positions to begin with* (emphasis added).”¹² Or consider Intel, as reported in the book *Inside Intel*: “[An] engineer earning over \$100,000 a year ... was a great deal more expensive to keep than a newcomer only a few years out of college. ... [Intel began to talk of] *bumping*, the practice, suggested to Intel by management consultants who feared that the company was aging too fast, of easing older employees out of the company.”¹³

The NRC study⁸ featured some disturbing statistics, shown in Tables 2 through 4.

By the way, these problems don't show up in unemployment data. Many older tech workers see the writing on the wall and simply change

TABLE 2. Percentage of Americans laid off.

Field	40+ years old (%)	<40 years old (%)
Tech	12.3	10.6
Non-tech	8.2	6.7

TABLE 3. Mean weeks to re-employment after being laid off.

Field	40+ years old (%)	<40 years old (%)
Tech	13.5	11.1
Non-tech	13.6	10.1

TABLE 4. Percentage change in wages in re-employment after being laid off.

Field	40+ years old (%)	<40 years old (%)
Tech	-13.73	+6.57
Non-tech	-19.73	-5.73

occupations. The former engineer now working as a sales clerk at RadioShack is employed, and thus isn't counted as an unemployed engineer in the data. But he's certainly *underemployed*. The same is true for independent IT consultants who find that contracts are harder to obtain.

All this is intimately connected to the H-1B program. When employers say they need H-1B workers because they can't find enough tech workers to hire, they mean there aren't enough young applicants at lower compensation. I've personally observed the connection repeatedly. I see my foreign students being hired by the same employers who reject my older American acquaintances who are equally or better qualified.

A compliant, immobile workforce

In a sensational 2014 legal case, Google, Apple, and several other UST companies were found guilty of violating antitrust laws by colluding to refrain from hiring one another's engineers. Though the companies' actions were widely interpreted as being motivated to keep worker salaries down, another driving force was that the companies' CEOs were anxious to

avoid the extreme disruption caused by engineers suddenly leaving a firm in the midst of an urgent project or taking their intellectual capital to a competitor.

For many employers, this makes hiring H-1B workers extremely attractive. If the employer is sponsoring a worker for a green card, which is standard practice for UST companies, that worker is effectively stuck because leaving the employer would mean starting the multiyear green-card process all over again—an unthinkable course for most foreign workers.

One major Silicon Valley employer explained the issue to a group of researchers, including myself, studying the H-1B program. While the company tries to prevent American workers from leaving by slowly doling out stock options, for foreign workers the slow green-card process achieves this much more effectively. Economists Sankar Mukhopadhyay and David Oxborrow statistically estimated the underpayment due to such immobility to be \$11,860 per year.¹⁴

This problem has been noted numerous times by official bodies such as the NRC in the aforementioned employer survey and in congressional testimony

by groups of foreign tech workers, such as Immigration Voice (<http://immigrationvoice.org>), campaigning to reduce green-card wait times. Murali Devarakonda, a member of the board of directors of the Immigrants Support Network, one such group active in the early 2000s, stated, “This is legal human rights violation in America. ...You [as an H-1B worker] are an indentured servant, a modern-day slave.”¹⁵

On his website hiref1students.com, David Swaim, a former immigration attorney for Texas Instruments—a leading employer of H-1B engineers—openly calls on US employers to give foreign students holding the F-1 student visa hiring preference over Americans, pointing out that “Most [American] college graduates leave [their employers] in less than two years. F-1 students who want permanent residence must stay seven to twelve years.”

IMPACT ON AMERICAN WORKERS AND THE US

In formulating national immigration policy, one must consider the impact both on individual American workers and on the US as a whole.

It’s illuminating to consider a 2010 study by Giovanni Peri,¹⁶ who, despite being a major supporter of H-1B and related foreign-worker programs, found that foreigners are displacing Americans at the STEM graduate-degree level. His work updated a 1989 National Science Foundation (NSF) internal report, which projected that the influx of large numbers of foreign students would suppress tech wage growth and thus drive American students away from pursuing graduate study.¹⁷ This is indeed what has happened, with the percentage of foreign PhD engineering students at US universities now reaching 50 percent or more.¹⁸ I’ll return to the NSF report shortly, but it dramatically illustrates the adverse impact of foreign student programs in terms of the national well-being.

In 1998, University of California, Berkeley economist Clare Brown¹⁹ wrote that “high-tech engineers and

managers have experienced lower wage growth than their counterparts nationally. ... Why hasn’t the growth of high-tech wages kept up?” She argued, “Foreign students are an important part of the story,” later adding more evidence in her 2011 book *Chips and Change*.²⁰ And the GAO noted that “the availability of foreign H-1B post-docs may discourage US students from earning biomedical [doctoral] degrees because of typically lengthy post-docs at relatively low wages.”²¹

As mentioned, the H-1B and green-card programs have most significantly impacted American workers over 35. A graph in the GAO report shows this quite starkly, with most H-1B workers under 35 and most American techies over that age.

More troubling, the overall quality of foreign tech workers is somewhat below that of Americans. Research by myself and others²² has shown that, compared to Americans of the same age, education level, and region, foreign tech workers who came to the US as students

- › earn lower wages (even among those who have green cards and are thus free agents);
- › are less likely to file patent applications;
- › are less likely to work in R&D; and
- › among those with doctorates, tend to earn their PhDs at lower-ranked universities.

In sum, the foreign-worker programs are displacing higher-quality workers by those of lesser quality.

What should be done?

The H-1B visa and green-card programs, as currently structured, aren’t in the US national interest. Fortunately, there are simple, easily implementable solutions, should the government find the political will to take action, given the following goals:

1. The immigration of truly outstanding STEM talents should be facilitated.
2. Policy shouldn’t incentivize the hiring of foreign workers in lieu of Americans, especially in the form of hiring younger foreigners instead of older US workers.
3. Policy shouldn’t have the effect of making STEM careers unattractive to bright young Americans.
4. The use of foreign workers as de facto indentured servants must be ended.

Recall the “staple a green card” proposals, which would grant automatic green cards to all foreign students earning graduate degrees at US universities. Though such a policy would help address goal 4—the green cards would make the students free agents—it would be disastrous in terms of the other goals, especially 2 and 3.

The vast majority of foreign students are young, so a “staple” policy would be highly contrary to goal 2. Regarding goal 3, as noted earlier, in 1989 the NSF correctly predicted that the large influx of foreign workers would discourage American STEM undergraduates from pursuing graduate study. This indeed occurred following enactment of the H-1B program in 1990, leading Georgetown University career researcher Anthony Carnevale to remark, “If you’re a high math student in America, from a purely economic point of view, it’s crazy to go into STEM.”²³ The fact that the NSF report actually recommended an automatic green-card policy to draw foreigners to US universities is a very strong argument against current “staple” proposals.

The key to addressing goal 2 is to redefine prevailing wage, which currently doesn’t take skill sets into account and institutionalizes age discrimination. The multilevel prevailing wage system should be replaced by a single wage set at Level IV in the four-tiered government wage definition,

which is the 67th percentile of wages for the given occupation and geographical region. Also, in light of goal 2, the Optional Practical Training extension of the F-1 student visa, which allows the student to work in the US for several years after graduation, should be disbanded. Under these reforms, the current H-1B cap would never be filled and thus there'd be no long backlog for green cards, thereby addressing goal 4.

Finally, what about goal 1? I've long held that the US benefits greatly from bringing in outstanding talent. Current provisions for such workers—the O-1 work visa for outstanding talents, and for green cards the fast track EB-1 and National Interest Waiver categories—should be expanded. ■

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