

Senator Jeff Sessions
Questions for the Record
“Immigration Reforms Needed to Protect Skilled American Workers”
Professor Ron Hira and Professor Hal Salzman

Responses by Ronil Hira

1. Based on publicly available information, please provide the following statistics as they pertain to H-1B recipients:

The following responses are sourced from the FY14 Characteristics of Specialty Occupations report issued by USCIS.

<http://www.uscis.gov/sites/default/files/USCIS/Resources/Reports%20and%20Studies/H-1B/h-1B-characteristics-report-14.pdf>

- a. The percentage of H-1B recipients who have a PhD, or equivalent.

8%
- b. The percentage of H-1B recipients who have a Master’s Degree, or equivalent.

43%
- c. The percentage of H-1B recipients who have a Bachelor’s Degree, or equivalent.

45%
- d. The percentage of H-1B recipients who have less than a Bachelor’s Degree.

1%

4% of H-1Bs in FY14 held a Professional Degree such as a Law degree.

As one can see from the data, H-1B workers most commonly hold no more than a Bachelors degree. The above data show educational levels for all H-1B recipients in FY14, including those H-1B workers whose petitions are capped and those who are not.

USCIS doesn't report disaggregate the data for the capped petitions, data that have significant policy implications. If we looked at the 65,000 base cap, one would find that the share of Bachelors degrees is much higher than for all petitions. Based on my analysis of the data I estimate that roughly 70% of the base cap is filled by H-1B workers who hold no more than a Bachelors degree.

Some of the leading H-1B employers have very a high share of Bachelors degree H-1B workers. For Infosys, 85% of its H-1B workers hold no more than a Bachelors degree, and for Tata, it is 78%.

This tells us that the employers using the H-1B base cap are not very selective in their H-1B workers.

2. Based on publicly available information, please provide the average age of an H-1B recipient.

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USCIS does not report the average age of an H-1B recipient but it provides the age distribution. For FY14, forty-two percent of H-1B workers are between the ages of 25-29 and nine percent between ages 20-24. That means more than half, 51%, of H-1B workers are under the age of 30.

Hiring young foreign workers feeds the rampant age discrimination practiced in the technology industry. Further, many young American workers, who are unemployed and underemployed, are directly competing with these H-1B workers.

3. Based on publicly available information, please provide the average number of years an H-1B recipient has been employed in the field prior to coming to the United States.

We do not have data on experience and I do not believe that USCIS collects such data. But given that more than half of H-1B workers are very young (<30 years old), by definition they have limited years of experience.

4. The Department of Labor's official Labor Force Participation Rate shows a steady decline in the number of Americans participating in the workforce over the last two decades. What impact, if any, has the H-1B program had on the Labor Force Participation Rate in the United States?

This is a difficult question to answer statistically. We do know that many Americans have dropped out of the labor force because of persistently anemic labor demand. Further, we know that some American workers take "voluntary retirement" packages rather than train their foreign H-1B replacement. In the Southern California Edison case, 100 of the 500 American IT workers took a voluntary retirement package. Many of those 100 have likely dropped out of the labor force prematurely.

Some H-1B workers are complementary to American workers, creating more labor demand for American workers' services. But too many of H-1Bs are substituting for American workers. The key is fixing the policies to encourage H-1B workers who complement the American workforce, not substitute for it.

5. Can H-1B recipients start new businesses in the United States while in H-1B status?

H-1B workers are expressly forbidden to work for themselves. They cannot start their own companies. They must work for an existing employer.

6. Do the top H-1B employers generate large numbers of patents and new technologies?

Most top H-1B employers do not patent much at all. The table below shows the number of U.S. patents, from FY10-12, for the top 20 H-1B employers. These are patents from *all* of the employees of the firm, American, permanent resident, foreign, and temporary workers.

TABLE: Most Top H-1B Employers Do Little Patenting			
FY12 H-1B Rank	Company	# New H-1Bs Received in FY12	Total U.S. Patents for ALL Employees 2010-2012
1	Cognizant	9,280	0
2	Tata	7,485	17
3	Infosys	5,600	56
4	Wipro	4,304	28
5	Accenture	4,035	340
6	HCL America	2,131	0
7	Tech Mahindra/SATYAM	1,963	15
8	IBM	1,846	18,463
9	Larsen & Toubro	1,829	5
10	Deloitte	1,668	6
11	Microsoft	1,496	8,713
12	Patni	1,260	0
13	Syntel	1,161	0
14	Intel	811	4,287
15	Amazon.com	775	46
16	Qualcomm	729	3,293
17	Google	646	1,879
18	PricewaterhouseCoopers	597	3
19	Synechron	571	0
20	Mphasis	567	0
Sources: USPTO patents by firm and year http://patft.uspto.gov/			
H-1B Top 20 from ComputerWorld list - USCIS original source			

As you can see most of the top H-1B employers patent very little. This is due to a number of factors. First, patenting is driven by the industry sector of the employer. Most of the top H-1B employers are in the IT Services sector, a sector that re-sells labor, and does not patent very much. For example, the top H-

1B employer for FY12 was Cognizant. It received more than 9,000 workers yet received ZERO U.S. patents for the three years FY10-12.

Firms like Intel and Qualcomm are in sectors, semiconductor design and fabrication, where employers patent heavily. It should be noted that we don't know how much their H-1B workers contributed to patenting.

The case of IBM is interesting. IBM has traditionally been the leading receiver of patents but almost all of its patenting comes from its Software Products and Semiconductor business lines; whereas, most of its H-1B workers are in its IT Services and Outsourcing business lines. So, it is almost certain that the H-1Bs IBM hires have little to do with its divisions that patent.

Some, like Bill Kerr from Harvard University, have claimed that raising the H-1B cap would spur patenting and thus innovation. But if this recommendation were adopted it would be terribly ineffective given that more than half the H-1Bs go to employers that hardly patent at all. Giving Cognizant more H-1Bs, which is what would happen with an increase in the cap, would contribute zero to patenting. If Kerr's goal for the H-1B program is to spur patenting then a more sensible approach would be to change the H-1B eligibility criteria to favor industries and heavily patent like semiconductors and automotive and occupations like mechanical engineering and electronics engineering. The current H-1B system brings in mostly ordinary IT workers who fill positions as Computer Systems Analysts, implementing IT systems in the back offices of banks and insurance companies. Those occupations aren't involved in product development and certainly not in patenting.

7. Although testimony at the hearing indicates that the total number of H-1B recipients in the United States is unknown, can you please provide your best estimate as to how many H-1B recipients are currently in the United States?

My best estimate pegs the number of H-1Bs at 600,000.

8. How does the H-1B program affect the racial and gender diversity of the STEM workforce?

The H-1B program has negative impacts on the racial and gender diversity in STEM. Current H-1B policies are working at cross-purposes to the very large investments being made by government to increase the diversity of American STEM workers and students. The adverse impacts of the H-1B program on diversity in the STEM workforce are both direct and indirect. In very public ways, the technology industry has recently acknowledged that it needs to do much more to improve its racial and gender diversity. Yet, the H-1B program undermines these private sector proclamations and efforts.

First, according the USCIS Characteristics of Specialty Occupations reports (<http://www.uscis.gov/tools/reports-studies/reports-and-studies>), a large majority, 70%, of H-1B workers in FY14 come from a single source country, India. And this concentration has been increasing over the years. Just ten years earlier, in FY04 the figure stood at 43%. The reason is simple – the rise of the offshore outsourcing industry and its increasing use of the H-1B program over the past decade. Nearly all

the H-1B workers the offshore outsourcing firms hire are from India. For Wipro, 98.4% of its H-1B workers come from India, and for Tata it is 99.9% and 97.4% for Infosys.

It should be noted that this preference for H-1Bs from India has nothing to do with international student enrollments. The number of Chinese students at U.S. universities far outnumber Indian students: 274,000 Chinese to 103,000 Indian in 2013/14 according to the Institute of International Education.

(<http://www.iie.org/EN/Services/Project-Atlas/United-States/International-Students-In-US>)

In spite of the very large number of Chinese students, the Chinese H-1B worker share *decreased* from 9.1% in FY04 to 8.4% in FY14.

The H-1B program directly skews the STEM workforce significantly towards workers of Indian origin, a group that is already overrepresented in the America's STEM workforce.

Though USCIS hasn't released gender information on H-1B workers, industry experts have said that the H-1B workers at outsourcing firms are overwhelmingly male. This again directly contributes negatively towards diversity in the STEM workforce, particularly in computer occupations.

There are also significant indirect impacts of the H-1B program on STEM diversity in America. Employers can tap cheaper H-1B and L-1 workers so they have little incentive to help prime and create pipelines of women and under-represented minority talent. They have little reason to invest in universities and educational organizations that broaden the pool of American STEM talent. While it is often subconscious, incumbent pools of workers tend to prefer workers that are similar to themselves.

The programs also contribute to rampant age discrimination in the industry.

9. How would “stapling a green card” to the diploma of every foreign STEM student who graduates from a U.S. university affect the domestic workforce and student population?

Any bill that eliminates labor certification for all STEM graduate students and eliminates the cap to their numbers will create perverse incentives in both the labor and educational markets. Employers will be incentivized to replace their older incumbent workers with cheaper fresh graduates, fueling age discrimination.

Universities will be placed in a conflict of interest position by becoming the sole gatekeeper for issuing greencards and at the same time making money from issuing those greencards. **Universities will be put in the position of selling greencards to foreign students.** And it will be a bonanza for those universities. Given that Masters degrees are short in duration (as little as 12 months), and have little oversight from outside bodies (no specialized accreditation process for most), this provision will make it inexpensive for foreigners to purchase greencards from a variety of universities. We will see a flood of foreign student applications, crowding out American students from the STEM fields. Those foreign students will in turn flood the labor market in the STEM fields, depressing wages, and further steering American students from studying these fields. Foreign students are much less sensitive to wages and working conditions than their American counterparts because they are starting from lower expectations in the home countries and

obtaining a greencard is a very valuable commodity. Foreign students will see paying the educational bills as a small price for a greencard.

Congress, not universities, should be deciding who immigrates to the country. The country should not begin selling large numbers of greencards, and certainly not at fire-sale prices.

There is no justification for the "stapling a greencard to the diploma." It is solving a problem that does not exist. All objective studies find that there are no systemic shortages in the STEM labor markets, and there is no justification for such a provision. Further, it is guaranteed to create very negative consequences for American workers, American students, and America's national innovation system.