The H-1B Visa Immigration Program: Analysis and Comments

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Abstract

The H-1B visa program was instituted to enable employers to hire workers in specialty occupations. The GAO evaluated companies that recruited, hired, and retained workers based on skills needed rather than the applicant's citizenship or visa status. Employers reported that they hired H-1B workers only when qualified US workers were not available. In 2011, many employers approved for H-1B were approved to hire workers in scientific, professional and technical services. Other approvals were in manufacturing, health care and social assistance, educational services, and in finance or insurance. Employers approved for H-1B workers are located in major US cities with most of them having many H-1B workers. Complaint violations involved that the company failed to pay the required wage. As well, the employer did not pay wages associated with the highest level skills in their field. The GAO 2011 report concludes that there is no way to precisely determine the level of unmet demands by employers. Comments include suggestions on how to improve the program and includes making companies respond to surveys.

Introduction

In the US migrants have been classified in different ways. One manner that has been used for workers to come to the US is by the use of visas allowing foreign workers to migrate to the US. Most guest workers tend to be concentrated at extreme ends of the occupational ladder (Martin, Abella, and Kuptsch 2006). The general rule is that the higher the level a professional, the more difficult it is to migrate to another country. However, most economists believe that attracting immigrant professionals is good for the receiving country because it raises incomes and growth rates.

The H-1B visa program was instituted in 1990 to enable employers to hire foreign workers in upper level specialty occupations. In its 2003 response, the GAO concluded that it allowed employers to fill specialty occupations temporarily for up to 3 to 6 years with highly skilled workers. Seldom was the immigrant limit reached through 1999 (GAO 2000). The original allocation of H-1B visas was 65,000 per year and it has increased to a high as 195,000 per year. In most instances, employers requesting H-1B employment visas reported that the workers were already in the US.

Subsequently, the H-1B immigrant worker program has been hailed as the best and brightest visa program. Yet it has been assailed by some as being used by industry to reduce labor costs and to obtain more recently trained foreign workers (North 2011; Herbst 2009; Hira 2008; Masters and Ruthizer 2000). In this paper I examine these different perspectives and offer policy suggestions as how to improve the program since it will continue to exist.
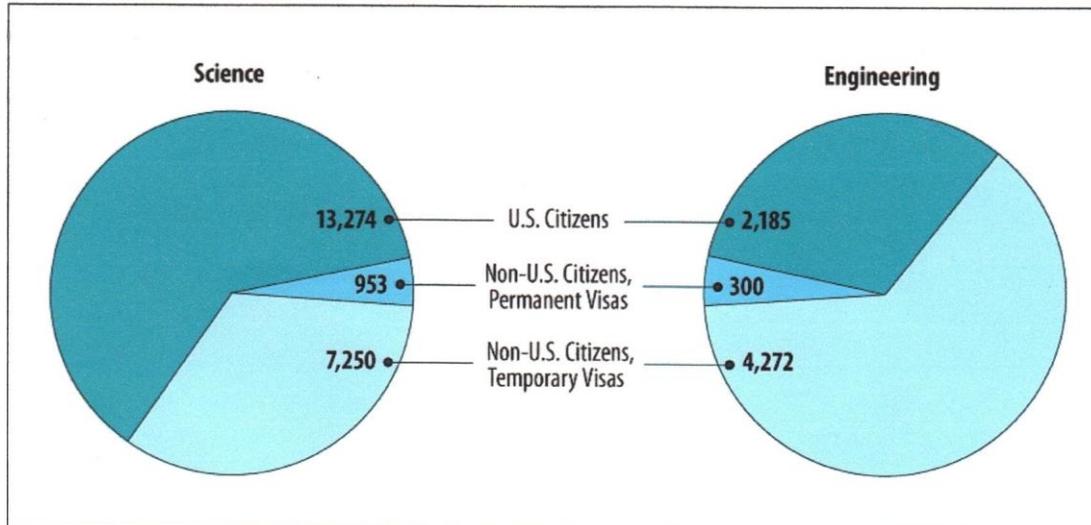
H-1B Employers and Applicants

In 2011, many employers for H-1B visas were approved to hire workers in "specialty occupations," defined as one requiring theoretical and practical application of a body of higher knowledge and attainment of a bachelor's degree or higher (or its equivalent) in the field of specialty. California (23,548) and New York (15,768) had the most workers with the average salaries being over $80,000. Every state has at least 50 H-1B workers (MyVisaJobs 2011).

Over the years there has been an approval rate as high as 90%. In 2010 the rate of those who petitioned their status the approval was 79.6%; 13.7% were denied, 3.7% certified-withdrawn, and 3% withdrew. In 2010, 38% of those with consent were in scientific, professional and technical services. Other approvals were in manufacturing (11%), health care and social assistance (8%), educational services (6%), and in finance or insurance (5%).

Over the years beginning in 1985 there has been a decline in US citizen white males having a doctoral degree in science and engineering. While there has been a slight increase in US white females receiving a doctorate and there has been a slight increase in US minorities received a doctorate. On the other hand there has been a general increase in foreigners receiving a doctorate. At the same time there has been an explosion science and technology employment in the US. Figure 1 illustrates this finding.

Figure 1. Doctorate Degrees: U.S. and Non-U.S. Citizens, 2006

Science		Engineering
13,274	U.S. Citizens	2,185
953	Non-U.S. Citizens, Permanent Visas	300
7,250	Non-U.S. Citizens, Temporary Visas	4,272

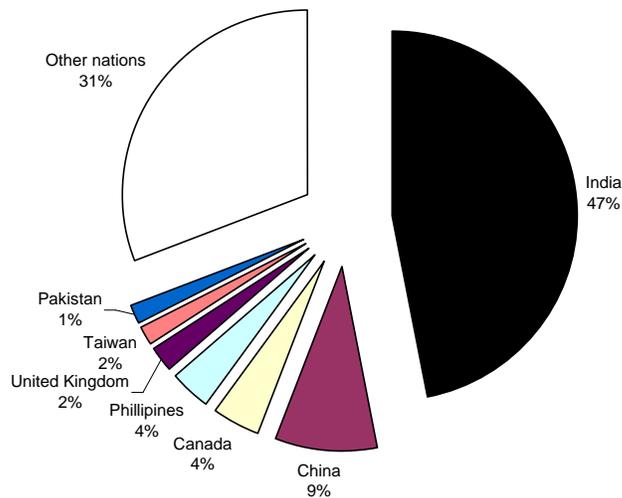**Source:** Science and Engineering Doctorate Awards: 2006, **Table 3**.

Note: An additional 1,186 degrees in the sciences, and 434 degrees in engineering were awarded to individuals of unknown citizenship.

Apparently DHS ignored the conclusion of the 2003 GAO report because the 2011 report by GAO concluded that there was no way to precisely determine the level of unmet demands by employers. This apparently has been a long-time problem since it was first identified in the GAO's 2000 report, years earlier. The establishment of new start-up firms had 70.3 per cent using 1-5 employees (Stine and Matthews 2009). The Chinitz measure of the number of small suppliers was the most important in weighted estimations and subsequently (Chinitz 1961).

In addition, the use of H-1B visas is by a small number of employers. Less than one percent of them used over one-fourth of all these visas. As shown in Figure 2 in 2011, most approvals were for workers from India (46.9%) or China (8.9%). The percentages were similar in 2003 (India 32% and China 9%) and 2011. However, a Social Security Audits presents (2011) a somewhat different percentage. Most current occupations were in systems analysis and programming (42%), although college/university education accounted for 7%. Many workers were already living in the US and many of them had a master's or higher from a US institute of higher education. In addition, from 2000 to 2009 more and more of the workers had an advanced degree. *Immigration Daily* lists the fees and other stipulations necessary to apply for H-1B (2011).

The major industry workers were hired were in computer systems design and related services, with 41,240, or the vast majority. However, elementary and secondary teachers were ninth on the list. California and New York had the largest number of H-1B workers Locations were scattered but New York, NY had over 10,000. Houston and Redmond, Washington, Chicago, and Los Angeles had major employers (MyVisaJobs 2011).

**Figure 2. Country of Birth for Approved H-1B Workers,
FY 2000-2009**

As shown on Map 1, H-1B applicants were distributed throughout the US (Machilis 2010) and in US cities with some of them having as many as 5,000.

Map 1. H-1B Petition Areas Source: U.S. Department of Labor via Foreign Labor Certification Data Center, State of Utah. (Map created by Machilis 2010.

A worker may only work for an employer after being approved by the Departments of Labor (DOL) and Homeland Security (DHS). The worker must first obtain a social security number. In 2003, GAO interviewed 36 employers that recruited, hired, and

Employer ▼	Number Workers Requested ▼	Job Title ▼	Wage Rate ▼	Prevailing Wage ▼	Worker Location (first listed) ▼	Full Time ▼
& COMMUNICATIONS, INC.	1 TV	SYSTEMS ANALYST	50232.00	50232.00	LOS ANGELES, CA	Y
.DECIMAL, INC.	1	SURFCAM TECHNICAL COMPUTER SPECIALIST	40456.00	36795.00	SANFORD, FL	Y
1-800-FLOWERS.COM, INC.	1	MANAGER, CONTACT CENTER SERVICES	135187.50	76274.00	CARLE PLACE, NY	Y
180SQUARED, INC.	1	LEAD INFRASTRUCTURE SOLUTIONS ARCHITECT	100000.00	94250.00	PLEASANTON, CA	Y
180SQUARED, INC.	1	SENIOR DEVELOPER	90000.00	83803.00	PLEASANTON, CA	Y
1WAYSOLUTIONS, INC	1	COMPUTER PROGRAMMER	60000.00	54995.00	EARTH CITY, MO	Y
1WAYSOLUTIONS, INC	1	COMPUTER PROGRAMMERS	60000.00	57450.00	SAN FRANCISCO, CA	Y
1WAYSOLUTIONS, INC	1	REMEDY ADMINISTRATOR	63000.00	62670.00	WHITEHOUSE STATION, NJ	Y
2020 COMPANY LLC	10	COMPUTER PROGRAMMER	56680.00	56680.00	FALLS CHURCH, VA	Y
2020 COMPANY LLC	10	COMPUTER SOFTWARE ENGINEER	64085.00	64085.00	CHICAGO, IL	Y
22-3336612	1	PROGRAMMER ANALYST	70000.00	66310.00	SOMERSET, NJ	Y
22-3336612						

Table 1. An Example of Job Requests, Wage Rates, Prevailing Wages, and Location Adapted from: Machlis 2010 retained workers based on the skills needed rather than the applicant's citizenship or visa status. Employers reported that they hired H-1B workers only when qualified US workers were not available. Half of the employers did not go abroad to locate workers but found most of them were already in the US, many on foreign student visas. The DOL in fact reported that 56% were already employed at the date of application (DOL 1996: 13).

Oversight Responsibility for the H-1B Program

A variety of federal governmental agencies have oversight for the H-1B program. In earlier years, many complaint violations involved that the company failed to pay the required wage. Starting in 1996 through 2010, investigations found in most of them that back wages were due to the worker (GAO 2003: 26; 2000). In 2011 virtually all complaints received were from 'staffing companies' and the number was expected to grow in the following years. However the exact number of complaints is not known because the Department of Labor (DOL) does not track such information in its data! Other complaints included that the employer failed to post notice that they intended to hire an H-1B worker and to attestations made. The DOL (1996: 20) results indicated that there was substantial variation in the minimum and maximum wages being paid. Thus, the employer did not pay wages associated with the highest level skills in their field.

Many workers were paid at the lowest job level rather than at a higher level (GAO 2011).

In 2011, there was a mixed degree of salaries obtained by H-1B workers in comparison to their US. counter parts. For example, electrical/electronics engineering occupations had salaries comparable to those earned by US workers. Workers in systems analysis, programming and computer-related occupations had a mixed salary when compared to US workers. However, Table 1 indicates that most H-1B workers were paid at an adequate level, while Table 2 illustrates examples that the salary levels paid to some workers was about equal to those paid in the US, depending on their educational level.

Table 2. Average Wage: Systems Analysis, Programming and Other Computer-related Occupations

	H-1B	U.S. Workers	Significant difference
Age			
18-50	$61,000	$70,000	Yes
20-39	60,100	65,000	Yes
20-29	60,000	58,000	No
30-39	70,000	70,000	No
40-50	77,063	84,000	Yes

On the other hand, foreign workers in colleges and university education were paid more than US workers. Thus, there was a negative influence on US college and university employees, but not for others. Possibly mediating these results are the varying ages at which the H-1B visa workers enter the US.

As shown in Tables 3 and 4, generally foreign born workers are younger than their US counterparts. This is especially true of electrical/electronics engineers, systems analysts, and physicians and surgeons. College and university educator's ages were mixed but generally were represented at middle ages. Accountants and auditors were generally younger. Except for physicians and surgeons, all H-1B foreigners had substantially more advanced degrees that their US counterparts.

In March 2002, slightly over 14% of workers in the US were foreign born (Migration News 2003). Foreign-born workers were significantly less likely to be in managerial and technical occupations, and more likely to be in farming and service occupations. However, workers from outside the US in H-1B visas were more likely to be in higher lever jobs.

The GAO evaluation concluded that the Department of Homeland Security (DHS) had incomplete information on H-1B worker entries, departures, and changes in visa status; these lacks were demonstrated in 2003 and continued through 2010 (GAO 2011; 2003: 4).

In 2010, over 50% of the H-1B workers were in the entry level positions. That is, they had a basic understanding of duties and performed routine tasks requiring only limited judgment. Many others were in middle level positions. Only 6% were at the upper level requiring competent judgment and sufficient experience requiring a high level of independent judgment.

Fraud and Technical Violations

While rules infractions are rare according to some, in fact they are plentiful according to others (Masters and Ruthizer 2000). To obtain an H-1B visa, a social security number must be obtained. A study of Social Security number-use by recent H-1B foreign residents reported as well that numerous petitions involved fraud or technical violations (U.S. Citizen and Immigration Services 2008). The overall violation rate was 36%. Fraud included counterfeit or forged documents, storefront or shell businesses, no bonafide job offer, and misrepresentation of H-1B status. Eighteen percent used their

SSNs for purposes other than to work for their approved employer. Another 11% posted wages different than for their approved employer. In addition, 7% had posted no wages from 2007 through 2009. Based on the audit, thousands of workers used their SSNs for purposes other than to work for their approved employers. Interestingly, the recommendation was that SSA contact DHS to offer a data match agreement to assist DHS' efforts to identify and reduce the number of H-1B workers using the SSNs for purposes other than working for their approved employer.   Whether this was done or not has not been determined, although the most likely the answer is that it has not yet been accomplished (Neufeld 2011).

Table 3. Frequency of Wage Levels Reported on
June 1, 2009-July 30, 2010

Wage level reported on LCA	Number	Percentage of total levels
I: Entry Level		
Basic understanding of duties and perform routine tasks requiring limited judgment.	130,528	54%
II: Qualified	69,806	29
Have good understanding of occupation and perform moderately complex tasks requiring limited judgement.		
III. Experienced	26,731	11
With special skills or knowledge and sound understanding of occupation.		
IV: Fully Competent	14.617	6
Competent with sufficient experience and will require a high level of independent judgment.		
Total reported	241,682	100%

Source: Labor's Employment and Training Administration.

Homeland Security's determination of fraud and technical violations examined only 246 of 96,820 H-1B petitions; they found 51 cases of fraud or technical violations (DHS 2008). Thus, there was a 21% violation rate. However, most of them had multiple violations. Of these violations, 13.4% involved fraud and 7.3% were technical violations.

Finally, DHS gave an indication of the fraud that was taking place. The types of fraud that was taken place were:

- the business did not exist;
- the educational degrees or experience letters submitted were confirmed to be fraudulent;
- signatures had been forged on supporting documents; and
- the beneficiary was performing duties that were significantly different from those described.

Table 4. Fraud Reported by Homeland Security

Reported Occupation	Violation Rate	% of Sample	Total Cases
Architecture, Engineering and Surveying	8%	15%	36
Mathematics & Physical Sciences	0%	1%	3
Computer Professionals	27%	42%	104
Life Sciences	0%	4%	11
Social Sciences	0%	1%	1
Medicine & Health	10%	4%	10
Education	9%	13%	33
Law	0%	1%	1
Writing	0%	1%	1
Art	29%	3%	7
Accounting, Human Resources, Sales, etc.	42%	11%	26
Managerial	33%	4%	9
Misc. Professionals	0%	2%	4
			246

Note: Not enough cases except for India; 46% were born in India. Of these, 25% were associated with some type of fraud or technical violation.

In 2011 a scandal erupted over the H-1B program with a number of K-12 school districts working their teachers under H-1B visas. This apparently was because K-12 school teachers are exempt from the current ceiling H-1B of 65,000 (North 2010). In 2010 DOL certified 13,157 new K-12 jobs, or 20.2%. These new jobs were not scattered randomly but were concentrated in New York with 4,563 or 34.7%, and Texas with 27.3%, with a concentration in the Houston area. In the Houston area, 401 were in Turkish-sponsored elementary and high school charter schools. In addition, Gardner (2011) reported that Prince Georgia's County in Maryland had more than 10% of its entire teaching staff on H-1B visas. This school district has been the only one penalized so far. What harm does this do to native-born and naturalized citizens are a good question.

Another case found that an Atlanta firm brought 43 Indian programmers to the US for jobs that did not materialize. This ended up being called the alien 'white collar alien smuggling' ring (Martin, Abella, and Kuptsch 2006: 68).

Policy Decisions

In a 2003 GAO reported that the Department of Homeland Security (DHS) had incomplete information on H-1B worker entries, departures, and changes in visa status (GAO 2003). The majority of employers said that they recruited, hired, and retained workers based on the skills needed rather than other qualification, including visa status. Among other conditions, this report suggested that the pay for these workers will not adversely impact other workers similarly employed and that they should be paid wages similar to others with the same experience. During 1997 through 2002, the number of workers approved was actually more than the allotment in 1999.

Legislation was enacted that purportedly enhanced DHSs ability to develop an automated entry/exit system (GAO 2003: 9). Labor organizations argued that the program displaced U.S. workers because they were paid less than US workers. However, the data shows inconsistencies in wages paid by various categories, some lower and others higher by age. In 2002, H-1B workers were generally younger and had a higher percentage of advanced degrees than U.S. workers. In the 2003 report GAO contacted 145 employers and 25%, or 36, chose to participate. The GAO report for 2003 concluded that the extent of violations was due in part to the limited investigative authority. The GAO report concluded that they did not know the proportion that began work in 2001 and some may not have begun work at all. As well, the worker could have been represented in multiple positions. The GAO report also said they could not give the characteristics of the population of H-1B workers in that year (GAO 2003: 36). The DHS generally agreed with the recommendations in the report.

One hundred and fifty companies in 2010 were contacted by GAO for information, of them 22 responded for response rate of 14.7%; a response rate that most social scientists do not accept as being reasonable allowing for generalizations to be made. This low response rate was similar to an earlier GOA report endeavoring to elicit experiences about the program (GAO 2003). In addition, GAO selected several additional companies to collect information. However, GAO in 2011 accurately indicated that the information from all of these companies could not be used to make inferences beyond the specific firms interviewed.

Conclusions

Astoundingly, the total number of H-1B workers in the US at any one time is unknown, as is information about their length of stay in the US (Highlights, GAO 2011). As well, there apparently is no way for the federal government to estimate the unmet demand among employers for H-1B workers. Despite the shortage of information, the visa's potential job creation has stimulated another bill expanding the opportunities for potential visa holders (Kerry 2011). Lack of data is important because information systems among the various federal agencies do not assign a unique identifier allowing tracking H-1B workers over time. System limitations also hinder the Department of Homeland Security from knowing when the H-1B cap has been reached. The right-wing Heritage Foundation objected to a bill that would limit the ability of companies hiring H-1B workers. They also believe that it is wrong to limit the numbers as well. They argue that adding regulations would be a serious setback to US economy (Sherk and Nguyen 2009).

The Department of Labor's review of applications is cursory and limited by law to only looking for missing information and obvious inaccuracies (DOL 1996). The Department of Homeland Security reported that 21% of applications they examined involved fraud or technical violations (2008). In addition, there are other deficits such as ensuring that US worker's jobs are protected and that their wage levels are not eroded by foreign labor.

Where these workers may be living and/or working appears to be substantially unknown. Nevertheless, if they have fully complied with H-1B initial visa requirements and obtained a social security number, it generally can be established whether or not they are working. As well, the number of them should be known and their locations secured for follow-up interviews (Social Security 2008). Thus, if there was cooperation among the federal agencies, the number of them and their locations then would be available and known to the Department of Homeland Security.

On the other hand, it is important that the H-1B workers be allowed into the US because they produce more than their share of inventions and patents (Kerr and Lincoln 2010). Thus, H-1B employers have significant reasons for continuing the program. As well, other arguments have been presented to continue the program such as the employees bring to the US new ways of thinking about technology, processes, and problem solving (Masters and Ruthizer 2000).

Taken all together, the shortcomings of the H-1B program may not be useful in allowing its broad potential to be met. My policy suggestion is to mandate that H-1B employers and employees be required to respond to follow-up surveys. The reason for this is that, using the violation rate of 21%, there may be a minimum of 20,000 H-1B, or more workers in the US with fraudulent or technical violations. Where many of these workers are living and/or working appears to be substantially unknown.

I have no known reports of any of these H-1B workers being involved in any catastrophe or terrorist activities. However, the problem of this potential certainly exists. The H-1B nonimmigrant worker program has been hailed as the best and brightest visa program. The benefits are that the foreign presence in graduate science and engineering programs is positive. Yet it assailed by some as being used by industry to reduce labor costs and to obtain more recently trained foreign workers (Stine and Matthews 2009). My conclusion is that while the H-1B program has merit it, as well, it has major deficiencies that need to be overcome if it is going to continue in the future. The laws are in not in keeping with each other and may be allowing in the US unknown terrorist risks.

Finally, the methodology used by federal agencies has been shoddy and with relatively small samples, some of which appear to be dubious. Evaluation of the utility of the H-1B program so far results in confusion. This is mainly because the evaluation is not multivariate. That is, the inferences are at a one-variation at particular point in time and there is no conclusion regarding the mix of age, academic, and other dimensions. My opinion is that these federal agencies should be mandated to have extensive cooperation with each other.

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