

# **Asian Indian Engineers on H-1B Visas in the United States**

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## **Abstract**

Under the U.S. Immigration and Nationality Act, the H-1B visa allows technology companies to temporarily employ foreign workers in specialty occupations. This paper presents a case study of Asian Indian engineers on H-1B visas working in technology companies in the United States. They enter the U.S. technology sector through one single H-1B visa program, yet they follow different sub-paths of H-1B visa. Depending on how they enter the U.S. technology sector, Asian Indian engineers differ significantly in their working conditions and socio-economic experiences. The paper is based on both primary data and secondary sources. Primary data comes from a National Science Foundation (NSF) funded study on return migration of Asian Indian engineers from the United States.

## **Introduction**

Since World War II, foreign-born population in science and engineering (S&E) has been increasing in the United States. In 2015, foreign-born accounted for almost 30% of college-educated workers employed in S&E occupations in the United States<sup>1</sup>. This is an outcome of major alterations in the U.S. immigration policies in 1952, 1965 and 1990. Among other changes, immigration policies gave preference to the U.S. growing economic and technical needs<sup>2</sup>. The Immigration and Nationality Act of 1952 established H-1 visas for workers who reside in a foreign country, have distinguished merit and ability, and come to the U.S. temporarily to perform services urgently needed in the country. The third preference of the U.S. Immigration Act of 1965 is for professionals, scientists, and artists of exceptional ability, and its sixth preference is for skilled and unskilled workers in occupations for which labor is in short supply. The 1990 Immigration Act developed a temporary contract labor program for the technology industry to maintain U.S. competitiveness in the global economy.

Since 1990, U.S. companies have been recruiting foreign-born scientists and engineers to work mostly in information communication technology (ICT) companies. Foreign-born scientists and engineers with at least a bachelor's degree (or equivalent) join U.S. technology companies under a temporary specialty worker visa program, commonly known as the H-1B visas. Since its inception, H-1B visa program has been controversial. However, controversy over H-1B visas has intensified especially after President Donald Trump signed the "Buy American and Hire American" Executive Order in 2017. Critics namely American labor unions, Republican senators, computer science professor Norman Matloff<sup>3</sup> and public policy professor Ron Hira<sup>4</sup> argue that it displaces U.S.-born qualified workers and depresses their wages. In contrast, industrial leaders of technology giants, U.S. Chamber of Commerce, and American Competitiveness Alliance argue that H-1B visas help the U.S. maintain its competitiveness in the

global market by providing a steady flow of highly skilled workers who are currently in a short supply in the country.

In the debate over H-1B visas, working and socio-economic experiences of foreign-born engineers are overlooked. This paper focuses on engineers from India because they are overwhelmingly present in the U.S. technology companies. India has been taking over half of H-1B visas, with the next share (approximately 10%) going to China<sup>1</sup>. In 2017, 75.6% H-1B visas went to workers born in India and 9.4% to those in China<sup>5</sup>. Some of H-1B visa holders from India come to the U.S. for education and subsequently join the workforce after graduation; whereas others enter directly from India to work in the U.S. technology sector. The paper shows that based on how Asian Indian engineers gain access to the U.S. technical workforce, they vary significantly in their working conditions, future immigration prospects, and socio-cultural experiences.

The paper draws from: (i) secondary sources, namely scholarly literature, government documents and news reports on the subject, and (ii) primary data collected in 2017-2018. The paper presents findings from in-depth interviews conducted with 40 Asian Indian engineers employed in the U.S. industrial sector. Details of methodology employed interviewed are outlined later in the paper.

### **H-1B Visas**

Temporary work visa program started in 1952, changed subsequently and went through major overhaul in the 1990s. In the 1980s, U.S. faced international competition in the technology sector from Western European countries and Japan<sup>6</sup>. The U.S. was seen as facing a shortage of qualified workers to fill marketplace demands for employment<sup>7,8,9</sup>. The U.S. government sought to maintain U.S. competitiveness in the global economy by revamping H-1B visa program. It sought to temporarily hire skilled workers from abroad to fulfill specialty jobs for which domestic labor was seen in short supply<sup>10</sup>.

The 1990 Act defined a “specialty occupation” as requiring highly specialized knowledge and skills, and a bachelor’s or higher degree in the specific specialty (or its equivalent). It created a cap of 65,000 temporary foreign workers based on specialized education and technical skills in demand. They were allowed to work for up to six years, with an eligibility for renewal in three years. This cap only applied to the U.S. industrial sector; those on H-1B visas working for academic institutions and government research laboratories were excluded from this cap. In 1998, the American Competitiveness and Workforce Improvement Act increased H-1B visas to 115,000 for the 1999 and 2000 fiscal years. In 2000, the American Competitiveness in the Twenty-first Century Act expanded H-1B visas to 195,000 for the 2001, 2002 and 2003 fiscal years. Since 2005, under the H-1B Visa Reform Act of 2004, H-1B visas have reverted back to 65,000 per year, with an additional 20,000 visas for foreign-born scientists and engineers with a master’s degree or a doctorate degree from U.S. educational institutions.

H-1B visa recipients tend to possess a bachelor’s or a higher-level degree. Nearly half of new H-1B visa recipients have a bachelor’s degree (44% in 2016) while the rest have an advanced degree<sup>1</sup>. Those holding a master’s or a doctorate are likely to have acquired H-1B visas after

graduate studies in the U.S.; whereas, those with a bachelor's as their highest degree are likely to be temporary workers from abroad on H-1B visas to work in the U.S. Foreign-born scientists and engineers who join U.S. technology companies after attaining a graduate degree from the U.S. have H-1B visas which can be categorized as H-1B Ideal type. Ontiveros<sup>11</sup> has separated three types of H-1B visa for those coming directly from their birth country to work: Pure H-1B, Outsourcing H-1B, and Body-Shop H1-B types.

Securing H-1B visas after attaining a graduate degree from U.S. educational institutions is an "Ideal H-1B" type. A common pattern has been for foreign-born students to come to the U.S. for graduate education in S&E fields. After acquiring their degrees, some graduates return to their home country; whereas, others seek employment in the U.S. Under Optional Practical Training (OPT), foreign graduates are allowed to work for 12 months; however, in qualifying S&E fields they are allowed to work for additional 24 months. Foreign-born graduates, therefore, get work experience, extend their stay, and have multiple years to find employment in a company of their choice. Since these foreign-born graduates are trained in American graduate schools, they are somewhat similar to Americans in routine work activities, socialization, and communication; thus, their work experiences and wages do not differ significantly from the main stream S&E culture in the U.S. With sponsorship from their employing company, they secure H-1B visas, and have a strong possibility for permanent immigration or attaining a green card.

Under the "Pure H-1B" type<sup>11</sup>, U.S. technology companies recruit foreign-born scientists and engineers through recruiting agencies, and pay recruiting agencies to provide best scientists and engineers. Recruiting agencies are known to charge scientists and engineers for finding employment in the U.S. and doing visa related paperwork, which are illegal under U.S. laws. When they arrive in the U.S., foreign-born scientists and engineers are immediately put to work for big U.S. companies, and often paid the salaries established on visa applications. There have been few cases when H-1B visa holders have worked under stressful environment, and not paid for overwork<sup>12</sup>. Typically, foreign-born scientists and engineers have a strong possibility of being sponsored for permanent immigration.

Increasingly U.S. technology companies are subcontracting work to other companies to reduce operating costs and minimize risks. When subcontracting work, U.S. companies do not micromanage subcontracting companies who would be hired to perform the work. Since the late 90s, several big companies mostly from India have emerged to produce contracted work on U.S. soil by employing H-1B workers. Ontiveros<sup>11</sup> calls this the "Outsourcing H-1B" type. These subcontracting companies also use recruiting agencies. As mentioned earlier, recruiting agencies charge money for finding jobs in the U.S. and visa-related expenditures against the U.S. laws. Often, foreign-born scientists and engineers are given inaccurate information on their pay, work, work conditions, and immigration sponsorship. After their arrival in the U.S., they learn that they are under-paid, under-employed, expected to work long hours, and are not going to be sponsored for permanent residents in the U.S.<sup>13, 14</sup>.

Under "Body-Shop H-1B" type<sup>11</sup>, small body-shopping firms abroad and in the U.S. recruit foreign-born scientists and engineers for a wide-ranging clientele base. These body-shopping firms keep a pool of foreign-born scientists and engineers with skills, which are in demand. Body-shop firms are known to give false information on pay, start day, the nature of job,

working hours, location of work, and so-forth<sup>15,16</sup>. Upon arrival in the U.S., these H-1B visa holders are put in a small apartment with 8-10 others to wait for a job. These H-1B visa holders come to the U.S. after paying money to body-shopping firms for finding employment and visas related expenditures, which are illegal under the U.S. law. Soon, they learn that they do not have a promised job; instead, they will be performing a series of short-term jobs as they become available. They have to sit on a “bench” without pay and wait for a job to arrive; benching is prohibited under the U.S. law. Once a job arrives, the body-shopping firms deduct 20% to 30% of salaries earned to cover living and business expenses<sup>17,18,19,20,21</sup>.

### **Methodology: A Qualitative Approach**

Data for this paper come from a larger NSF-funded study on the return migration of scientists and engineers from the U.S. to India that was conducted from 2017 to 2019. Given that there is little information on the subject, qualitative methodology—focuses on why and how a certain phenomenon occurs by understanding attitudes, behavior, beliefs, characteristics, concepts, definitions, experiences, meanings, metaphors, and symbols. For a comparative group, we interviewed 40 Asian Indian engineers in 2017-18, who were working in technology companies in the United States. These participants were recruited from major cities in four states, namely California, New York, New Jersey and Texas, which have concentration of both technology companies and Asian Indian population. The participants came from two industries—information communication technology and bio-technology—since these industries employ the largest number of Asian Indian engineers in the U.S. Participants were selected through snow ball sampling method as a list of Asian Indian engineers and unrestricted access to companies was not available. The main criteria to select participants were that they must be India-born and working in U.S. technology companies for a minimum of three years.

A semi-structured interview guide was used to conduct in-depth interviews, which averaged about an hour. Most interviews were conducted face-to-face, though some were via telephone. All interviews were audio-recorded and later transcribed verbatim. The transcriptions were processed in NVivo software for data analysis. To ensure trustworthiness of data, two coders coded the data. The codes were categorized by themes that allowed us to identify patterns within the entire text. A phenomenological approach—the lived experiences of a concept or a phenomenon for several individuals—was employed to understand the H-1B visa system. Findings are reported with interview excerpts to highlight the complexity of concepts and by frequency to show their strength. In addition to demographic questions, following two out of 35 questions asked formed the basis for this paper.

1. Currently, what is your immigration status in the United States?
2. If on H-1B, do you feel comfortable with your immigration status? Please explain your reasons.

To protect privacy and to comply with the Institutional Review Board (IRB) requirements, names of the participants, location, and information about their employers’ are not disclosed. The 40 participants comprised 28 males (70%) and 12 females (30%). The age group of the participants varied; majority were between the ages 30 and 39 (67%). A little over 15% of the participants were between the ages 20 and 29 and about 10% ranged between the ages of 40 and

49. In addition, there was one participant each belonging to age groups 50 to 59 and above 60. Most of these participants (87%) were married with almost half of them having at least one child (n=21). About 40% of the participants who were married had a working spouse at the time of their interview. Majority of the participants (83%) held a graduate degree with remaining (17%) holding an undergraduate degree; out of graduate degrees, 63% held a Master's degree and 20% a doctorate. Over half of them (60%) had completed their terminal degrees in the U.S. and the remaining 40% were completed in India. These degrees were in engineering and related fields (87%) and in science fields (13%). The majority (67%) of these participants have held their current employment for less than five years, while 23% had been employed at their current position for five to 10 years, and 10% had been employed for over 10 years. Based on their education and employment, they are considered engineers in this study.

### Findings

At the time of the interview, 25 out of 40 participants were on H-1B visas; whereas eight were U.S. citizens and seven had acquired permanent residency. Out of 25 H-1B participants, 76% were not comfortable at all with their H-1B visa status holders; the remaining participants felt somewhat comfortable. Most participants gave multiple reasons for their comfort and discomfort with H-1B visas.

| Categories        | Interview Quotes                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Company's Support | "It will change soon [from H-1B to green card] because my manager does not want to do so much unnecessary paperwork, every time I have to go outside on a business trip."                                                                                                                                                                                                                |
| US Merit System   | "I am almost confident that it will work in our favor and again solely because we have proved that we are not the one who will bring the economy down."                                                                                                                                                                                                                                  |
| Plans to Return   | "I have been hearing from my friends how hard the U.S. immigration system, the kind of pressure it puts on people, [and] the kind of tension they go through. So, I have made up my mind that I am not staying here permanently, going through different stages of the immigration process. Since I know I will be thrown out when my six years are over, I am able to plan for better." |

Table 1: Factors Leading to Comfort with H-1B Visas

About one-fourth of participants (24%) were not concerned with their status as H-1B visa holders (table 1). It was mostly because their companies were willing to sponsor them for green cards, if they had not already done so. In addition, companies had taken full responsibility for paperwork associated with immigration and H-1B renewal. Others believed that the U.S. merit-based system would automatically take care of them. A few participants wanted to move back to India rather than worry about H-1B visas.

A large majority of participants (76%), however, showed their discomfort with their status as H-1B visa holders. Their discomfort was categorized into four broad categories, namely limited

employment opportunities, low salaries or wages, job insecurity, and restricted social mobility (table 2).

| Categories                       | Interview Quotes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limited Employment Opportunities | <p>“Even with a Master’s from here [US], it was very difficult to get a job. No matter how good you are... Questions come. Do you have citizenship? Do you have a green card? End of story.”</p> <p>“I do not want H-1B restrictions on me. I am not as independent as a person with a green card or a citizenship...I cannot just leave a job and start another job.”</p> <p>“get out of the body shop company as soon as possible because I found that most of them are pretty bad, they exploit us, they take advantage of Indians who come there.”</p> |
| Low Salaries                     | <p>“These contracting agencies give pay on an hourly basis after they are paid from their clients... They keep almost 20%-30% of that... Their clients know nothing about it.”</p> <p>“They pay us much less than what is really paid for our work.”</p>                                                                                                                                                                                                                                                                                                   |
| Job Insecurity                   | <p>“You are constantly worried that you can be sent back any day.”</p> <p>“With the current immigration things that are happening, I feel stressed. I do not know if I go back to my home country or vacate, I do not know whether I would be working here or not. That is the stress I am facing right now.”</p>                                                                                                                                                                                                                                          |
| Restricted Social Mobility       | <p>“Imagine there is a family emergency back in India, and you want to go there. But you cannot because you may not be able to enter the United States again.”</p> <p>“The lawyers do not recommend you going out of the country as it is a risky business.”</p>                                                                                                                                                                                                                                                                                           |

Table 2: Factors Leading to Discomfort with H-1B Visas

**Limited Employment Opportunities:** Most of these participants found their temporary status as H-1B visa holders created difficulties for them to find desired work. Participants who graduated in the U.S. found some companies were hesitant to hire them because of cost and administrative work associated with the visa renewal and immigration processes. Participants who came from India on H-1B visas cited difficulties with recruiting agencies and body-shops, who exploited their situation. According to these participants, their temporary immigration status limited job availability, professional growth and created a dependence on their current positions.

**Low Salaries:** Most of the participants believed that they are paid less than what they expected. Participants who graduated from the U.S. or working for a big company received salary which was agreed upon hiring based on participants’ qualifications. In addition, they were offered benefits, leaves and other perks. Participants who came directly from India to work in the U.S. believed that they settled for low paying positions or depended on paying a portion of their wages to contracting agencies that exploited their positions.

**Job Insecurity:** Job insecurity was another reason attributed to discomfort in relation to participants' immigration status as H-1B visa holders. Participants were concerned about uncertainty of their job due to the temporary status of H-1B visas and anti-immigration environment under the current administration, and their inability to plan a future creating further helplessness. Participants who graduated from the U.S. or worked for a big company viewed themselves vulnerable due to H-1B visa. Participants who came directly from India to work in the U.S. perceived it as a clear threat of losing their jobs and going back to India.

**Restricted Social Mobility:** Some participants reported their discomfort with H-1B due to restricted social mobility, namely inability to travel. They believed this further lowered their social standing within the Asian Indian community. Their parents and other family members remaining in India. They spoke with them regularly on the phone and did video-telephony; however, it was not the same as periodically visiting them. So, travel to India was rather important to them. It was this desire which was restricted due to H-1B.

### Conclusions

The main goal of the H-1B visa program in the United States has been to bridge the labor gap without displacing and adversely hurting U.S. workers. However, the H-1B visa program is projected as bringing cheap foreign labor that hurts U.S.-born workers' employment and income prospects. In the intense debate over H-1B visas, working and living conditions of specialty workers tend to be overlooked. This paper has shown how severely economic, political and social forces shape their working and social lives. As one dissects H-1B visa into various parts, socio-economic variations in its impact on H-1B visa holders become increasingly apparent. Asian Indian engineers who have degrees from the United States tend to be slightly at the high-end; whereas, those who come directly from India face difficulties. Either way, Asian Indian engineers (and all foreign workers on H-1B) are unable to become full members of the scientific community or the U.S. society as long as they are on H-1B visas.

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