The Search for Skills: Demand for H-1B Immigrant Workers in U.S. Metropolitan Areas

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"A global view of high-skilled labor complemented by metropolitan skills training will enable U.S. companies to obtain the workforce they need to keep America competitive now and in the future."

Findings

An analysis of the geography of H-1B visa requests—particularly in the metropolitan areas with the highest demand between 2001 and 2011—reveals that:

- Demand for H-1B workers has fluctuated with economic and political cycles over the last decade and reflects a wide range of employers’ needs for high-skilled temporary workers. Employer requests have exceeded the number of visas issued every year except from 2001 to 2003 when the annual cap was temporarily raised from 65,000 to 195,000. Employers requesting the most H-1B visas are large companies subject to the cap specializing in information technology, consulting, and electronics manufacturing. Science, technology, engineering, and mathematics (STEM) occupations account for about 60 percent of requests for H-1B workers, with the remaining 40 percent allocated proportionately to other occupations, including science, technology, engineering, and math.

- Employers in metropolitan areas with the highest demand between 2001 and 2011 accounted for 91 percent of all requests but only 67 percent of the national workforce. Over the last decade, the federal government has distributed about $1 billion from H-1B visa fees to fund programs for workforce skills development in the U.S. workforce.

- One hundred and six metropolitan areas had at least 250 requests for H-1B workers in the 2010-2011 period, accounting for 91 percent of all requests but only 67 percent of the national workforce. Metropolitan areas vary by the number of employers using the H-1B program and the cap status of the employers. Demand in corporate metro areas (such as Columbus, IN and Seattle, WA) comes predominantly from private employers subject to the annual visa cap, while in research metro areas (such as Austin, TX and Durham, NC) universities and other research institutions are exempted from the cap. In mixed metro areas (such as Atlanta, GA and Philadelphia, PA), a variety of employers are demanding temporary high-skilled foreign workers.

- In 92 of the 106 high demand metropolitan areas, STEM occupations accounted for more than half of all requests. Computer occupations were the most highly requested occupation, followed by computer science and mathematics. Where employers' skills needs were met, there was considerable variation among areas in the number of STEM occupations requested, ranging from 15 in Bloomington, IL to 52 in New York metro area. Metropolitan areas also vary on occupational concentration, ranging from 74 occupation groups requested in the New York metro area, to 15 groups requested in Richmond, VA.

- H-1B visa fees designated for skills training and STEM education have not been proportionately distributed to metropolitan areas requesting the highest number of H-1B workers. Metropolitan areas with high demand for H-1B workers are only receiving $3.09 on average per working age person 16 years or older compared to $15.26 per working age person in low H-1B demand areas. STEM education funds are similarly distributed with the high H-1B metros receiving only $1.00 per working age person compared to $14.10 in low H-1B metros.

The U.S. government’s policy of placing an annual cap on H-1B visas was originally intended to help high-skilled workers find employment and to support industry needs generated by local employer skills gaps and regional economic indicators. The federal government should also consider establishing a commission on labor and immigration issues comprised of employers and unions to help adjust the cap for H-1B visa applicants and to support industry needs generated by local employer skills gaps and regional economic indicators.
A skilled workforce provides the foundation for metropolitan areas to transition to the Next Economy.
The H-1B Program connects US employers to high-skilled workers.
Metros drive demand for H-1B workers
The US must match the supply of skilled workers to metro demand
The H-1B Program connects US employers to high-skilled workers
Share of Global Engineering BAs

- **56%** Asia
- **17%** Europe
- **4%** United States

Source: National Science Foundation, Science and Engineering Indicators (2012)
H-1B Visa Program: Dual Approach

1. Employers apply for high-skilled worker visas to meet demand for specialty occupations
H-1B Temporary Work Visas

Private Firms
Capped

Research, Non-Profit, Government Organizations
Uncapped
H-1B Temporary Work Visas

Private Firms

Capped

H-1B Cap
For Private Employers
High-Demand Industries and Firms
High-Demand Industries and Firms

Information Technology
- Microsoft
- Intel
- WIPRO

Management Consulting
- IBM
- Deloitte
- Accenture

Manufacturing
- CATERPILLAR
- Cummins
- Qualcomm

Finance
- Ernst & Young
- Goldman Sachs
- JPMorgan Chase & Co.
H-1B Temporary Work Visas

Research, Non-Profit, Government Organizations

Uncapped
H-1B Temporary Work Visas
Origin Countries of H-1B Visa Recipients

Occupations of H-1B Visa Requests

- **STEM Occupations**
  - 46.8% Computer Occupations
  - 8.2% Engineers
  - 64% Total

- **Non-STEM Occupations**
  - 5.7% Financial Specialists
  - 6.4% Healthcare Practitioners
  - 36% Total

Source: Brookings Analysis of Department of Labor Data (2010-2011)
1. Employers apply for high-skilled worker visas to meet demand for specialty occupations

2. Revenues from visa fees are invested in US workforce skills development
$1 billion
technical skills training and STEM education, 2001-2011

Employment and Training Administration
Department of Labor

National Science Foundation

H-1B Visa Program: Skills Training
H-1B Visa Program: Skills Training

$628 million
technical skills training, 2001-2011

Employment and Training Administration
Department of Labor

National Science Foundation
H-1B Visa Program: Skills Training

$357 million
STEM education, 2001-2011

Employment and Training Administration
Department of Labor

National Science Foundation
Metros drive demand for H-1B workers
Metros Concentrate H-1B Requests

High-Demand H-1B Metros
106 Metropolitan Areas

- 67% of workers
- 91% of H-1B requests

Map showing 106 metropolitan areas with high demand for H-1B visas.
Metros With Highest H-1B Intensity

Note: Intensity represents applications per 1,000 workers
Metro Profile
San Jose, CA

- 14,926 H-1B visa requests
- 17.1 H-1B intensity requests per 1,000 workers

Top Employers Requesting H-1Bs
- 3% Uncapped
- Intel
- Yahoo!
- eBay

Occupations
- 87% STEM
- Computer Occupations
- Engineers
- Business Operations Specialists
Metro Profile
New York, NY

52,921
H-1B visa requests

6.3
H-1B intensity
requests per 1,000
workers

Top Employers Requesting H-1Bs

6%
Uncapped

JPMorgan Chase & Co.
Goldman Sachs
Tata

Occupations

Financial Specialists
Computer Occupations
Business Operations Specialists

STEM
52%
Metro Profile
Columbus, IN

Columbus, IN

89%
STEM

Applications

629
H-1B visa requests

14.6
H-1B intensity requests per 1,000 workers

Top Employers Requesting H-1Bs

1%
Uncapped

Cummins
LHP Software
KPID Infosystems Ltd.

Occupations

89%
Engineers
Computer Occupations
Metro Profile
Rochester, MN

Applications

278
H-1B visa requests

2.6
H-1B intensity requests per 1,000 workers

Top Employers Requesting H-1Bs

71%
Uncapped

Occupations

58%
STEM

Life Scientists
Health Practitioners

278
H-1B visa requests
The US must match the supply of skilled workers to metro demand
Increasing responsiveness to fluctuations in H-1B demand
Increasing Responsiveness to Fluctuations in H-1B Demand

![Chart showing H-1B employer demand and cap from 1999 to 2011. The demand peaks in 2007 with 404,907 filings and reaches a low of 115,000 in 2001. The cap remains at 85,000 for most years, with a peak of 380,320 in 2000.](image-url)
Standing Commission on Labor & Immigration
Standing Commission on Labor & Immigration
H-1B Panel

- Bureau of Labor Statistics
- Employment & Training Administration, Department of Labor
- National Science Board, National Science Foundation

Business
Demography
Economics
Immigration
Experts

Business Research Organization

Map of the United States with markings.
Increasing responsiveness to fluctuations in H-1B demand

Matching skills training to metro needs
Matching Skills Training to Metro Needs

$628 million
technical skills training, 2001-2011
$628 million
technical skills training, 2001-2011

Matching Skills Training to Metro Needs

Technical Skills Training
Per-Capita Expenditures

High-Demand H-1B Metros: $3.09
Low-Demand H-1B Metros: $15.26
Matching Skills Training to Metro Needs

Technical Skills Training
Per-Capita Expenditures

<table>
<thead>
<tr>
<th>Metro</th>
<th>High-Demand H-1B Metros</th>
<th>Low-Demand H-1B Metros</th>
<th>San Jose</th>
<th>New York</th>
<th>Columbus, IN</th>
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Federal Government
Target skills training in high H-1B demand metros

Metro Leaders
Collaborate to apply for H-1B technical skill grants
Kansas Engineering Excellence Project
Wichita, KS

$5 million skills training grant

Aligned to aviation and aerospace cluster
The Search for Skills
The Demand for H-1B Workers in U.S. Metros