

International Students and Economic Development of Global Metropolitan Areas

A world map with a dark blue background. Numerous small, glowing yellow dots are scattered across the map, representing international students in various global metropolitan areas. The dots are most densely clustered in North America, Europe, and East Asia.

A skilled workforce provides the foundation for metropolitan areas to transition to the Next Economy



Outline

1. International Students Supply of Skilled Workforce
2. Demand for Skilled Workers
3. Challenges and Prospects for Immigration Reform



1. International Students Supply Skilled Workforce

Metros are home to
foreign students



The U.S. is the global hub for higher education, receiving 21 percent of all students studying abroad



Forthcoming Brookings Report on Foreign Students

5+ million

approvals for F-1 visas
in 2001-2012



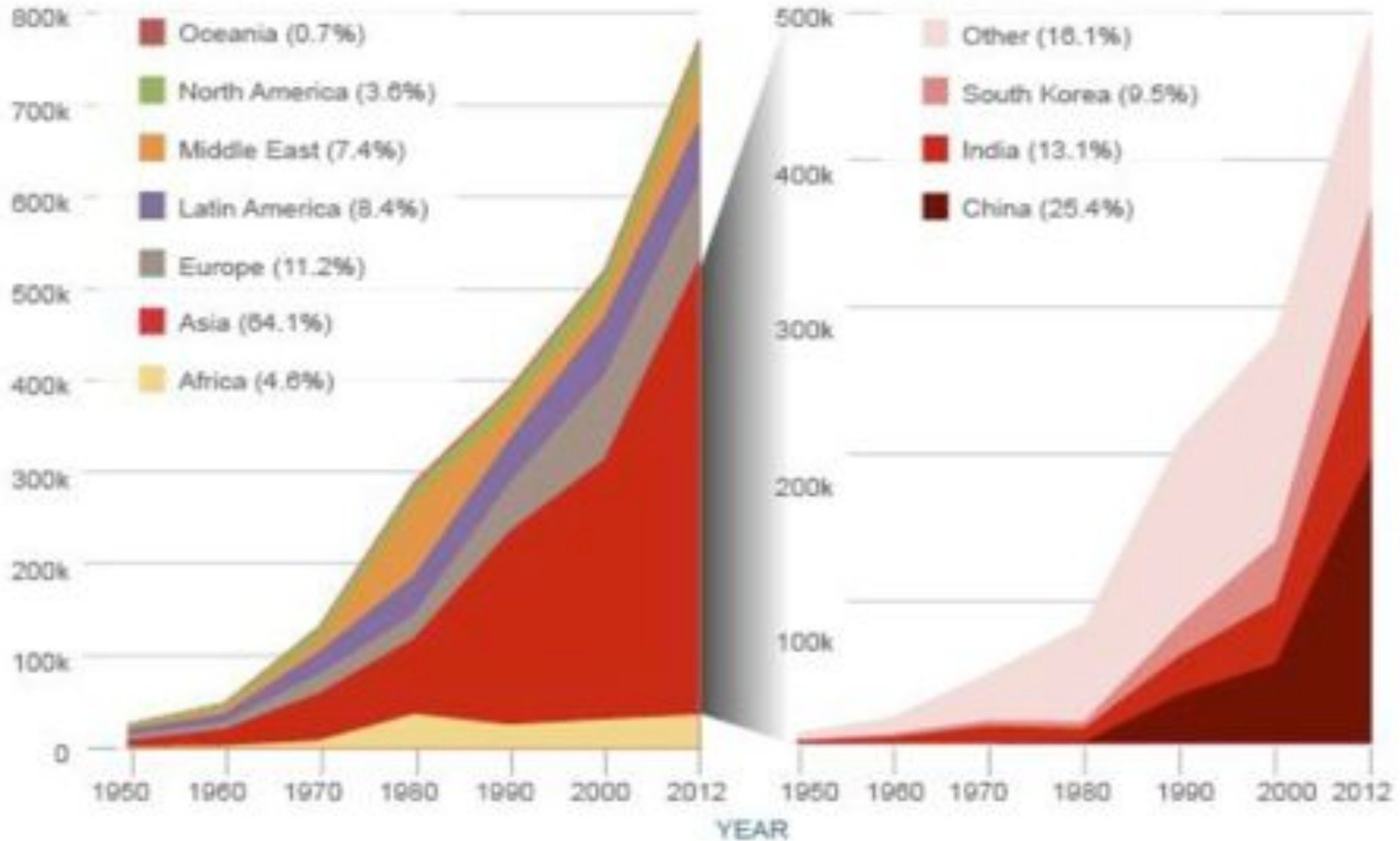
Three Types of Foreign Student Visas



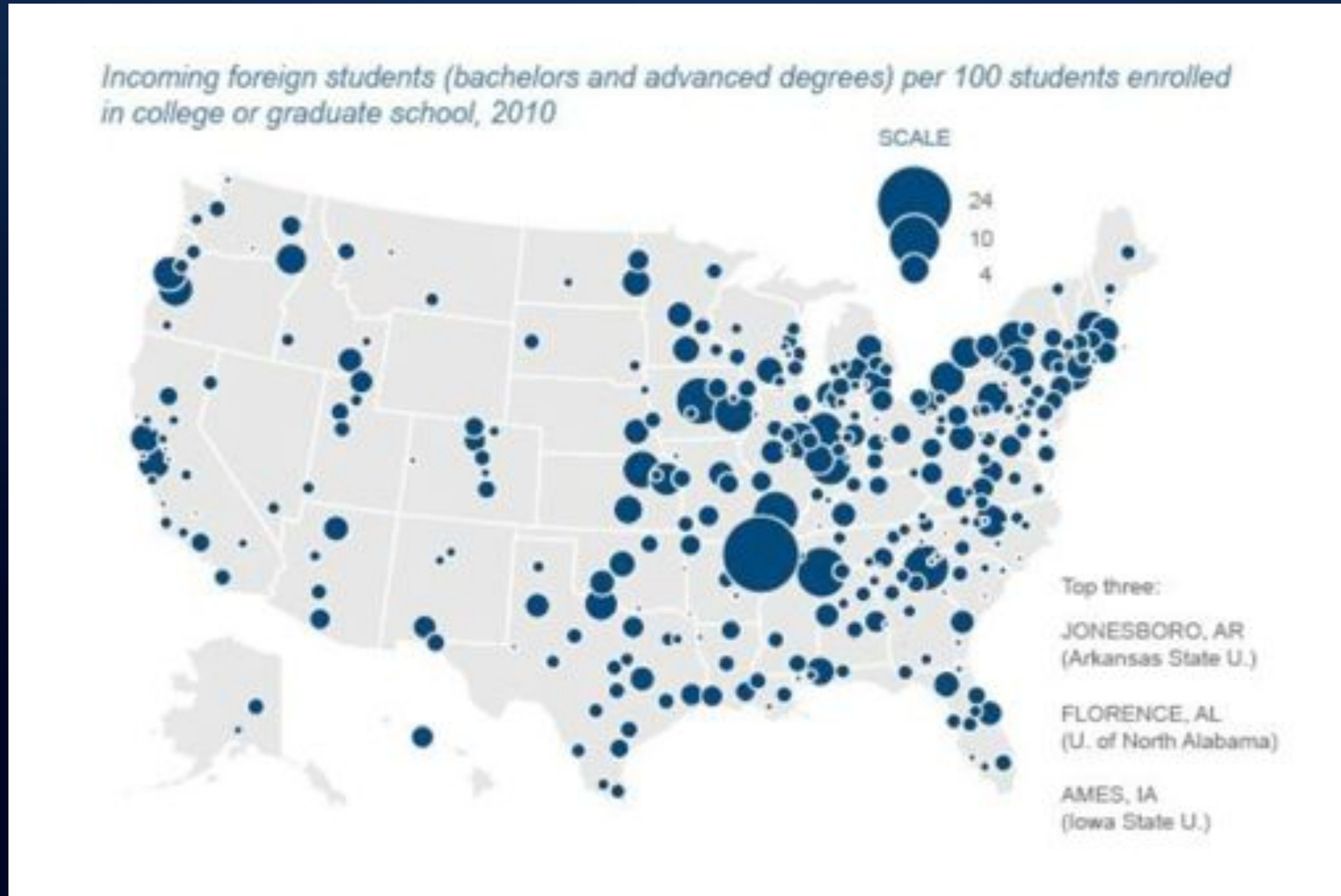
1. **F-1 Visa: For full-time academic study; most common visa**
2. J-1 Visa: For cultural exchange purposes, also known as the Fulbright Program
3. M-1 Visa: For non-academic vocational purposes only; least common visa

Foreign Students from Asia are driving growth

Number of foreign students studying in the U.S., from...
(percentages in parentheses are for 2011/2012 school year)



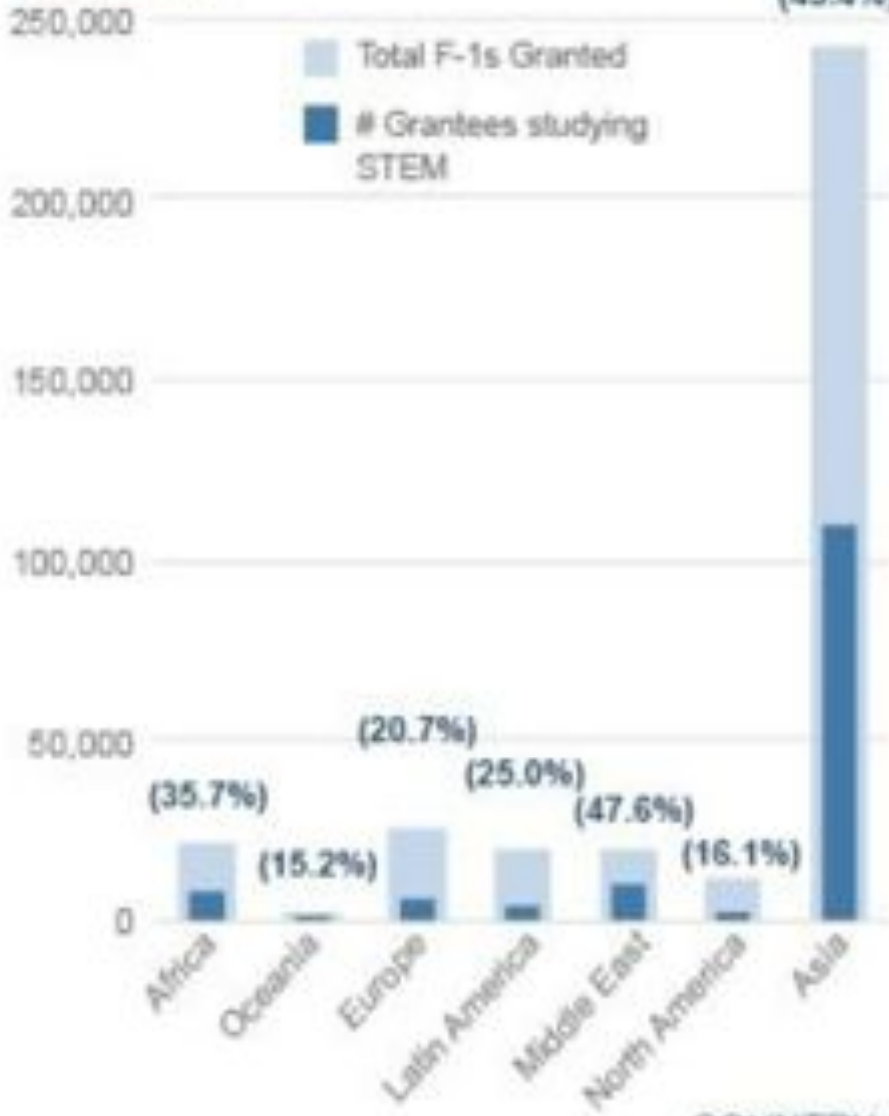
Smaller metros have the highest concentration of foreign students



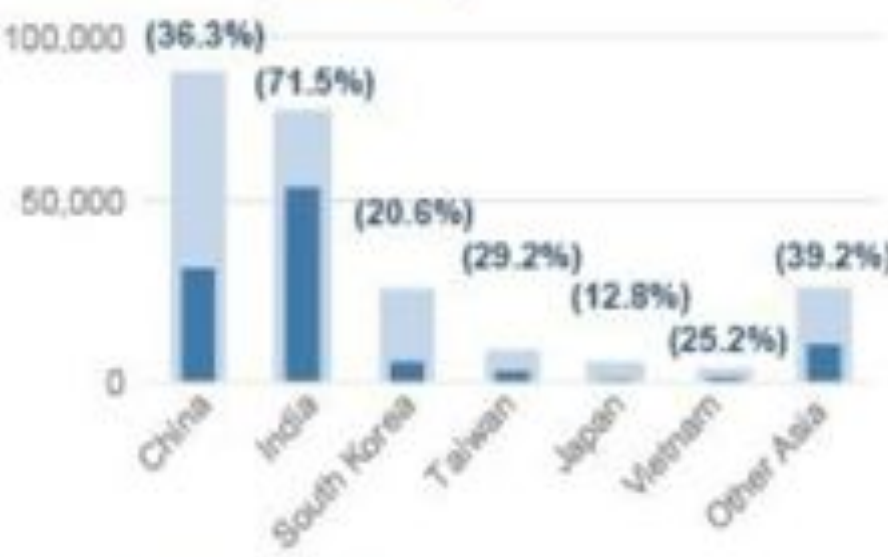
Students from Asia comprise an overwhelming share of all foreign students studying STEM

Number of foreign students enrolling in STEM degree programs, 2010
(numbers in parentheses indicate percent of grantees studying STEM)

BY REGION



BY COUNTRY (ASIA ONLY)



COUNTRY / REGION OF CITIZENSHIP

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

Neil G. Ruiz, Jill H. Wilson, and Shwetal Chaudhry

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 almost two-thirds of requests for H-1B work and healthcare, finance, business, and life sciences occupations are also in high demand. Over the last decade the federal government has distributed about \$1 billion from H-1B visa fees to fund programs to address skills shortages 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. Considerable variation exists among these metro areas in the number of workers requested and the ratio of requests to the size of the total metro workforce. On average, there were 3.3 requests for H-1Bs per 1,000 workers in these 106 metro areas, compared to 2.4 for the nation as a whole.
- 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 Durham, NC and Ann Arbor, MI), the demand is driven by universities and other research institutions exempted from the cap. In mixed metro areas (such as Atlanta, GA and Trenton, NJ), 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 group in all but 11 metros of the 106 high-demand metros, where engineering, healthcare practitioners, and postsecondary teachers were more requested. Metropolitan areas also vary on occupational concentration, ranging from 34 occupation groups requested in the New York metro area, to 15 groups requested in Bloomington, IL.
- H-1B visa fees designated for skills training and STEM education have not been proportionately distributed to metro areas requesting the highest number of H-1B workers. Metropolitan areas with a high demand for H-1B workers are only receiving \$3.09 on average per working age person 16 years or older of the technical skills training grants compared to \$15.26 for metros that have a lower demand for H-1Bs from 2001-2011. STEM education funds are similarly distributed with the high H-1B metros receiving only \$100 per working age person 16 years or older compared to \$14.10 in the low H-1B metros.

The U.S. government should develop an independent standing commission on labor and immigration removed from politics that can adjust the cap for H-1B visa applicants based on local employer skills needs and regional economic indicators. The federal government should also channel H-1B visa fees to skills training in areas that are currently being filled by H-1B workers at the metropolitan level.

"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."

2. Demand for Foreign Skilled Workers

The H-1B Program
connects US employers to
high-skilled workers



H-1B Visa Program

**Immigration Act
of 1990**



November 29, 1990

**American
Competitiveness
and Workforce
Improvement Act of
1998**



October 21, 1998



H-1B Temporary Work Visas



Private Firms
Capped



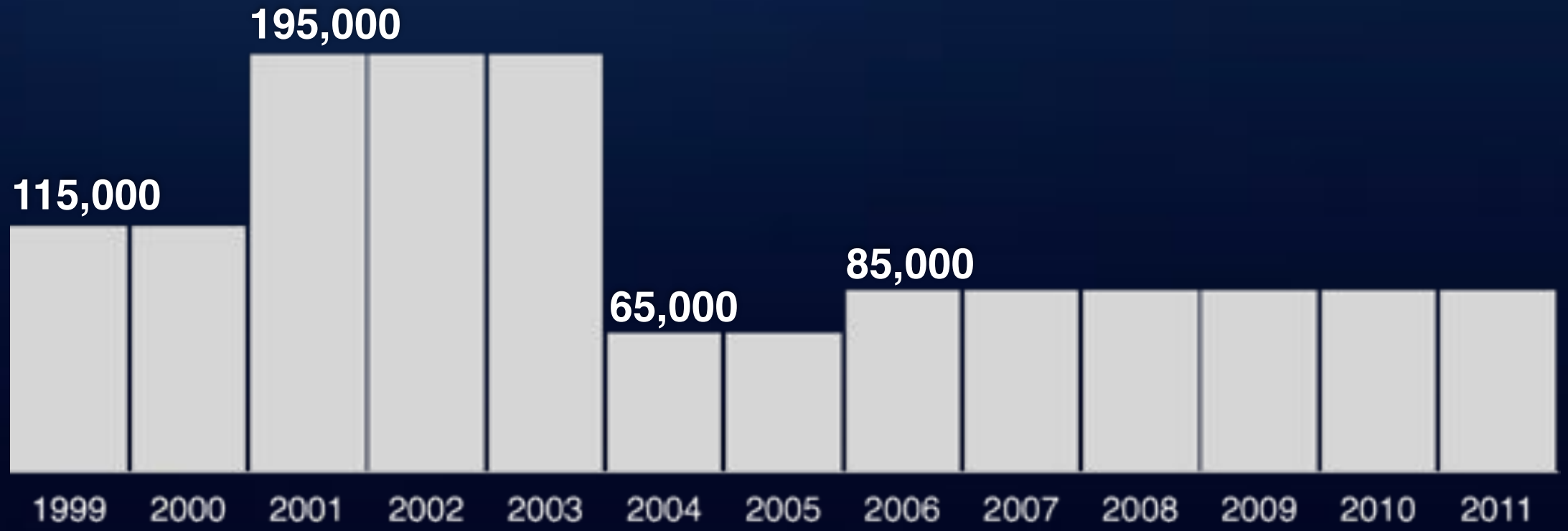
Research, Non-Profit,
Government Organizations
Uncapped

H-1B Temporary Work Visas



Private Firms
Capped

H-1B Cap
For Private Employers

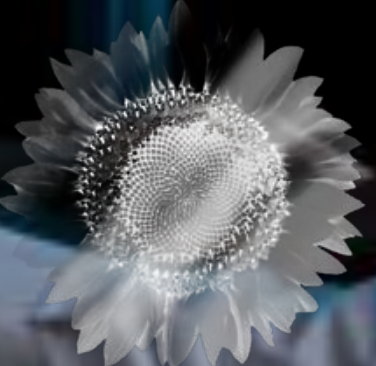


High-Demand Industries and Firms

Information
Technology

Microsoft

intel



WIPRO

Management
Consulting



Deloitte.

accenture

Manufacturing

CATERPILLAR



QUALCOMM

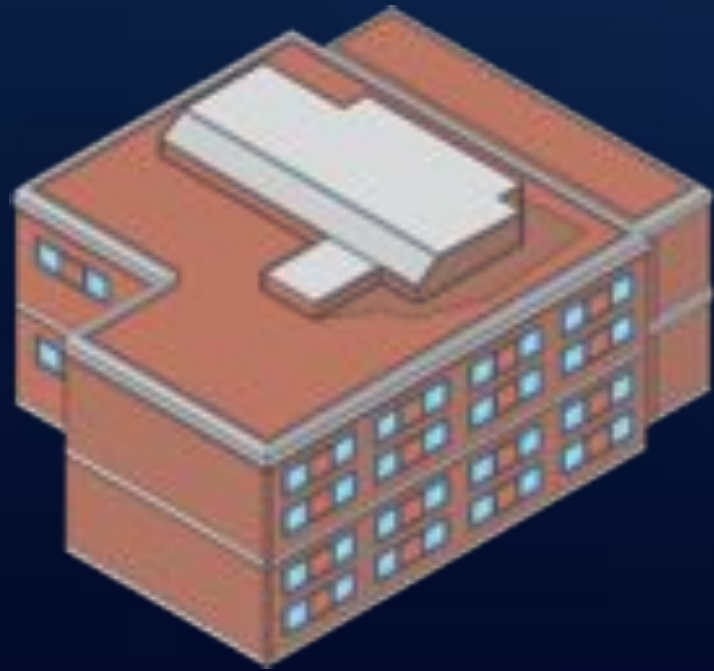
Finance

ERNST & YOUNG

**Goldman
Sachs**

JPMORGAN CHASE & CO.

H-1B Temporary Work Visas



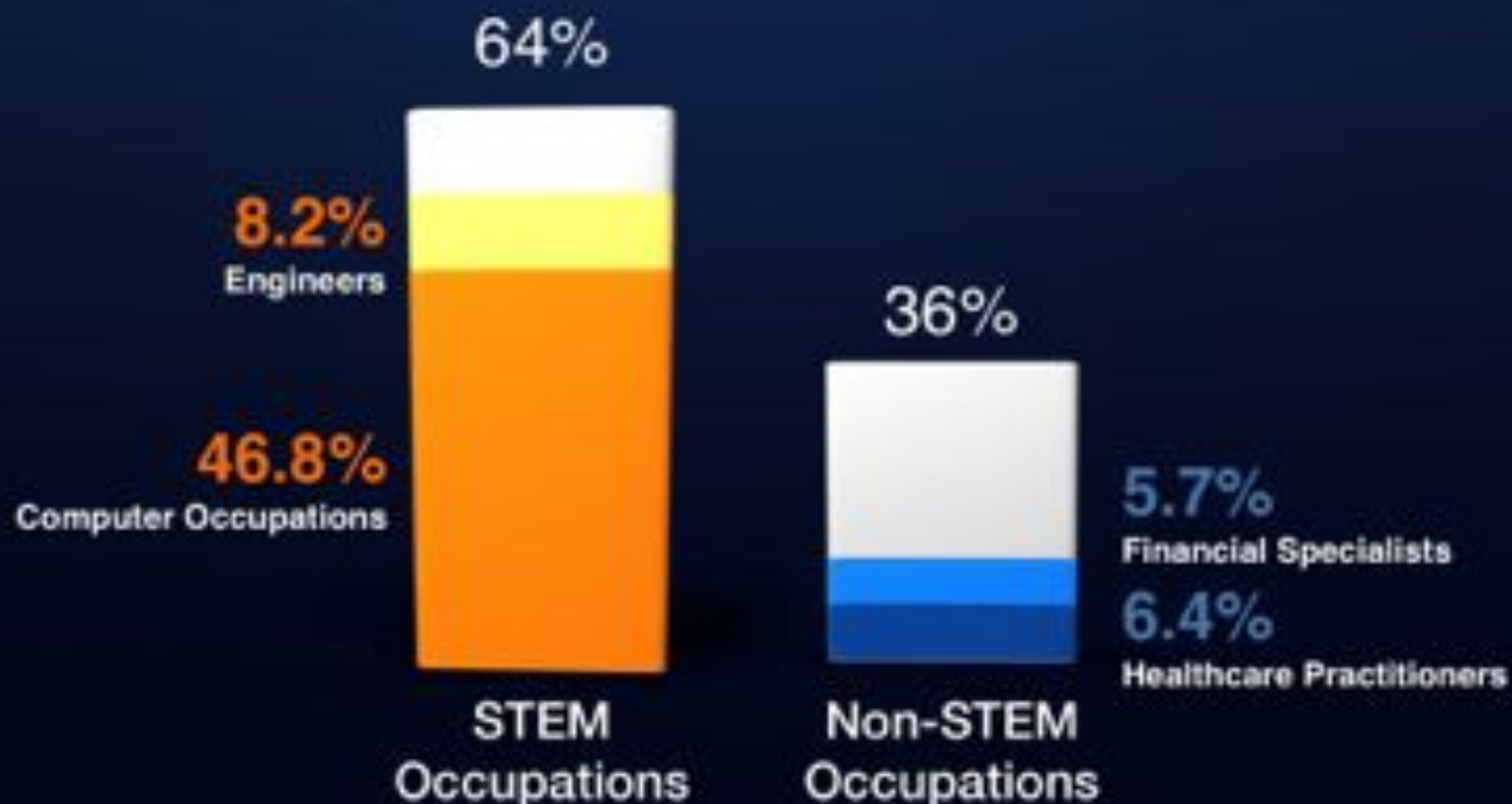
Research, Non-Profit,
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H-1B Temporary Work Visas



Occupations of H-1B Visa Requests



H-1B Cap Not Responsive to Economic Needs

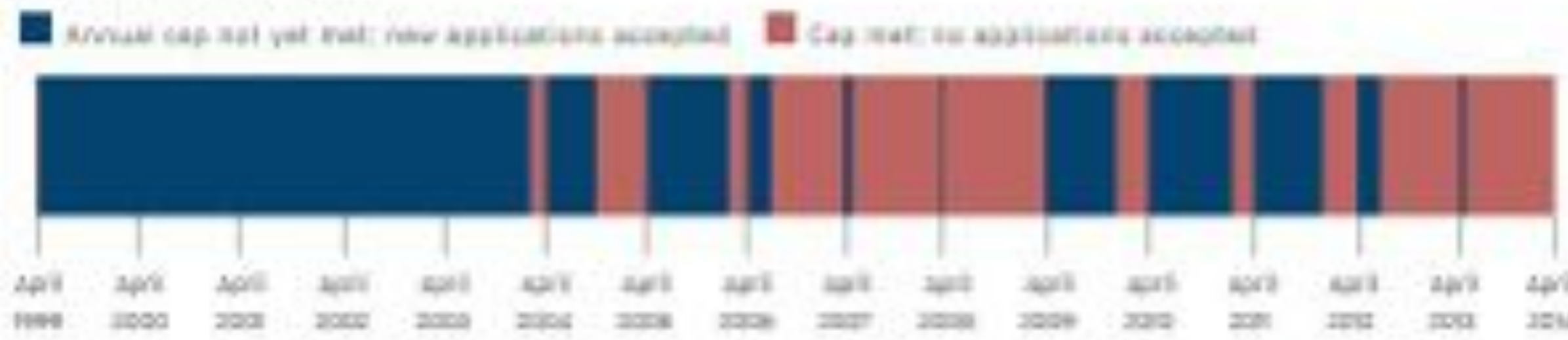
H-1B Cap Fills Rapidly

This year, the demand for H-1B visas has outstripped supply in five days. Last year it took a little over two months to reach the cap.

Annual cap on H-1B visas



H-1B availability windows



Metros drive demand for
H-1B workers

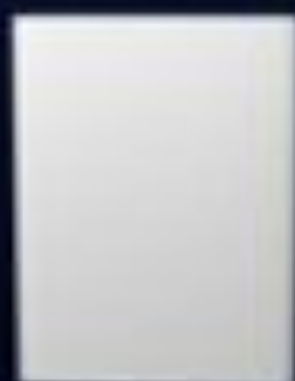


Metros Concentrate H-1B Requests

High-Demand H-1B Metros
106 Metropolitan Areas



67%



Workers

91%



H-1B
Requests

Metros With Greatest Number of H-1B Applications



Metros With Highest H-1B Intensity



Metros With Highest Share of STEM H-1B Requests



Metro Profiles



Metro Profile

St. Louis, MO



Applications

2,263

H-1B visa requests

1.71

H-1B intensity requests per 1,000 workers

Top Employers Requesting H-1Bs

17%
Uncapped



Occupations

75%
STEM

- Computer Occupations
- Life Scientists
- Health Diagnosing Practitioners

Metro Profile

Detroit, MI



Applications

4,653

H-1B visa requests

2.66

H-1B intensity
requests per 1,000
workers

Top Employers Requesting H-1Bs

6%

Uncapped



Occupations

66%

STEM

Computer Occupations
Engineers

Metro Profile

Pittsburgh, PA



Applications

2,370

H-1B visa requests

2.08

H-1B intensity
requests per 1,000
workers

Top Employers Requesting H-1Bs

25%

Uncapped



Occupations

25%

STEM

Computer Occupations

Health Practitioners

Engineers

Metro Profile

Cleveland, OH



Applications

1,790

H-1B visa requests

1.78

H-1B intensity
requests per 1,000
workers

Top Employers Requesting H-1Bs

27%
Uncapped



Occupations

60%
STEM

- Computer Occupations
- Health Practitioners
- Engineers

Metro H-1B Data Profiles

106 High-Demand Metros

Demand for H-1B Immigrant Workers in U.S. Metropolitan Areas

Wichita, KS Metro Area

TOTAL NUMBER OF H-1B VISA REQUESTS	NUMBER OF H-1B VISA REQUESTS PER 1,000 WORKERS	TOTAL GRANT DOLLARS RECEIVED FROM H-1B PROGRAMS	PER-CAPITA GRANT DOLLARS RECEIVED FROM H-1B PROGRAMS
262	0.9	\$6.0 MILLION	\$12.63
RANK 102	RANK 101	RANK 27	RANK 5

TOP OCCUPATIONS, BY NUMBER OF VISA REQUESTS

Computer Occupations	83
Engineers	61

Due to small sample sizes, no other occupations can be displayed.

% OF VISA REQUESTS FROM UNCAAPPED ORGANIZATIONS

14.3%

RANK 43

CAAPPED UNCAAPPED

SELECTED TOP EMPLOYERS

Wichita State University

Due to small sample sizes, no other employers can be displayed.

% OF VISA REQUESTS IN STEM OCCUPATIONS

66.7%

RANK 61

NON-STEM STEM

All data averaged for 2010-2011 unless otherwise noted. Of the 106 sample metros, 70 received some funding over this period, while 36 received none.

Report: www.brookings.edu/metro/h1b
Twitter: @metro/h1b

BROOKINGS

Metropolitan Areas | H-1B Visas | Labor Policy | Immigration | Competitiveness

Report | July 18, 2012

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

PREV. Key Aspects of H-1B: 1. Application Process 2. Demand Over Time 3. Types of Workers 4. Geography of Demand 5. Metro Area Profiles

H-1B demand comes from both large and small metropolitan areas

One hundred and six metropolitan areas exhibited a high demand for H-1B workers in the 2010-2011 period, accounting for 91 percent of all H-1B requests. In these and other metropolitan areas, the H-1B intensity, calculated as the ratio of requests to the total number of jobs in the metro area, is high. Demand for H-1B workers, however, is not limited to large metropolitan areas. Columbus, Indiana boasts the second-highest demand intensity at 14.8 requests per 1,000 workers.

H-1B requests in high-demand metropolitan areas

Columbus, IN: 629 requests, 14.60 intensity

New York, NY: 52,021 requests, 6.32 intensity

REQUESTS: 0, 10,000, 50,000

INTENSITY: 0, 1, 2



www.brookings.edu/metro/h1b



3. Challenges and Prospects for Reform

F-1 visas approved in 2010



F-1s enrolled in advanced degree programs



F-1s enrolled in advanced degree programs AND studying a STEM field



Of the 668,513 F-1 visas in 2010, **188,281 (28.2%)** were enrolled in advanced degree programs, of whom **96,162 (14.4%)** were studying a STEM field.

Under proposals to give green cards to foreign STEM advanced degree holders these individuals would have faster access to a green card upon graduating with a job offer.

H-1b visas approved in 2010



H-1bs transferring from F-1 status



H-1bs transferring from F-1 status who had a graduate degree



Of the 76,627 new H-1B visas approved in 2010, **26,502 (34.6%)** were transferring from F-1 visa status, of whom **19,922 (26.0%)** had a graduate degree.

They can then apply for permanent status, if sponsored by their employer.

Congress Agrees on High-Skilled Immigration Reform



Regional Visas?



International Students and Economic Development of Global Metropolitan Areas

A world map with a dark blue background. Numerous small, glowing yellow dots are scattered across the map, representing global metropolitan areas. The dots are most densely clustered in North America, Europe, and East Asia, with fewer dots in South America, Africa, and Australia.