A skilled workforce provides the foundation for metropolitan areas to transition to the Next Economy
The U.S. is the global hub for higher education, receiving 21 percent of all students studying abroad
5+ million approvals for F-1 visas in 2001-2012

500,000 OPT approvals in 2008-2012
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
Messages

1. Metros are home to foreign students
2. Foreign students connection metros to global markets
3. Metros can leverage foreign student global connections and retain them after they graduate
Metros are home to foreign students
Top Schools of Destination

- USC University of Southern California
- Columbia University
- University of Illinois
- Purdue University
- NYU
- Northeastern University
- The University of Michigan
- University of Washington
- Indiana University
85 percent of foreign students pursuing BMD degrees are in 118 metros.
Financial Impact on Metro Economies

$35 billion
Over 2008-2012
### Top 10 STEM Metro Destinations as Percentage of Total F-1 Students

<table>
<thead>
<tr>
<th>Rank</th>
<th>U.S. Metropolitan Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Beaumont-Port Arthur, TX</td>
</tr>
<tr>
<td>2</td>
<td>Palm Bay-Melbourne-Titusville, FL</td>
</tr>
<tr>
<td>3</td>
<td>Anderson, SC</td>
</tr>
<tr>
<td>4</td>
<td>College Station-Bryan, TX</td>
</tr>
<tr>
<td>5</td>
<td>Blacksburg-Christiansburg-Radford, VA</td>
</tr>
<tr>
<td>6</td>
<td>Las Cruces, NM</td>
</tr>
<tr>
<td>7</td>
<td>Gainesville, FL</td>
</tr>
<tr>
<td>8</td>
<td>Dayton, OH</td>
</tr>
<tr>
<td>9</td>
<td>Lafayette, IN</td>
</tr>
<tr>
<td>10</td>
<td>Corvallis, OR</td>
</tr>
</tbody>
</table>
45% of Foreign Student Graduates Stay to Work in School’s Metro Post-Graduation under OPT
Metro Profiles

- New York
- Lafayette
- Los Angeles
- Las Vegas
Foreign Students Metro Profile
New York City, NY

F-1 Students
101,586
44.5

F-1 Visas Approved

Top Schools

31.3% STEM

Business, Management, Marketing 25%
Engineering 11%
Visual Arts 11%
Computer and Information Sciences 8%
Liberal Arts 5%

Top Global Hometowns

Seoul 7%
Beijing 5%
Shanghai 3%
Mumbai 2%
Taipei 2%

Foreign Student Retention under OPT
75.3%
Foreign Students Metro Profile
*Lafayette, IN*

**F-1 Students**
11,354

**F-1 Visas Intensity**
55.1

**Top Schools**

- 64.1% STEM
  - Engineering: 38%
  - Business and Management: 16%
  - Computer and Information Sciences: 6%
  - Mathematics: 6%

**Top Global Hometowns**
- Beijing: 11%
- Seoul: 7%
- Shanghai: 5%
- Nanjing: 2%
- Mumbai: 2%

**Foreign Student Retention under OPT**
11.0%
Foreign Students Metro Profile
Las Vegas, NV

F-1 Students
2,850

F-1 Visas
15.4

Intensity
Approved

Top Schools

12.1% STEM

Top Global Hometowns

Seoul 16%
Singapore 10%
Hong Kong 3%
Beijing 2%
Busan 2%

Foreign Student Retention under OPT
75.0%

Business and Management 67%
Engineering 6%
Basic Skills 5%
Health Professions 4%
Computer and Information Sciences 3%
Foreign Students Metro Profile
Los Angeles, CA

F-1 Students
68,271
41.7

F-1 Visas
Approved

Top Schools

USC University of Southern California
UC Irvine
UCLA
California State University Northridge

Top Global Hometowns
Seoul 10%
Beijing 4%
Taipei 3%
Shanghai 3%
Hong Kong 3%

Foreign Student Retention under OPT
63.4%

59.0% STEM

Business and Management 30%
Engineering 15%
Visual Arts 7%
Theology 7%
Computer and Information Sciences 6%
Foreign Student Graduates are Economic Ambassadors
US Metro Foreign Student Data Profiles
118 Highest US Metro Destinations of Foreign Students

**Lafayette, IN Metro Area**

<table>
<thead>
<tr>
<th>Total Number of F-1 Visas Approved</th>
<th>Number of F-1 Visa Approvals per 1,000 students</th>
<th>Total Tuition Dollars from F-1 Visa Students</th>
<th>Estimated Living Costs Dollars from F-1 Visa Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,354</td>
<td>55.1</td>
<td>$308.18 million</td>
<td>$125.18 million</td>
</tr>
</tbody>
</table>

**Top Majors of Visa Approvals**

<table>
<thead>
<tr>
<th>Degree Programs</th>
<th>% of Visa Approvals in STEM Degree Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEM</td>
<td>63.7%</td>
</tr>
</tbody>
</table>

**Top Source Cities and Countries of Citizenship**

- Beijing, 1,105
- Seoul, 704
- Shanghai, 619
- Nanking, 238
- Mumbai, 225
- China, 4,819
- India, 1,869
- Taiwan, 350
- Malaysia, 360

**Table Data**

<table>
<thead>
<tr>
<th>Metro Area</th>
<th>Top Schools</th>
<th>Top Majors of Visa Approvals</th>
<th>Top Source Cities and Countries of Citizenship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Boston-Cambridge-Quincy, MA-NH Metro Area**

**Corvallis, OR Metro Area**

**Las Vegas-Paradise, NV Metro Area**

http://www.brookings.edu/foreignstudents
Foreign Students connect metros to global markets
Foreign Students from fast-growing emerging economies are driving growth
Global Hometowns of America’s Foreign Students

Top Source Hometown of F-1 Foreign Students, 2008-2012

<table>
<thead>
<tr>
<th>Rank</th>
<th>City</th>
<th>Number of Students</th>
<th>Share</th>
<th>City Size</th>
<th>City Income Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Seoul, South Korea</td>
<td>56,503</td>
<td>4.9%</td>
<td>Large</td>
<td>Upper Middle Income</td>
</tr>
<tr>
<td>2</td>
<td>Beijing, China</td>
<td>49,946</td>
<td>4.3%</td>
<td>Megacity</td>
<td>Middle Income</td>
</tr>
<tr>
<td>3</td>
<td>Shanghai, China</td>
<td>29,145</td>
<td>2.5%</td>
<td>Megacity</td>
<td>Middle Income</td>
</tr>
<tr>
<td>4</td>
<td>Hyderabad, India</td>
<td>26,220</td>
<td>2.3%</td>
<td>Large</td>
<td>Very Low Income</td>
</tr>
<tr>
<td>5</td>
<td>Riyadh, Saudi Arabia</td>
<td>17,361</td>
<td>1.5%</td>
<td>Large</td>
<td>Upper Middle Income</td>
</tr>
<tr>
<td>6</td>
<td>Mumbai, India</td>
<td>17,294</td>
<td>1.5%</td>
<td>Megacity</td>
<td>Low Income</td>
</tr>
<tr>
<td>7</td>
<td>Taipei, Taiwan</td>
<td>15,985</td>
<td>1.4%</td>
<td>Large</td>
<td>High Income</td>
</tr>
<tr>
<td>8</td>
<td>Hong Kong, SAR</td>
<td>12,406</td>
<td>1.1%</td>
<td>Large</td>
<td>High Income</td>
</tr>
<tr>
<td>9</td>
<td>Kathmandu, Nepal</td>
<td>10,721</td>
<td>0.9%</td>
<td>Small</td>
<td>Very Low Income</td>
</tr>
<tr>
<td>10</td>
<td>Jeddah, Saudi Arabia</td>
<td>10,468</td>
<td>0.9%</td>
<td>Middle</td>
<td>Middle Income</td>
</tr>
</tbody>
</table>
Emerging Fast-Growing Global Cities Send the Most Students

75.2% of foreign students came from Large and Mega-Cities, with populations between 5M and 10M, or over 10M

73.4% of foreign students came from cities with GDP per capita between $6K and $40K

For students earning a Bachelors, Masters or Doctorate degree in the 2008-2012 period

Source: Brookings Analysis of Immigration and Customs Enforcement Data and McKinsey Global Cities of the Future
Foreign Students Disproportionately study STEM or Business Fields

Percent of Student Population Pursuing STEM or Business Degrees, 2008-2012

<table>
<thead>
<tr>
<th></th>
<th>Foreign Students</th>
<th>All US Higher Education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Percent</strong></td>
<td>67%</td>
<td>48%</td>
</tr>
</tbody>
</table>

Series 1
60% of PhD Foreign Students are Pursuing STEM Degrees

<table>
<thead>
<tr>
<th>Doctorate</th>
<th>Field</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Engineering</td>
<td>38,201</td>
<td>27.8%</td>
</tr>
<tr>
<td>2</td>
<td>Physical Sciences</td>
<td>16,262</td>
<td>11.8%</td>
</tr>
<tr>
<td>3</td>
<td>Biological And Biomedical Sciences</td>
<td>13,766</td>
<td>10.0%</td>
</tr>
<tr>
<td>4</td>
<td>Health Professions And Related Programs</td>
<td>10,620</td>
<td>7.7%</td>
</tr>
<tr>
<td>5</td>
<td>Social Sciences</td>
<td>8,329</td>
<td>6.1%</td>
</tr>
<tr>
<td>6</td>
<td>Computer And Information Sciences</td>
<td>8,199</td>
<td>6.0%</td>
</tr>
<tr>
<td>7</td>
<td>Mathematics And Statistics</td>
<td>5,935</td>
<td>4.3%</td>
</tr>
<tr>
<td>8</td>
<td>Business, Management, Marketing</td>
<td>5,237</td>
<td>3.8%</td>
</tr>
<tr>
<td>9</td>
<td>Education</td>
<td>4,278</td>
<td>3.1%</td>
</tr>
<tr>
<td>10</td>
<td>Theology And Religious Vocations</td>
<td>3,408</td>
<td>2.5%</td>
</tr>
<tr>
<td></td>
<td>All Other Fields</td>
<td>23,246</td>
<td>16.9%</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>137,481</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Global Foreign Student Hometown Data Profiles

94 Highest Source Cities of Origin for America’s Foreign Students

Hyderabad, India

- Total Number of F-1 Visas Approved: 26,220
- Total Number of STEM F-1 Visas Approved: 20,840
- Total Tuition Dollars from F-1 Visa Students: $373.16 million
- Estimated Living Costs Dollars from F-1 Visa Students: $272.44 million

Top Majors of Visa Approvals:
- Computer and Information Sciences: 9,074
- Engineering: 8,773
- Business, Management, Marketing: 3,989
- Health Professions: 1,040
- Engineering Technologies: 996

Top Schools:
- International Technological University
- University of Northern Virginia
- Stratford University
- Tri-Valley University
- Herguan University

Top U.S. Metropolitan Destinations:
- San Jose-Sunnyvale-Santa Clara, CA: 2,826
- Washington-Arlington-Alexandria, DC: 2,169
- New York-Newark-Edison, NY-NJ-PA: 1,440
- San Francisco-Oakland-Fremont, CA: 1,403
- Chicago-Naperville-Joliet, IL-IN-WI: 1,167

All data is for 2008-2012 calendar years and only for students studying for bachelor's or above degree programs.
Country of Origin Data Profiles

Top 74 Countries of Origin for America’s Foreign Students

### Mexico
- **Total Number of F-1 Visas Approved:** 17,171
- **Total Number of STEM F-1 Visas Approved:** 4,883
- **Total Tuition Dollars from F-1 Visa Students:** $301.68 million
- **Estimated Living Costs Dollars from F-1 Visa Students:** $180.28 million

### Republic of Korea
- **Total Number of F-1 Visa Approvals:** 110,446
- **Total Number of STEM F-1 Visa Approvals:** 22,925
- **Total Tuition Dollars from F-1 Visa Students:** $2.54 billion
- **Estimated Living Costs Dollars from F-1 Visa Students:** $1.58 billion

### Top Majors of Visa Approvals
- **Business, Management, Marketing:** 4,733
- **Engineering:** 2,773
- **Visual and Performing Arts:** 1,272
- **Liberal Arts and Sciences, Humanities:** 756
- **Social Sciences:** 742

### Degree Programs

<table>
<thead>
<tr>
<th>Bachelor's</th>
<th>Master's</th>
<th>Doctorate</th>
</tr>
</thead>
<tbody>
<tr>
<td>34%</td>
<td>57%</td>
<td>9%</td>
</tr>
</tbody>
</table>

### Top U.S. Metropolitan Destinations
- **El Paso, TX:** 3,173
- **New York-Newark-Edison, NY-NJ-Pa:** 893
- **Boston-Cambridge-Quincy, MA-NH:** 844
- **McAllen-Edinburg-Mission, TX:** 804
- **San Antonio, TX:** 677

### All data is for 2008-2012 calendar years and only for students studying for bachelor’s or above degree programs.

www.brookings.edu/foreignstudents
Size of the Foreign Student Population

From Germany, 2008–2012

Number of F-1 Visa Holders

12,713

Rank: 14th of 74 countries.

All told, these foreign students paid $267,958,289 in tuition and $151,687,091 in living costs.

Levels of Degree Pursued

Share of foreign students from Germany pursuing a bachelor’s, master’s, or doctorate degree, 2008–2012

- Bachelor’s: 52.5%
- Master’s: 35.6%
- Doctorate: 11.9%

Top majors of foreign students: business, management, marketing, and related support services (4,308 foreign students); liberal arts and sciences, general studies and humanities (1,107); social sciences (893); engineering (698); and legal professions and studies (604).

STEM Enrollment

Share of foreign students from Germany pursuing a degree in science, technology, engineering, or math

- STEM: 16.8%
- Non-STEM: 83.2%

Rank: 61st of 74 countries.
Top Destination Metro Areas for Foreign Students

<table>
<thead>
<tr>
<th>METRO AREA DESTINATION</th>
<th>NUMBER OF STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York-Northern New Jersey-Long Island, NY-NJ-PA</td>
<td>1,127</td>
</tr>
<tr>
<td>Boston-Cambridge-Quincy, MA-NH</td>
<td>645</td>
</tr>
<tr>
<td>San Diego-Carlsbad-San Marcos, CA</td>
<td>571</td>
</tr>
<tr>
<td>Honolulu, HI</td>
<td>557</td>
</tr>
<tr>
<td>Los Angeles-Long Beach-Santa Ana, CA</td>
<td>522</td>
</tr>
</tbody>
</table>

Top Destination Institutions

<table>
<thead>
<tr>
<th>SCHOOL NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>California International Business University</td>
</tr>
<tr>
<td>Columbia University in the City of New York</td>
</tr>
<tr>
<td>Harvard University</td>
</tr>
<tr>
<td>Hawaii Pacific University</td>
</tr>
<tr>
<td>New York University</td>
</tr>
</tbody>
</table>

Data source: Brookings analysis of data from U.S. Immigration and Customs Enforcement obtained through a Freedom of Information Act (FOIA) Request. All data are aggregates across the 2008–2012 time period.

Brookings is a non-profit institution and the charts above were created using Highsoft software under a non-commercial license, the terms of which can be found here. Please note that Highsoft software is not free for commercial use.
Metros can leverage foreign students’ global connections and retain them after they graduate.
Leverage Global Connections of Foreign Students and Alumni


Note: This map shows the cities in China that are hometowns for at least 1,500 students in the U.S. It depicts the five largest flows of students from each of these cities to their metropolitan area place of study in the U.S.
USC and UCLA Leverage Foreign Students for Metro-to-Global City Exchanges

MBAs assist LA Businesses Export Abroad

MBAs assist businesses abroad import into LA
Every metro has major global connections abroad
Metro Leaders
Connect Employers with higher educational institutions

Local Employers
Collaborate with colleges and universities
Current US Visa System

F1 Visa → Optional Practical Training → H1B Visa

PERMANENT RESIDENT CARD
NAME: MUELLER, ANJA
INS# 065-788-472
Birthdate: 02/21/70
Country of Birth: Germany
CARD EXPIRES: 03/30/10
Resident Since: 02/04/00
H-1B Cap Not Responsive to Economic Needs

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**
  - 1999: 115,000
  - 2000: 195,000
  - 2001: 65,000 + add'l 20,000 from graduates of American universities

- **H-1B availability windows**
  - Blue: Annual cap not yet met; new applications accepted
  - Red: Cap met; no applications accepted

*Source: Brookings*
F-1 visas approved in 2010

- **668,513**

F-1s enrolled in advanced degree programs

- **188,281**

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

- **96,162**

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

- **76,627**

H-1bs transferring from F-1 status

- **26,502**

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
Metros should advocate for federal reform: F-1 to Green Card Scenarios

164,202
if every F-1 student received a green card per year

126,014
if F-1 students from High and Very-High Research Doctorate-Granting Schools received a green card per year

87,902
if F-1 students from Very-High Research Doctorate-Granting Schools received a green card

For students receiving Bachelors, Masters and Doctorate degrees over the 2008-2012 period

Source: Brookings Analysis of Immigration and Customs Enforcement Data
Foreign Students Help Grow the U.S. Economy

They are a bridge back to their local economies.

2/3rds of them study high-demand STEM and business fields.

45% work in the same metro area after graduation.
What can States do?
The Geography of Foreign Students in U.S. Higher Education:
Origins and Destinations