The Economic Impact of International Students from a Cross-National Perspective

Patricia Chow  
Institute of International Education

Robert Gutierrez  
Institute of International Education

Jason Baumgartner  
Indiana University Bloomington

Yuriko Sato  
Tokyo Institute of Technology

NAFSA 2009 Annual Conference

Fostering Global Engagement through International Education  
May 24–29, 2009  
Los Angeles, CA
Presentation Topics

- IIE *Open Doors* Data on U.S. International Educational Exchange
- Project Atlas: Global Student Mobility
- International Student Economic Impact in the U.S.
- Comparison of International Student Economic Impact in USA, Japan and Australia
The Institute of International Education (IIE) is one of the largest and most experienced higher education exchange agencies in the world.

*Open Doors* is an annual statistical survey conducted by IIE since 1948, with support from the U.S. Department of State since 1972.

- 4 surveys: International Student Census; U.S. Study Abroad Survey; International Scholars Survey; and Intensive English Programs Survey.
Open Doors International Student Census

- Annual survey of international students at U.S. campuses
- Timeframe: 2007/08
- Respondents: Accredited U.S. higher education institutions
- Data elements:
  - Enrollment trends
  - Places of origins
  - Distribution across the U.S
  - Institutional type and top institutions
  - Fields of study
  - Other data elements
The number of international students in the U.S. increased 7% in 2007/08 to a record high of 623,805 international students.
New International Student Enrollments

New international student enrollment increased 10% to 173,122 in 2007/08.
Places of Origin of International Students
Regions of Origin of International Students

Students from Asia account for 61% of all international students in the U.S.
### Top 10 Places of Origin of International Students

Students from the top 5 places comprise 49% of all international students in the U.S.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Place of Origin</th>
<th>2006/07</th>
<th>2007/08</th>
<th>% of Total</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>India</td>
<td>83,833</td>
<td>94,563</td>
<td>15.2</td>
<td>12.8</td>
</tr>
<tr>
<td>2</td>
<td>China</td>
<td>67,723</td>
<td>81,127</td>
<td>13.0</td>
<td>19.8</td>
</tr>
<tr>
<td>3</td>
<td>South Korea</td>
<td>62,392</td>
<td>69,124</td>
<td>11.1</td>
<td>10.8</td>
</tr>
<tr>
<td>4</td>
<td>Japan</td>
<td>35,282</td>
<td>33,974</td>
<td>5.4</td>
<td>-3.7</td>
</tr>
<tr>
<td>5</td>
<td>Canada</td>
<td>28,280</td>
<td>29,051</td>
<td>4.7</td>
<td>2.7</td>
</tr>
<tr>
<td>6</td>
<td>Taiwan</td>
<td>29,094</td>
<td>29,001</td>
<td>4.6</td>
<td>-0.3</td>
</tr>
<tr>
<td>7</td>
<td>Mexico</td>
<td>13,826</td>
<td>14,837</td>
<td>2.4</td>
<td>7.3</td>
</tr>
<tr>
<td>8</td>
<td>Turkey</td>
<td>11,506</td>
<td>12,030</td>
<td>1.9</td>
<td>4.6</td>
</tr>
<tr>
<td>9</td>
<td>Saudi Arabia</td>
<td>7,886</td>
<td>9,873</td>
<td>1.6</td>
<td>25.2</td>
</tr>
<tr>
<td>10</td>
<td>Thailand</td>
<td>8,886</td>
<td>9,004</td>
<td>1.4</td>
<td>1.3</td>
</tr>
</tbody>
</table>
The top 5 host states (California, New York, Texas, Massachusetts and Illinois) hosted 43% of international students in 2007/08.
Institutional Type

Doctorate institutions host the largest number of international students (60% of the total).
Top 10 Institutions Enrolling International Students

International students tend to be concentrated in a relatively small number of large research institutions

<table>
<thead>
<tr>
<th>Rank</th>
<th>Institution</th>
<th>State</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of Southern California</td>
<td>CA</td>
<td>7,189</td>
</tr>
<tr>
<td>2</td>
<td>New York University</td>
<td>NY</td>
<td>6,404</td>
</tr>
<tr>
<td>3</td>
<td>Columbia University</td>
<td>NY</td>
<td>6,297</td>
</tr>
<tr>
<td>4</td>
<td>University of Illinois at Urbana-Champaign</td>
<td>IL</td>
<td>5,933</td>
</tr>
<tr>
<td>5</td>
<td>Purdue University - Main Campus</td>
<td>IN</td>
<td>5,772</td>
</tr>
<tr>
<td>6</td>
<td>University of Michigan - Ann Arbor</td>
<td>MI</td>
<td>5,748</td>
</tr>
<tr>
<td>7</td>
<td>University of California - Los Angeles</td>
<td>CA</td>
<td>5,557</td>
</tr>
<tr>
<td>8</td>
<td>University of Texas - Austin</td>
<td>TX</td>
<td>5,550</td>
</tr>
<tr>
<td>9</td>
<td>Harvard University</td>
<td>MA</td>
<td>4,948</td>
</tr>
<tr>
<td>10</td>
<td>Boston University</td>
<td>MA</td>
<td>4,789</td>
</tr>
</tbody>
</table>

**TOP 10 TOTAL (9% of all int’l students)**  58,187
Fields of Study of International Students

The top fields of study are Business/Management & Engineering. 33% of international students are studying these fields.
Data tables and other resources are available online.
Project Atlas: A Global Student Mobility Resource

Robert Gutierrez
Research and Evaluation Manager
Institute of International Education (IIE)
grutierrez@iie.org
The Atlas of Student Mobility: Introduction

- What is Atlas: a shared online resource of global student mobility data, contributed by partner organizations

- Began in 2003; a recognized need for better understanding of data in a cross-country context

- Updated on a rolling basis based on each country’s collection cycle

- Data reported include: country of origin, total and international student enrollment population, leading destinations for outbound students

- Other resources, partner publications, Global Education in the News archives
Worldwide: A Growing Pie

- Worldwide, there were over 2.9 million international students in 2006, a 3% increase over the previous year.

- By 2025, almost 8 million students are projected to be studying outside their home country.

Source: OECD Education at a Glance 2007
The 623,805 international students in the U.S. comprise less than 4% of total U.S. higher education enrollment, with only 153 institutions hosting 55% of all international students in the U.S.

Sources: Project Atlas 2007 data from partner organizations and UNESCO/OECD 2006 data
The People's Republic of China has grown into a major study destination with the numbers of international students and scholars rising steadily over the past decade. According to the China Scholarship Council, there were more than 155,000 international students in China in 2007-08.

**General Student Data**

- Most recent total for international student enrollment: 195,503 (2007-08)
- Types of institutions surveyed: Public and private
- Number of students from country studying abroad: 144,000
- Percentage of institutions surveyed including international students: 23%
- Number of international students, by level of study:
  - Undergraduate: 57,367
  - Graduate/post-graduate: 10,046
  - Non-degree (all levels): 127,290

**Top 10 Sending Places of Origin**

- 1. South Korea 33.0%
- 2. Japan 9.5%
- 3. United States 7.5%
- 4. Vietnam 6.6%
- 5. Thailand 3.7%
- 6. Russia 3.7%
- 7. India 3.7%
- 8. Indonesia 3.4%
- 9. France 2.4%
- 10. Pakistan 2.3%

**Top Fields of Study**

- Business and management: 17,091
- Engineering: 6,795
- Physical and life sciences: 16,982
- Social sciences: 4,700
- Math and computer sciences: 1,411
- Fine and applied arts: 2,606
- Health professions: 8,671
- Education: 1,070
- Humanities: 134,762
- Agriculture: 755

2003 data >>
2004 data >>
2005 data >>
2007 data >>

**Top 10 Destinations**

- 1. United States 93,472
- 2. Japan 86,578
- 3. United Kingdom 50,763
- 5. Germany 27,329 (2005)
- 7. Canada 17,913 (2005)
- 8. France 17,132
- 9. South Korea 15,788
- 10. Macao (China) 11,469
Country Profile Page: INDIA

As its tertiary level education places expand, India is becoming a regional host country as well as a leading sending country. India has one of the world’s largest higher education systems, comprising more than 350 universities and 16,000 colleges. The Indian government has enacted policies encouraging and helping more international students from developing countries to study in India.

General Student Data
Total count of all higher education students, both domestic and international: 11,612,505

Most recent total for international student enrollment: 18,594

Do these counts of international students reflect both public and private institutions? Yes

Top 10 Sending Places of Origin
Top 10 sending places of origin and percentage of total international student enrollment:
1. Iran 11.7%
2. United Arab Emirates 10.1%
3. Nepal 9.3%
4. Ethiopia 5.6%
5. Saudi Arabia 4.1%
6. Kenya 3.3%
7. United States 3.3%
8. Oman 3.3%
9. Yemen 3.2%
10. Bhutan 2.9%

2003 data >>
2004 data >>

Top 10 Destinations
Top 10 destinations and number of students from given country studying abroad*:
1. United States 79,219
2. Australia 22,039 (2005)
3. United Kingdom 19,204
5. Canada 2,826 (2005)
6. New Zealand 1,563 (2005)
7. Malaysia 1,400 (2005)
8. Ukraine 1,170
9. Kazakhstan 960
10. Cyprus 793

Methodology & Sources
The Association of Indian Universities (AIU) is responsible for collecting international student data. In collaboration with the University Grants Commission, AIU also sets national policies relating to data collection. The AIU is the main source for the student data listed above. Data have been collected on an annual basis up to the present year, 2005. For purposes of collection, an international student is defined as a student from another nationality apart from India. Further data are collected on: field of study; academic level; type of host institution attended; degree/qualification/credential awarded; and sources of student financial support.
Economic impact (or, “money talks”)

• Australia

  – International education activity contributed A$15.5 billion in export income to the Australian economy in 2008, up 23.4 percent from the previous calendar year.

Economic impact (or, “money talks”)

- **The UK**

  - According to British Council research, attracting international students to the UK is worth £8.5 billion to the nation.

Economic impact (or, “money talks”)

- Japan
  - Of incoming international students in Japan in 2007, 89.7 percent were privately financed international students, 8.5 percent were Japanese government sponsored students, and 1.8 percent were foreign government sponsored students. **Overall, 91.5 percent of incoming international students in 2007 brought funding from international sources to Japan.**
  
  - The number of privately financed incoming international students in Japan has more than doubled from 41,390 in 1998 to 106,297 in 2007, while the number of foreign government sponsored incoming international students has steadily increased in the same period, from 1,585 in 1998 to 2,181 in 2007.

Economic impact (or, “money talks”)

- **New Zealand**
  - The economic impact of export education in New Zealand excluding offshore education earnings is approximately 2.1 billion for 2007/08. This is an increase from earlier figures for estimating economic impact of export education that include offshore education earnings. These figures were 545 million in 1999 and 1.3 billion in 2001.

The Atlas of Student Mobility

Visit us on the web at: www.atlas.iienetwork.org

THANK YOU!

Robert Gutierrez
rutierrez@iie.org
NAFSA International Student Economic Impact: The Algorithm

Open Doors: Number of International Students

x Peterson’s Expenses:
- Tuition & Fees
- Room & Board

- Open Doors U.S. Support: Percentage by Carnegie Classification

+ Living Expenses for Dependents

= Economic Impact
NAFSA International Student Economic Impact: Enrollment Data

- Compute economic impact only for students reported in IIE Open Doors. Institutions that do not provide information are not represented.

- Conduct separate analysis for the undergraduates and graduates, and then consolidate the result set in the final report.

- Students on optional practical training (OPT) are counted in Open Doors, and included in the enrollment counts on the reports, but they are exempted from the analysis.

- Note: Enrollment reports represent peak enrollment, and not necessarily enrollment levels throughout the year.
NAFSA International Student Economic Impact: Expense & Funding Data

- Tuition & fees and living expenses are derived from Peterson’s (formerly from College Board) data collected on surveys completed by institutions every year.

- Students at institutions reporting extremely low values or zero values for expenses are estimated to have expenses based on a weighted average for the institution’s state location and Carnegie type.

- Percentage of U.S. funding for a student is based on Open Doors primary source of funding with the following filters:
  - (1) whether a student is an undergraduate or graduate
  - (2) the institution type based on Carnegie codes.
NAFSA International Student Economic Impact: Dependent Data

- Percentage of married students separately for undergraduates and graduates based on IIE Open Doors and a 85% probability they are in the United States.

- A 60% probability of a child per couple.

- A spouse increases the living expenses by 25% and a child by an additional 20%.

- Dependents living expenses total $413 for 2006-07 and account for 2.7% of the overall economic impact.
NAFSA International Student Economic Impact for 2007-08: $15.5 Billion

http://www.nafsa.org/public_policy.sec/international_education_1/eis_2008
NAFSA International Student Economic Impact: Currency Comparison

Per Student Economic Impact & Currency Comparison

- Dollars
- Euros
- Pounds

Years: Fall 2001 to Today
NAFSA International Student Economic Impact: Impact of Currency

According to this analysis the average international student would need to spend less than 18,000 Euros (E.U.) or less than 16,000 Pounds (U.K) in order to pay less than the $25,000 impact they bring to the U.S.

The impact of the global financial crisis has resulted in a strengthened U.S. dollar and a reversal of recent currency trends.
Questions to consider:

- Will the U.S. dollar continue to strengthen against other currencies or go back down as the global economic conditions improve?

- What impact will currency play in the future trends of international student enrollments?

- How might it change U.S. students decisions about study abroad?

- How will the projected increase of U.S. students entering college further increase the competitiveness of programs in the U.S. while the currency markets find a new baseline as the global economy stabilizes?
Definition of International Students in Higher Education in USA, Japan, Australia

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>Japan</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universities and Colleges</td>
<td>included</td>
<td>included</td>
<td>included</td>
</tr>
<tr>
<td>Vocational Edu. above Diploma level</td>
<td>excluded</td>
<td>included</td>
<td>included</td>
</tr>
<tr>
<td>English/Japanese Education before</td>
<td>partly included</td>
<td>partly included</td>
<td>included</td>
</tr>
<tr>
<td>entering universities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Exchange rate: 1US$=100Yen=1.43 AU$ as of April 2009
International Students counted for economic impact in USA, Japan & Australia in 2007

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>Japan*</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's Graduates</td>
<td>177,982</td>
<td>57,790</td>
<td>177,760</td>
</tr>
<tr>
<td>Non-Degree</td>
<td>22,369</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate's or Junior College &amp; Collae of Technology</td>
<td>65,378</td>
<td>2,331</td>
<td></td>
</tr>
<tr>
<td>Intensive language at universities &amp; collages</td>
<td>24,468</td>
<td>2,348</td>
<td>101,824</td>
</tr>
<tr>
<td>Language at private schools</td>
<td>30,019</td>
<td>31,663</td>
<td></td>
</tr>
<tr>
<td>Vocational above Diploma level</td>
<td>9,221</td>
<td>22,160</td>
<td>94,663</td>
</tr>
<tr>
<td>Optional Practical Training</td>
<td>56,766</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>567,039</strong></td>
<td><strong>108,137</strong></td>
<td><strong>374,247</strong></td>
</tr>
</tbody>
</table>

*Japan's figure excludes the Japanese government scholarship students 10,020 and grant aid & JICA students 341 from the total of 118,498.
## Contribution from Tuition and Fees

(US million $)

<table>
<thead>
<tr>
<th>Category</th>
<th>USA</th>
<th>Japan</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's Graduates</td>
<td>10,639</td>
<td>518</td>
<td>1,973</td>
</tr>
<tr>
<td>Non-Degreee</td>
<td></td>
<td>145</td>
<td></td>
</tr>
<tr>
<td>Associate's or Junior College &amp; College of Technology</td>
<td></td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Intensive language at universities &amp; collages</td>
<td>18</td>
<td></td>
<td>268</td>
</tr>
<tr>
<td>Language at private schools</td>
<td>225</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocational above Diploma level</td>
<td>277</td>
<td></td>
<td>509</td>
</tr>
<tr>
<td>Optional Practical Training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total tuition and fees</strong></td>
<td>10,639</td>
<td>979</td>
<td>2,750</td>
</tr>
<tr>
<td><strong>Per (self-funded) student</strong></td>
<td>0.019</td>
<td>0.009</td>
<td>0.007</td>
</tr>
</tbody>
</table>
Contribution from Living Expenses

(US million $)

- Bachelor's Graduates
- Non-Degree
- Associate's or Junior College & College of Technology
- Intensive language at universities & colleges
- Language at private schools
- Vocational above Diploma level
- Optional Practical Training

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>Japan</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's</td>
<td>10,979</td>
<td>898</td>
<td>3,406</td>
</tr>
<tr>
<td>Non-Degree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate's</td>
<td></td>
<td></td>
<td>286</td>
</tr>
<tr>
<td>Intensive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language at</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>private schools</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocational</td>
<td></td>
<td>231</td>
<td>731</td>
</tr>
<tr>
<td>above Diploma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sub total</td>
<td>10,979</td>
<td>1,129</td>
<td>4,422</td>
</tr>
<tr>
<td>Dependants'</td>
<td>413</td>
<td></td>
<td></td>
</tr>
<tr>
<td>total living</td>
<td>11,392</td>
<td>1,129</td>
<td>4,422</td>
</tr>
<tr>
<td>expenses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per (self-funded) student</td>
<td>0.020</td>
<td>0.010</td>
<td>0.012</td>
</tr>
</tbody>
</table>
## Host country’s support

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>Japan</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Support from host country</strong></td>
<td>6,488</td>
<td>715</td>
<td>115</td>
</tr>
<tr>
<td><strong>Budget for government's scholarship students</strong></td>
<td>228</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td><strong>Support excluding government scholarship part</strong></td>
<td>6,488</td>
<td>487</td>
<td>0</td>
</tr>
<tr>
<td><strong>Support for self funded students per (self funded) student</strong></td>
<td>0.011</td>
<td>0.005</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Breakdown of Japan’s support for Self funded students:
- Government: 37%
- Universities: 31% (20% is exemption of tuition fees at private universities)
- Non-government: 17%
- Local government: 2%
- Other sources: 13%
## Economic contribution per self-funded student (US million $)

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>Japan</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net contribution</strong></td>
<td>15,543</td>
<td>1,621</td>
<td>7,058</td>
</tr>
<tr>
<td><strong>Per (self funded) student (T+L - S)</strong></td>
<td>0.027</td>
<td>0.015</td>
<td>0.019</td>
</tr>
<tr>
<td><strong>Tuition and fees (T)</strong></td>
<td>0.019</td>
<td>0.009</td>
<td>0.007</td>
</tr>
<tr>
<td><strong>Living expenses (L)</strong></td>
<td>0.020</td>
<td>0.010</td>
<td>0.012</td>
</tr>
<tr>
<td><strong>Host country's support (S)</strong></td>
<td>0.011</td>
<td>0.005</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Guess at the Self-funded students in three countries

USA=High tuition & fees+ High living expenses
  -High support → rich and/or excellent students

Japan=Medium tuition & fees+ Medium living expenses - Medium support → less rich students supported by part time jobs

Australia=Medium tuition & fees+ Medium living expenses - Minimum support → less rich students supported by part time jobs and loans
Future tasks

• Foreign students in Vocational and Language Education → unified international standard
• Government scholarship students and Self-funded students → should be analyzed separately
• Breakdown of Host country’s support → reflect the host country’s foreign student support policy and system
• More detailed survey about the self-funded students in three countries
The Economic Impact of International Students from a Cross-National Perspective – Q & A | Conclusion

Patricia Chow
Institute of International Education

Robert Gutierrez
Institute of International Education

Jason Baumgartner
Indiana University Bloomington

Yuriko Sato
Tokyo Institute of Technology

NAFSA 2009 Annual Conference
Fostering Global Engagement through International Education
May 24–29, 2009
Los Angeles, CA