Highlights from the 2014 CGS/GRE Survey of Graduate Enrollment & Degrees

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A presentation for the Summer 2015 CGS Research and Policy Forum, August 27, 2015
CGS/GRE Survey of Graduate Enrollment & Degrees

- Jointly sponsored by CGS and the Graduate Record Examinations (GRE) Board
- Conducted annually since 1986
- Designed to provide information about applications for admission to graduate school, graduate student enrollment, and graduate degrees and certificates conferred
- The only national survey that collects data on first-time and total graduate enrollment across all fields of graduate study
- The only source of data on graduate enrollment by degree level and on applications to graduate school by broad field of study
About the 2014 Survey

• The 2014 survey was launched in November 2014 to U.S.-based institutions that were members of:
  • Council of Graduate Schools, and/or
  • One of the four regional graduate school associations:
    • Conference of Southern Graduate Schools (CSGS)
    • Midwestern Association of Graduate Schools (MAGS)
    • Northeastern Association of Graduate Schools (NAGS)
    • Western Association of Graduate Schools (WAGS)

• Survey was sent to 787 colleges and universities. Useable responses were received from 636 institutions, for an overall response rate of 81%
Today’s Presentation

• Highlights from the forthcoming report ...
  • New records
  • Notable trends
  • Insights into specific populations

• Open discussion
New Records

• For the first time in the survey’s history, the total number of graduate applications surpassed two million

• The number of offers of admission was 851,057

• The Fall 2014 first-time graduate enrollment was 479,642
Total graduate enrollment peak was in 2010

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014
First-Time Graduate Enrollment by Broad Fields of Study, Fall 2004 to Fall 2014

Note: Trends based upon institutions that provided data for all years, 2004 to 2014
Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014
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Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014
First-Time Graduate Enrollment by Broad Fields of Study, Fall 2004 to Fall 2014

Note: Trends based upon institutions that provided data for all years, 2004 to 2014
Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014
More women than men enrolled for the first-time in graduate programs in Fall 2014, but ...  

<table>
<thead>
<tr>
<th>Field</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Fields</td>
<td>38.4%</td>
<td>61.6%</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>38.0%</td>
<td>62.0%</td>
</tr>
<tr>
<td>Public Administration and Services</td>
<td>22.5%</td>
<td>77.5%</td>
</tr>
<tr>
<td>Physical and Earth Sciences</td>
<td>61.3%</td>
<td>38.7%</td>
</tr>
<tr>
<td>Mathematics and Computer Sciences</td>
<td>67.5%</td>
<td>32.5%</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>22.9%</td>
<td>77.1%</td>
</tr>
<tr>
<td>Engineering</td>
<td>75.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Education</td>
<td>25.2%</td>
<td>74.8%</td>
</tr>
<tr>
<td>Business</td>
<td>56.1%</td>
<td>43.9%</td>
</tr>
<tr>
<td>Biological and Agricultural Sciences</td>
<td>45.1%</td>
<td>54.9%</td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>43.5%</td>
<td>56.5%</td>
</tr>
</tbody>
</table>

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014, Table B.4
First-time graduate enrollment in S&E fields for women is on the rise

<table>
<thead>
<tr>
<th>Field</th>
<th>Average annual % change, 2004 to 2014</th>
<th>Average annual % change, 2009 to 2014</th>
<th>% change, 2013 to 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical and Earth Sciences</td>
<td>-0.7%</td>
<td>0.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Mathematics and Computer Sciences</td>
<td></td>
<td>11.4%</td>
<td>17.1%</td>
</tr>
<tr>
<td>Health Sciences</td>
<td></td>
<td>6.2%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
<td>8.0%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Biological and Agricultural Sciences</td>
<td></td>
<td>2.7%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

Total: 2.6% 2.6% 2.6%

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014, Table C.11
Women also recorded substantial gains in S&E degree attainment

Trends in S&E master’s degrees awarded to women, 03/04 to 13/14

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014, Table C.29 & C.30
Women also recorded substantial gains in S&E degree attainment

Trends in S&E master’s degrees awarded to women, 03/04 to 13/14

Trends in S&E doctorates awarded to women, 03/04 to 13/14

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014, Table C.29 & C.30
Underrepresentation of certain populations

U.S. Citizen and Permanent Resident First-Time Graduate Enrollment by Race/Ethnicity, Fall 2014

- **White**: 62%
- **Asian**: 7%
- **Hispanic/Latino**: 10%
- **Black/African American**: 11%
- **American Indian/Alaska Native**: 0%
- **Native Hawaiian/Other Pacific Islander**: 0%
- **Two or More Races**: 3%
- **Race/Ethnicity Unknown**: 7%

Data Sources: Table B.11 and U.S. Census Bureau, Educational Attainment in the United States: 2014, Detailed Tables, Table 3. Detailed Years of School Completed by People 25 Years and Over by Sex, Age Groups, Race and Hispanic Origin: 2014
Underrepresentation of certain populations

U.S. Citizen and Permanent Resident First-Time Graduate Enrollment by Race/Ethnicity, Fall 2014

U.S. population distribution by race/ethnicity

- 65% White
- 16% Hispanic/Latino
- 13% Black/African American
- 5% Asian

Data Sources: Table B.11 and U.S. Census Bureau, Educational Attainment in the United States: 2014, Detailed Tables, Table 3. Detailed Years of School Completed by People 25 Years and Over by Sex, Age Groups, Race and Hispanic Origin: 2014
The growth in domestic first-time graduate enrollment is attributed to non-White students.

<table>
<thead>
<tr>
<th></th>
<th>% change, 2013 to 2014</th>
<th>Average annual % change, 2009 to 2014</th>
<th>Average annual % change, 2004 to 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Citizens/Permanent Residents</td>
<td>1.3%</td>
<td>-0.4%</td>
<td>1.9%</td>
</tr>
<tr>
<td>White</td>
<td>0.2%</td>
<td>-1.2%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>3.4%</td>
<td>1.3%</td>
<td>3.5%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>-3.0%</td>
<td>-5.5%</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>2.0%</td>
<td>0.4%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>6.8%</td>
<td>4.0%</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014, Table C.5
Growth in first-time graduate enrollment of Hispanic/Latino students in S&E fields is strong

% change in S&E first-time graduate enrollment for Hispanic/Latino students, 2004 to 2014

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014, Table C.10
Growth in first-time graduate enrollment of Hispanic/Latino students in S&E fields is strong

% change in S&E first-time graduate enrollment for Hispanic/Latino students, 2004 to 2014

% change in S&E first-time graduate enrollment for White students, 2004 to 2014

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014, Table C.10
International enrollment is driving the growth

% changes in first-time graduate enrollment by citizenship, 2004 to 2014

<table>
<thead>
<tr>
<th>Citizenship/Residency</th>
<th>Average annual % change, 2004 to 2014</th>
<th>Average annual % change, 2009 to 2014</th>
<th>% change, 2013 to 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary Residents</td>
<td>9.8%</td>
<td>10.1%</td>
<td>11.2%</td>
</tr>
<tr>
<td>U.S. Citizens and Permanent Residents</td>
<td>1.9%</td>
<td>-0.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Total</td>
<td>2.9%</td>
<td>0.8%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014, Table C.5
International enrollment is driving the growth

% changes in first-time graduate enrollment by citizenship, 2004 to 2014

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<tr>
<td>Total</td>
<td>2.9%</td>
<td>0.8%</td>
<td>3.5%</td>
</tr>
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</table>

Change in first-time graduate enrollment headcounts by citizenship, 2004 to 2014

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary Residents</td>
<td>4,534</td>
<td>6,482</td>
<td>-1,948</td>
</tr>
<tr>
<td>U.S. Citizens and Permanent Residents</td>
<td>4,464</td>
<td>4,079</td>
<td>385</td>
</tr>
<tr>
<td>Total</td>
<td>8,293</td>
<td>14,762</td>
<td>6,469</td>
</tr>
</tbody>
</table>

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014, Table C.5
International enrollment is driving the growth

% changes in first-time graduate enrollment by citizenship, 2004 to 2014

- U.S. Citizens and Permanent Residents:
  - Temporary Residents: 2.9% increase, 10.1% decrease
  - U.S. Citizens and Permanent Residents: 0.8% increase, 1.3% decrease
  - Total: 3.5% increase

Change in first-time graduate enrollment headcounts by citizenship, 2004 to 2014

- Temporary Residents:
  - U.S. Citizens and Permanent Residents: 4,534 increase, 6,482 decrease
  - Total: 9,982

- U.S. Citizens and Permanent Residents:
  - Temporary Residents: 4,464 increase, 1,246 decrease
  - Total: 8,293 increase

- Total:
  - Temporary Residents: 4,079 increase
  - U.S. Citizens and Permanent Residents: 3,424 increase
  - Total: 14,762 increase

Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014, Table C.5
First-time graduate enrollment among international students continues to grow in STEM

Note: Trends based upon institutions that provided data for all years, 2004 to 2014
Source: CGS/GRE Survey of Graduate Enrollment & Degrees, 2004 to 2014
Do these findings resonate with what you know about trends in graduate enrollment?

What is driving these changes?

What are some implications for the future?

Any implications for policy?