

# Data Sources: International Enrollment in US Graduate Schools

In 2004, the Council of Graduate Schools (CGS) began a multi-year empirical examination of international graduate application, admission, and enrollment trends. The core of this examination is a three-phase annual survey of CGS member institutions. The results of the latest survey, released in November, provide data on final offers of admission, as well as first-time and total enrollment of international students in US graduate schools in fall 2008. The full survey report, *Findings from the 2008 CGS International Graduate Admissions Survey Phase III: Final Offers of Admission and Enrollment* (Bell, 2008), is available on the CGS website ([www.cgsnet.org](http://www.cgsnet.org)). The summary findings for first-time and total enrollment are presented here, with a special analysis of the data by institutional control (public versus private). The full survey report includes additional analyses by broad field and size of international graduate student enrollment.

## Survey Methodology and Response Rate

The 2008 International Graduate Admissions Phase III: Final Offers of Admission and Enrollment survey was sent to 490 US colleges and universities that were members of CGS as of October 2008. A total of 181 institutions responded to the survey, for a response rate of 37%. Of the respondents, 127 (70%) were public institutions and 54 (30%) were private institutions. The survey asked institutions to report the final number of prospective international students who were offered admission to master's and doctoral degree programs at their institution, the number of new international graduate students (first-time enrollment), and the total number of international graduate students (first-time, plus continuing students).

## First-Time Enrollment Trends

First-time enrollment is typically the best indicator of future trends in total graduate student enrollment. The 2008 survey results show that first-time enrollment of international students at US graduate institutions continued to grow, but the rate of increase slowed in each of the past two years. Between 2007 and 2008, the number of first-time international graduate students grew 3%, less than the 4% increase that occurred in 2007, and far below the 12% increase reported in 2006 (see Figure 1).

The international graduate admissions surveys collect data

for students who originate from four key sending countries or regions: India, China, South Korea, and the Middle East. The latest survey results reveal that the number of first-time graduate students from India dropped 2% in 2008, following an 8% increase in 2007 (see Table 1). Similarly, first-time enrollment of students from South Korea fell 4% in 2008, following a 3% gain last year. The number of first-time enrollees from China and the Middle East both increased in fall 2008, by 14% and 8%, respectively, yet both of these increases mark a slowdown from the rates of increase in 2007 (19% for China and 12% for the Middle East).

**Table 1.** Changes in First-Time and Total Enrollment of International Students in US Graduate Schools by Country/Region of Origin, 2006 to 2007 and 2007 to 2008

	First-Time Enrollment		Total Enrollment	
	2006 to 2007	2007 to 2008	2006 to 2007	2007 to 2008
China	19%	14%	15%	10%
India	8%	-2%	14%	3%
South Korea	3%	-4%	2%	-2%
Middle East	12%	8%	5%	7%

Source: Council of Graduate Schools, 2008 International Graduate Admissions Phase III: Final Offers of Admission and Enrollment Survey

Overall, first-time enrollment of international graduate students increased slightly faster at public institutions (3%) than at private institutions (2%) in fall 2008 (see Table 2). By country/region of origin, however, this was not the case. For students from China, first-time enrollment increased 17% at private institutions, compared with 12% growth at public institutions. Similarly, first-time enrollment of students from the Middle East increased 15% at private institutions, compared with a 4% gain at public institutions. First-time enrollment for students from India and South Korea declined at both public and private institutions in fall 2008. For first-time enrollees from India, the decrease was larger at private institutions, while for South Korean first-time enrollees, the decrease was larger at public institutions.

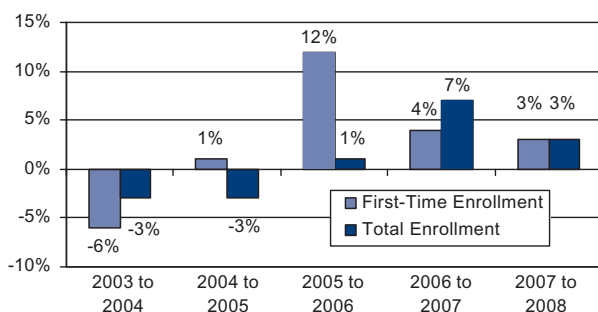
## Total Enrollment

Total international graduate student enrollment rose by 3% in 2008, compared with a strong 7% gain in 2007, and a 1% increase in 2006 (see Figure 1). This slowdown in the rate of growth in total enrollment in 2008 is partly a function of the slowdown in the rate of increase in first-time graduate enrollment that occurred over the past two years.

Total enrollment increased by a higher rate in 2008 than 2007 for students from the Middle East (7% versus 5%, respectively), but the total enrollment increases for students from China and India were both smaller in 2008 than they were in 2007 (see Table 1). Total Chinese enrollment increased 10% in 2008, following a 15% increase in 2007, and total Indian enrollment increased 3% in 2008, down from a 14% gain in 2007. Total enrollment of South Korean students fell 2% in 2008, following a 2% increase last year.

While first-time enrollment increased faster at public institutions than at private institutions in 2008, the opposite

**Figure 1.** Changes in First-Time and Total Enrollment of International Students in US Graduate Schools, Fall 2004 to Fall 2008



Source: Council of Graduate Schools, 2008 International Graduate Admissions Phase III: Final Offers of Admission and Enrollment Survey

was true for total international graduate student enrollment. Overall, total enrollment was up 5% at private institutions, compared with 2% at public institutions (see Table 2). The trends for students from China and India also followed this pattern. The total number of graduate students from China increased 17% at private institutions versus 8% at public institutions, and the total number of enrollees from India increased 6% at private institutions versus 2% at public institutions. For students from South Korea, total enrollment remained level at private institutions (0%), but dropped 2% at public institutions. Total Middle Eastern enrollment was 7% at both types of institutions.

**Table 2.** Changes in First-Time and Total Enrollment of International Students in US Graduate Schools by Institutional Control, 2007 to 2008

	First-Time Enrollment		Total Enrollment	
	Public	Private	Public	Private
<b>International Total</b>	3%	2%	2%	5%
<b>Country/Region of Origin</b>				
China	12%	17%	8%	17%
India	-2%	-5%	2%	6%
South Korea	-5%	-1%	-2%	0%
Middle East	4%	15%	7%	7%

Source: Council of Graduate Schools, 2008 *International Graduate Admissions Phase III: Final Offers of Admission and Enrollment Survey*

## Implications

Of the 2.2 million graduate students studying in the United States, about 12% are non-US citizens on temporary visas (Knapp et al., 2008). But, in many fields non-US citizens outnumber domestic students. For example, 64% of the doctorate recipients in engineering in 2006 were non-US citizens, along with 61% of the doctorate recipients in computer science, 56% of those in physics, and 55% of those in mathematics (Hoffer et al., 2007).

These international students contribute to the US economy by producing the research and innovation on which it depends. They also add to the knowledge base and intellectual capital of universities through teaching and research assistantships (Stewart, 2005). Many international students remain in the United States after the receipt of the doctorate, contributing to the US workforce in postdoctoral positions, on university faculties, and in research and development in the private sector. Of the foreign citizens who received science and engineering doctorates from US universities in 2003, two-thirds (66%) lived in the United States in 2005. The five-year stay rate is even higher; of the foreign doctorate recipients in science and engineering in 2000, 68% were in the United States in 2005 (Finn, 2007).

While the United States remains the leader in attracting graduate students from abroad, many nations are successfully encouraging more of their students to stay at home for graduate studies. Furthermore, several countries are stepping up their efforts to recruit more international students to their own universities. South Korea, for instance, recently announced plans to double its universities' numbers of international students by 2010 (McNeil, 2008). The Japanese government recently announced plans to double the number of international students attending its universities by 2020

(Associated Press, 2008), and the Chinese Scholarship Council plans to offer 20,000 scholarships to overseas students by 2010 and to increase the number of international students attending Chinese universities to 500,000 by 2020 (China Daily, 2008).

Although the global competition for top graduate students has increased, it is encouraging to see that many US institutions are taking action to maintain international graduate student enrollment. Eight out of ten institutions responding to the CGS survey reported undertaking at least one effort to increase international graduate student applications, offers of admission, and/or enrollment over the past two years. Over half of the respondents (54%) indicated that they have worked with specific foreign institutions and/or consortia of institutions to identify potential international students within the past two years, 41% said they have devoted more funding to international marketing and promotion efforts, and 36% have asked current staff to devote more time to international recruiting and outreach efforts.

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