



Council of Graduate Schools

RESEARCH REPORT

**FINDINGS FROM THE
2008 CGS INTERNATIONAL GRADUATE
ADMISSIONS SURVEY**

PHASE I: APPLICATIONS

APRIL 2008

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Council of Graduate Schools

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OVERVIEW

In 2004, the Council of Graduate Schools (CGS) began an extensive, multi-year empirical examination of international graduate application, admission, and enrollment trends. This analysis responds to member institutions' concerns about continuing changes in the enrollment of students from abroad seeking master's and doctoral degrees from American colleges and universities.

The key component of this examination is a three-phase survey of CGS member institutions. The survey collects an initial snapshot of graduate school applications (*Phase I*, conducted in January of each year), final applications and an initial picture of admissions offers (*Phase II*, June), and final offers of admission, first-time enrollments, and total enrollments (*Phase III*, September).

The 2004 *Phase I* survey found a 28% decline in the number of applications to American colleges and universities from prospective international graduate students from 2003 to 2004. Subsequent surveys revealed a 5% decline from 2004 to 2005, an 11% increase from 2005 to 2006, and an 8% increase from 2006 to 2007.¹

CGS survey data for 2008 suggest that the rate of growth in applications from prospective international graduate students has slowed considerably. Furthermore, a majority of the graduate schools that have consistently responded to the CGS survey still have not reversed the declines in international applications they suffered in 2004.

This report first describes the survey methodology used to collect and calculate changes in applications from 2007 to 2008, and then compares the one-year changes to those found in prior surveys.

SURVEY METHODOLOGY AND RESPONSE RATE

The 2008 *International Graduate Admissions Phase I: Applications* survey was sent to 481 American colleges and universities that were members of CGS as of January 2008.² The survey asked these institutions to report their numbers of applications for admission to master's and doctoral degree programs from prospective international students, by country of origin and field of study. CGS defines an international student as one "who is not a citizen, national, or permanent resident of the United States and who is in this country on a visa or temporary basis and does not have the right to remain indefinitely."³

¹ Syverson, P. 2004. "Council of Graduate Schools Survey Finds Widespread Declines in International Graduate Student Applications to U.S. Graduate Schools for Fall 2004." Washington, DC: Council of Graduate Schools; Brown, H. & Doulis, M. 2005. *Findings from 2005 CGS International Graduate Admissions Survey I*, Washington, DC: Council of Graduate Schools; Brown, H. 2006. *Findings from 2006 CGS International Graduate Admissions Survey, Phase I: Applications*. Washington, DC: Council of Graduate Schools; Redd, K.E., Mahler, J.D., & Neubig, E. H. *Findings from the 2007 CGS International Graduate Admissions Survey, Phase I: Application*. Washington, DC: Council of Graduate Schools

² CGS also has member institutions in Canada and affiliate members from overseas universities. These institutions were not included in the survey population.

³Brown, H.A. 2005. *Graduate Enrollment and Degrees: 1986 to 2005*. Washington, DC: Council of Graduate Schools.

Roughly 33% (157) of these CGS members provided usable survey responses.⁴ The response rates among certain types of institutions were even higher. All ten of the universities with the largest international student enrollments in fall 2006⁵, 84% of the 25 largest, and 68% of the 50 largest provided valid responses. The high participation rate among the campuses with the largest international graduate enrollment is important because collectively these 50 institutions enrolled more than 41% of the total international graduate student population in fall 2006.⁶

For some campuses, the timing of the CGS survey came at a very early point in their application processing cycles, before final numbers were known. These institutions provided early estimates of their application figures. For that reason, the survey results (described in the next section of this report) should be considered initial estimates of application trends. Nonetheless, because of the high response rates among the institutions with the largest numbers of international graduate students, the overall results do appear to illustrate accurately significant trends in international student applications in the United States.

SURVEY RESULTS

Total Number of Applications

The total number of applications for admission to responding CGS institutions from non-U.S. citizens grew only 3% in 2008. However, there was a great deal of variation around this overall rate. About 38% of institutions reported declines in applications between 2007 and 2008; total applications at these institutions dropped 13%. At the 62% of respondents that reported increases, applications rose 9%.

The 3% gain in applications is the lowest rate of increase reported by CGS since 2005 (see Table 1). Further, 65% of the institutions that have consistently participated in the CGS survey since it began in 2004 have experienced an overall decline in applications. Collectively, these institutions have 30% *fewer* international graduate applications this year than they did in 2003. Among all the graduate schools that have consistently responded to the CGS survey, the total number of international applications is 16% below that received five years ago.

These findings strongly imply that international students' interest in U.S. graduate schools still has not returned to the levels that were experienced prior to 2004. And, with the minimal increase in applications this year, it appears unlikely that total application figures will return to their pre-2004 levels in the near future.

⁴ The total response rate for the survey was 35% (168 institutions), but the analysis in this report is based on the 157 respondents that reported their numbers of international applications for admissions to master's and doctoral programs for *both* fall 2007 and fall 2008 in the 2008 survey.

⁵ National Center for Education Statistics. 2006. Integrated Postsecondary Education Data System (IPEDS) Fall 2006 Enrollment Survey Dataset. On-line: Available: <http://nces.ed.gov/ipeds>

⁶ Ibid.

Table 1. Annual Percentage Change in the Graduate Applications, 2004 to 2008, by Country/Region of Origin and Prospective Field of Study				
	Final Number of Applications, 2004 to 2005	Final Number of Applications, 2005 to 2006	Final Number of Applications, 2006 to 2007	Preliminary Number of Applications, 2007 to 2008*
International Total	-5%	12%	9%	3%
Country/Region of Origin				
China	-15%	19%	19%	12%
India	-5%	26%	12%	0%
Korea	1%	4%	0%	0%
Middle East [†]	7%	10%	17%	12%
Field of Study				
Business	0%	16%	15%	10%
Education	3%	1%	12%	-1%
Engineering	-7%	19%	13%	1%
Humanities & Arts	0%	5%	8%	12%
Life Sciences**	-2%	9%	18%	2%
Physical Sciences***	-2%	15%	12%	7%
Social Sciences	-2%	6%	0%	10%

[†]Middle East countries include: Bahrain, Cyprus, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian Authority, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, and Yemen.

* Results are based on the 157 institutional respondents that provided applications data for both fall 2007 and fall 2008.

**Includes Agriculture.

***Includes Earth Sciences.

Sources: Council of Graduate Schools, 2008 International Graduate Admissions Survey, Phase I: Applications. Council of Graduate Schools, 2007 International Graduate Admissions Survey, Phase II: Final Applications and Initial Offers of Admission.

Applications by Country/Region of Origin

India, China, and Korea rank as the top three countries of origin for international graduate students in the United States. Students from these three nations accounted for about one-half of all non-U.S. citizens attending American graduate schools, according to the Institute of International Education's 2007 *Open Doors* report.⁷ Much of the overall trend in total applications can thus be accounted for by changes among students from these three countries. Applications from prospective students from countries in the Middle East⁸ have also been included in the CGS surveys because of the geopolitical importance of this region. Middle Eastern students accounted for about 6% of total international graduate enrollment in 2006, according to *Open Doors*.

⁷ Institute of International Education (IIE). 2007. *Open Doors: Report on International Educational Exchange*. New York, NY: IIE.

⁸See Table 1 for a list of the countries included in the Middle East.

The sharp slowdown in growth from India accounts for much of the overall decelerating rate of increase in total international applications. After jumping 26% in 2006, applications from prospective Indian graduate students grew only 12% in 2007 and did not increase at all in 2008. The number from Korea was also flat in 2007 and 2008 after rising 4% in 2006. Chinese applications grew 12% in 2008, versus 19% in 2007, and applications from the Middle East gained 12% in 2008 compared with 17% one year earlier.

Two trends may explain the recent slowdown in the growth of international applications to American graduate schools. First, U.S. institutions face increasingly fierce competition for these students from Europe, Asia, Australia, and other nations. Over the past several years, Australia, Britain, France, and Germany have used national marketing strategies, increased offers of financial support, and implemented other broadly coordinated efforts to recruit students from abroad, while in the U.S. strategies for recruiting students from overseas are largely conducted at the individual institutional level.⁹

Second, several Asian countries are making greater efforts to keep their brightest students in their home nations for graduate study. In China, for instance, the number of graduate students has more than doubled since 1998, largely because government officials have expanded their institutions' capacity and improved quality.¹⁰ Similarly, the South Korean government has invested more than \$1 billion (USD) in research and other projects that seek to transform their universities into "globally recognized powerhouses."¹¹ Undoubtedly, these funds are helping to motivate more graduate students to remain at home. And the Indian National Knowledge Commission has called for the government to create 1,500 new universities by 2015 in order to keep up with expected growing demand.¹² India has also increased its efforts to encourage its graduate students to study at home.¹³

As a result of the increasing competition from foreign countries, the United States' share of total international student enrollment (undergraduate and graduate students combined) fell from 26% in 2000 to 22% in 2005, according to the Organisation of Educational Co-operation and Development (OECD).¹⁴ In roughly the same period, the number of international students at British universities more than doubled, and foreign-born graduate students now account for more than half the total enrollment.¹⁵ Germany, France, Australia, and Japan have also experienced sharp increases in total international enrollments.¹⁶

⁹ Woo, S. October 26, 2006. "Competition Increases for Foreign Students." *Chronicle of Higher Education*, p. A43; American Council on Education (ACE). 2006. *Students on the Move: The Future of International Students in the United States*. Washington, DC: ACE; Labi, A. September 28, 2007. "Europe Challenges U.S. for Foreign Students." *Chronicle of Higher Education*, p. A29.

¹⁰ American Association for the Advancement of Science (AAAS). 2008. "Gunning for the Ivy League." *Science*, 319: 148-151.

¹¹ Brender, A. March 17, 2008. "South Korea Pumps Billions Into Research." *Chronicle of Higher Education*, p. A52.

¹² National Knowledge Commission. 2008. *Note on Higher Education*. On-line. Available: <http://knowledgecommission.gov.in/downloads/recommendations/HigherEducationNote.pdf>

¹³ American Council on Education, 2006.

¹⁴ Organisation for Economic Co-operation and Development (OECD). 2007. *Education At A Glance, 2007*. Paris, France: OECD.

¹⁵ Labi, A. September 22, 2006. "Foreign Students Increase in Britain." *Chronicle of Higher Education*, p. A44.

¹⁶ American Council on Education, 2006.

In short, prospective international students generally—and graduate students specifically—now have greater choices when deciding which colleges and universities to attend. Many students in Korea and India who in the past would have considered the United States exclusively are now more willing to enroll at universities in Europe, or to remain in their home countries. These trends mean that many American graduate schools will need to make even greater efforts if they are to increase their numbers of international applications.

Applications by Fields of Study

The fields of business, engineering, social sciences, physical sciences, and life sciences have attracted the majority of international students for a number of years. Approximately 68% of international graduate students in the U.S. are enrolled in these fields.¹⁷ Applications in nearly all of these fields experienced decelerating rates of growth between 2007 and 2008. Applications to engineering programs, for instance, grew just 1% in 2008, after a 13% increase last year and a 19% jump in 2006. Life sciences applications grew just 2% this year versus 18% in 2007, and physical sciences applications gained 7% in 2008 compared with 12% one year ago. Social sciences and humanities & arts were the only two fields that saw greater growth this year than last.

Applications by Institutional Type

While the overall changes in the number of applications are important, they potentially mask gains and losses experienced by different types of institutions. To account for the wide variability in application trends, this year, for the first time, CGS is reporting the percentage changes in applications by institutional control (public versus private colleges and universities) and classification (master's versus doctoral-granting institutions, based on the 2000 Carnegie Classification of Institutions of Higher Education¹⁸). Table 2 displays these results.

The public Research/Doctoral Extensive universities saw a 6% gain in applications, versus no growth at similar private universities. Both the public and private Research/Doctoral Intensive schools experienced sharp declines in applications, while public and private Master's & Specialized institutions saw applications rise. The 45% increase in applications at private Master's colleges and universities is impressive, but it is based on a small number of respondents and thus should be interpreted cautiously.

¹⁷ Council of Graduate Schools (CGS). 2007. *Graduate Enrollment and Degrees: 1996 to 2006*. Washington, DC: CGS.

¹⁸ See Table 2 for more information on the 2000 Carnegie Classification definitions.

Table 2. Percentage Change in International Graduate Applications, 2007 to 2008, by Institutional Control and Carnegie Classification⁺		
	Number of Respondents*	Percentage Change in Applications
Total (All Institutions)	157	3%
Public	111	5%
Private**	46	-1%
Research/Doctoral Extensive⁺	86	3%
Public	59	6%
Private**	27	0%
Research/Doctoral Intensive⁺	30	-11%
Public	20	-10%
Private**	10	-12%
Master's & Specialized⁺	41	4%
Public	32	2%
Private**	9	45%

⁺Based on the 2000 Carnegie Classification of Institutions of Higher Education. *Research/Doctoral Extensive* universities typically award 50 or more doctorates across at least 15 fields of study each year. *Research/Doctoral Intensive* universities typically award at least 10 doctoral degrees across three or more disciplines each year. *Master's & Specialized* colleges and universities typically offer master's degrees exclusively, although some may award doctoral degrees in one or more disciplines.

*All results are based on the 157 institutional respondents that provided applications data for both fall 2007 and fall 2008.

**Includes not-for-profit and for-profit (proprietary) institutions.

Source: Council of Graduate Schools, 2008 International Graduate Admissions Survey, Phase I: Applications.

Applications by International Graduate Enrollment Size

Application trends also vary greatly by total international graduate student enrollment size. Table 3 illustrates the percentage changes in applications from 2007 to 2008 for the colleges and universities with the ten, 25, and 50 largest enrollments of international graduate students, based on fall 2006 international enrollments.¹⁹

The “10 Largest” institutions are the universities that enroll the largest numbers of international students. The “25 Largest” and “50 Largest” include institutions with the 25 and 50 largest enrollments of international graduate students, and “All Other” institutions are those with international graduate student populations that are below those of the 50 largest.

¹⁹ National Center for Education Statistics. 2006. Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Survey Dataset.

Table 3. Percentage Change in International Graduate Applications, 2007 to 2008, by International Graduate Enrollment Size⁺				
	10 Largest	25 Largest	50 Largest	All Others
International Total	4%	3%	4%	3%
Country/Region of Origin				
China	9%	7%	8%	17%
India	3%	2%	3%	-7%
Korea	-3%	-1%	1%	0%
Middle East ⁺⁺	9%	9%	12%	12%
Field of Study				
Business	13%	9%	10%	9%
Education	5%	-4%	0%	-3%
Engineering	4%	1%	1%	0%
Humanities & Arts	13%	7%	11%	13%
Life Sciences*	-2%	-5%	-2%	8%
Physical Sciences**	8%	7%	7%	6%
Social Sciences	11%	8%	8%	13%

⁺Institutional graduate student enrollment size is based on information collected from the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS) Fall 2006 Enrollment Survey Database.

⁺⁺Middle East countries include: Bahrain, Cyprus, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian Authority, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, and Yemen.

*Includes Agriculture.

**Includes Earth Sciences.

Source: Council of Graduate Schools, 2008 International Graduate Admissions Survey, Phase I: Applications.

Institutions with the largest numbers of international graduates had the greatest overall gains in applications, while those with smaller international graduate enrollments had only small gains or (in some instances) declines. At the “10 Largest” and “50 Largest” universities, international applications rose 4%, compared with a gain of 3% at “All Other” institutions.

The country/region-of-origin differences are particularly striking. Total applications from prospective Indian students fell 7% at the institutions outside the 50 largest; in contrast, they increased 3% at the “10 Largest.” On the other hand, applications from Korea *fell* 3% at the ten largest institutions, compared with no change at those outside the 50 largest.

In the fields of study, applications for the “10 Largest” universities grew the most in business (13%), humanities & arts (13%), and social sciences (11%). Engineering applications were flat or had only small increases at all institutional size types except the ten largest, while applications in the life sciences declined at the ten, 25, and 50 largest universities but rose 8% at those outside the 50 largest.

SUMMARY AND IMPLICATIONS

The United States continues to be the destination of first choice for many prospective international graduate students, but the results of CGS' 2008 *Phase I: Applications* survey show that the U.S. can no longer take its historic leadership in attracting talented students from overseas for granted.²⁰ The total number of applications for admission to CGS-member graduate schools received from prospective international students rose just 3% in 2008, after gains of 9% in 2007 and 12% in 2006. Given the sharp increases of the past two years, some slowdown in applications is to be expected. But the magnitude of the deceleration of growth between 2007 and 2008 is cause for concern. Furthermore, the overall results mask the fact that at 38% of responding institutions, applications fell sharply. It is also very important to note that the overwhelming majority of institutions that have consistently responded to the *Phase I* survey still have significantly fewer international graduate applications this year than they did in 2003.

The overall slowdown in international graduate applications can be attributed to rapidly decelerating growth in the numbers from India, one of the two countries that send the largest numbers of graduate students to the U.S. Indian applications were essentially flat in 2008 after strong gains in 2006 and 2007.

Applications declined sharply at Doctoral/Research Intensive universities, and grew just 1% at the colleges and universities with international graduate enrollments outside the 50 largest. The declines at Doctoral/Research Intensive institutions were offset somewhat by small increases in applications at the Doctoral/Research Extensive institutions and the ten largest universities.

What effect will these application trends have on the number of new international students entering American graduate schools? The results from the next phase of the CGS international graduate admissions survey series, scheduled to be launched this summer, will provide very important clues about the future trends in international graduate student applications and offers of admission.

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The Council of Graduate Schools (CGS) is an organization of 500 institutions of higher education in the United States and Canada engaged in graduate education, research, and the preparation of candidates for advanced degrees. CGS members award 94% of the doctoral degrees and 80% of the master's degrees in the United States. The organization's mission is to improve and advance graduate education, which it accomplishes through advocacy in the federal policy arena, research, and the development and dissemination of best practices.*

**Graduate Enrollment and Degrees, 1996-2006 (Washington, DC: Council of Graduate Schools, 2007).*

²⁰ Labi, A., 2007.