

The Sleeping Giant Awakes?

**The recent surge in international
students in U.S. Higher Education**

The first in a series of reports on U.S.
higher education and international
students

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i-graduate

INTERNATIONAL INSIGHT

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Introduction to the Series

This is the first in a series of four reports that offer a broader perspective on the current boom in international student enrollment in U.S. colleges and universities.

Over the past decade, international students in U.S. higher education grew by 50%, passing a total of 800,000 for the first time, by far the largest such enrollment by any country in the world. International numbers in the U.S. is expected to grow further in the coming years. In a time of weaker domestic demand, and falling state appropriations in real terms, international students offer U.S. universities and colleges welcome revenue. This series of papers argues that U.S. higher education has an opportunity not only to generate significant new income, but enhance its standing in the world and improve the experience for all students, domestic and international. Greater ambition in the international student market would reap these rewards, in terms of scale and strategy.

By embracing much stronger growth in international students, and viewing expansion as a pedagogic and experiential benefit, over and above revenue, the U.S. could tackle a number of tough realities. Domestic student demographics do not favor many parts of the U.S., with the number of high-school graduates in decline nationally after peaking in 2009. Where demographics are strong, in the South and West, much growth will be driven by Hispanics, a population poorly served by most institutions historically, and representing significant academic preparation, language and affordability challenges. Domestic higher education enrollment has declined in the recent years, after almost two decades of steady growth; state appropriations are still recovering from the “Great Recession” and endowment performance remains mixed. Adult and online enrollment has increased dramatically over the past decade, but there is evidence that participation has peaked or will soon plateau¹. There is also growing pressure on colleges and universities to improve retention and graduation rates, enhance the student experience and better demonstrate employability and value-for-money.

There is no question the U.S. higher education brand remains preeminent, and there is no shortage of international demand. But this series of papers argues that international students also constitute a powerful stimulant for innovation in the student experience. Most such students embody language and cultural challenges but, unlike less-traditional domestic students, pay above-average tuition. For institutions that take the opportunity seriously, investing in enterprise-wide innovation and coherence, across instruction and services as well as marketing and recruitment, the international student may be key to unlocking more fundamental reform efforts, even ushering in a new golden age for U.S. higher education.

Yet many schools simply employ income from international students to merely subsidize rather than innovate the core business. The *International Student Barometer™*, a global survey of international student satisfaction in which a growing number of U.S. institutions participate, consistently finds associations between large numbers and rapid growth in international students and average-to-poor student satisfaction². This is counter to the rhetoric of internationalization, which asserts that a more international student body is in tune with broader globalization and enhances the experience for all. At large decentralized universities, which appeal most strongly to many international students, a culture of

strong departmental and faculty autonomy inhibits the extent to which instructional or service good practice may be consistently applied. Administrators recognize experiential and service inconsistencies but feel constrained by the wider environment. Few U.S. institutions have strategy documents that speak to internationalization at this level of detail, and that take on cultural change.

At best, this is a missed opportunity to use the combination of large-scale demand, increased revenue and non-standard learning/service needs to drive reform. At worst, in an environment of ever-greater international student choice across countries and institutions, the brand equity all U.S. institutions enjoy might be vulnerable to more tangible evidence of student satisfaction at some institutions over others. This series of reports explores these issues.

The series consists of four reports, which will appear in 2014 and 2015:

- **Report 1:** The Sleeping Giant Awakes? The recent surge in international students in U.S. higher education
- **Report 2:** Explaining Success- what distinguishes schools with the strongest international student satisfaction track record?
- **Report 3:** Sizing Up Global Demand for Higher Education Across Borders: assessing the short-term and long-term opportunity
- **Report 4:** A Strategic Approach to Internationalization

About i-graduate

The International Graduate Insight Group (i-graduate) track and benchmark the student experience worldwide. i-graduate runs the *International Student Barometer™* (ISB), the world's largest survey of international student satisfaction, with feedback from nearly 2 million students. Since it began, more than 800 universities and colleges around the world have implemented the ISB to better understand strengths and weaknesses across the student experience. i-graduate's survey processes have been adopted by many leading U.S. universities, including University of Illinois Urbana-Champaign, University of Cincinnati, George Washington University, University of Minnesota, University of Missouri Columbia, Northeastern University, Northwestern University and University of Pittsburgh. This report is written by Richard Garrett, i-graduate's North America Director, based in Boston, MA. i-graduate is part of Tribal Group.

More information can be found at www.i-graduate.org.

Report 1: The Sleeping Giant Awakes? The recent surge in international students in U.S. higher education

Introduction

The United States remains, indisputably, the premiere national higher education brand in the world. The draw of the U.S. is evidenced by the huge number of international students who enroll in U.S. higher education each year- almost 820,000 in academic year 2012/13, according to the Institute for International Education, far higher than any other country (IIE, 2013). The second largest player in the market, the United Kingdom, enrolled fewer than half a million international students³, while the rest of the top five, Germany, France and Australia, each enrolled fewer than 300,000 (OECD, 2013). After stuttering post-9/11, international enrollment in the U.S. has surged to record highs, growing almost 50% over the past ten years.

As a foundation for the series, the present report seeks perspective on the recent surge in international student numbers in the United States. i-graduate argues that the U.S. has embarked on a new era of international student recruitment, driven by weaknesses in the domestic market and seemingly insatiable global demand. Yet to fully understand this trend, it is important to look beyond international student numbers alone. Depending on the perspective, the U.S. is simultaneously the most and one of the least international of the major higher education systems in the world. How is this possible? Let us examine this complex picture.

In addition, an appendix takes a critical look at the main data sources on international students. All these sources are valuable but also embody various limitations, and even contradict each other at times. Most sources are widely cited in media and other commentary but often in isolation. It is rare for these sources to be formally compared. Such a comparison is an important starting point towards our goal to better understand and evaluate the international student boom in which U.S. higher education is engaged.

International Student Growth: fast and faster

It is well-known that despite c.50% growth in international higher education student numbers in the U.S. over the past decade, the nation's share of international students fell from 23% in 2000 to 17% in 2011. As shown in Figure 1, despite adding over 200,000 to the annual total compared to ten years earlier, many other countries grew international enrollment even faster. The total number of higher education students studying outside their home country stood at 4.3 million in 2011, among OECD and partner countries, which constitute the bulk of activity, suggesting the global total is at least 4.5 million. These figures have doubled in a decade (OECD, 2013).

Using OECD data, the twenty nations in 2000 ranked #6-25 for international student recruitment together enrolled c.520,000 international students, only somewhat higher than the U.S. figure that year of 475,000. By 2011, the U.S. had grown 48% to 710,000, according to the OECD, while countries ranked

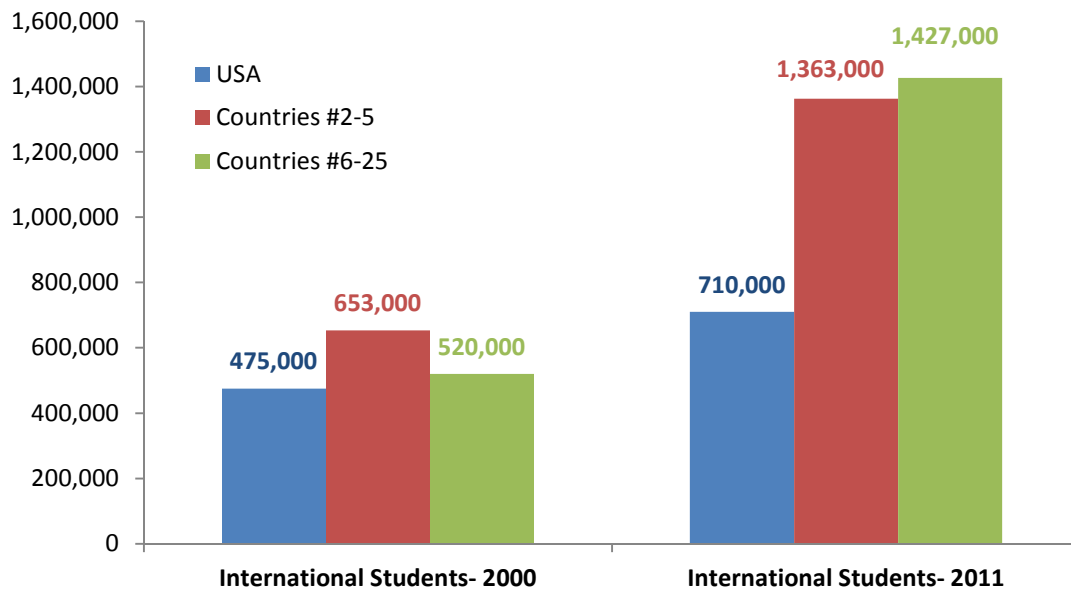
#6-25 enrolled over 1.4 million international students, up 169% and more than double the then U.S. figure. Examples of countries that have outpaced the U.S. in terms of international student growth include:

- **Canada**- going from 94,000 international students in 2000 to 204,000 in 2011 (117% growth)
- **Russian Federation**- 41,000 to 171,000 (317% growth)
- **Japan**- 67,000 to 151,000 (125% growth)
- **Spain**- 26,000 to 107,000 (312% growth)
- **South Africa**- 45,000 to 83,000 (84% growth)

The geographical spread of countries hosting large numbers of international students is notable⁴.

Countries ranked #2-5 in 2000 also grew faster than the U.S. These four countries together enrolled about 650,000 international students in 2000. The ranking was unchanged in 2011, but those same countries then enrolled over 1.3m international students, up 100%, more than double U.S. growth over the period.

Figure 1. U.S. international student recruitment less impressive compared with other countries



Source: OECD and i-graduate analysis. Countries #2-5, in both 2000 and 2011, are the UK, Germany, France and Australia.

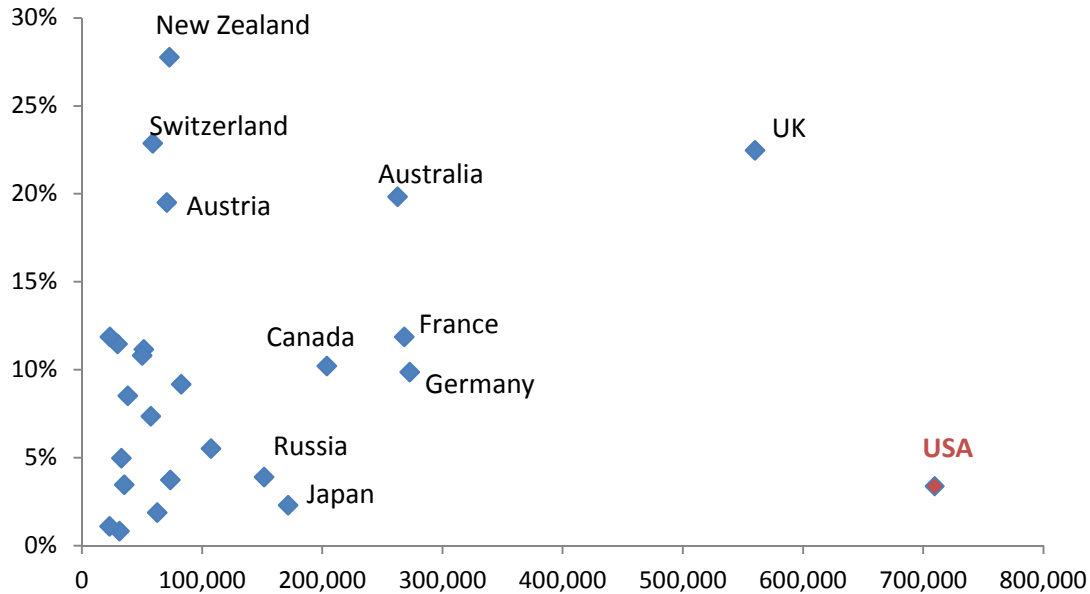
In summary, most other leading countries grew international higher education student numbers by 100% or more over the past decade, while the U.S. managed only 50% growth. A lower base, increased demand, and the development of more robust higher education systems in many countries over time explain some of this disparity. Let us now look at the data from another angle.

International Student Intensity- U.S. as outlier

Another way to compare the U.S. and other countries is to look at intensity of international student recruitment. This vantage point lends further weight to the argument that the U.S. is under-performing in the international student market. What proportion of the U.S. higher education student population is international? Despite boasting the highest international student total in the world, the U.S. actually has one of the lowest ratios of international students to all higher education students among the 25 largest national players- <4% in 2011. By contrast, as shown in Figure 2, the ratio is over 10% in Canada, France and Germany, around 20% in Australia and the UK⁵ and over 27% in New Zealand. In 2011, only four of the top 25 countries exhibited a lower international student ratio than the U.S.

The below-average international student ratio in the U.S. suggests that the country is substantially under-leveraged in terms of recruitment potential. Even if the U.S. were to merely double its international student ratio, to say 7%, this ratio would still be some distance behind the other largest players, but represent a massive boost to the country in terms of internationalized campuses, international goodwill and institutional revenue.

Figure 2. U.S. Outlier- both the highest total and one of the lowest ratios of international students

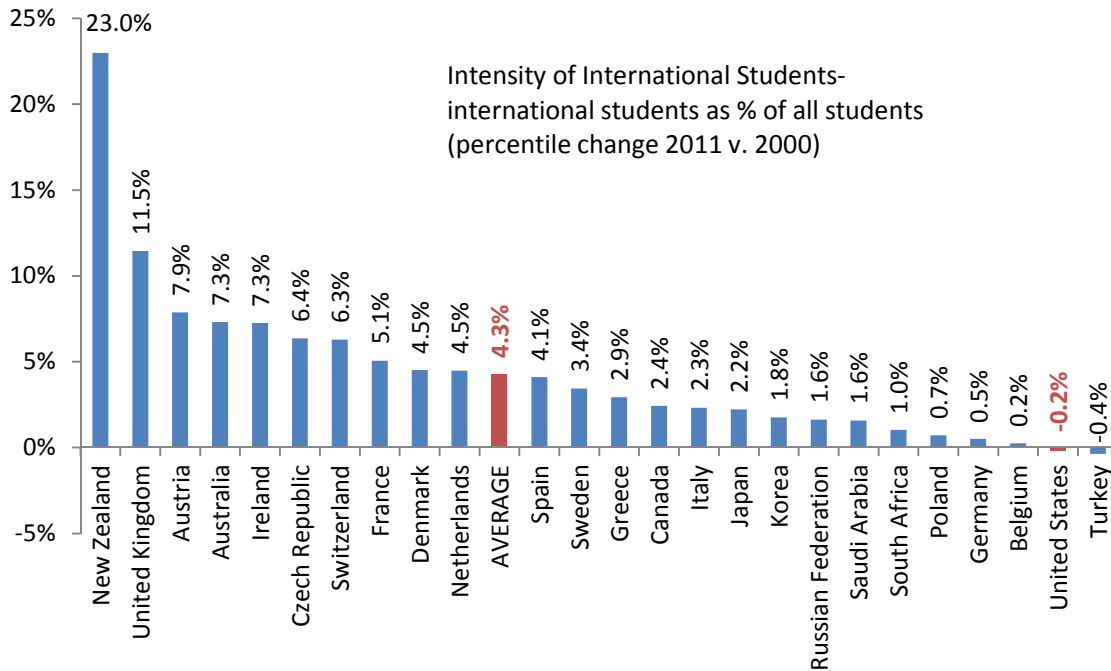


Source: OECD, UNESCO, Statistics Canada, EuroStat, Russia Ministry of Education, Higher Education South Africa, Center for Higher Education Transformation (South Africa), Council of Higher Education (Turkey) and i-graduate analysis

Moreover, not only does the U.S. have a lowly international student ratio, this ratio actually fell over the past decade. Based on OECD and UNESCO data, derived from the U.S. Department of Education, in 2000 3.6% of U.S. higher education students were international, falling to 3.4% in 2011. This decline, despite almost 50% growth in international student numbers, speaks to the boom in the domestic market in the U.S. over the period. This boom was driven by a demographic wave of high school graduates and a dramatic increase in adult student numbers stimulated by the rise of degree-granting for-profit universities and online learning.

Figure 3 contrasts U.S. decline in international student intensity with increased intensity almost everywhere else among the top 25 leading recruiter countries.

Figure 3. Unlike other leading players, U.S. higher education actually grew “less international” 2011 v. 2000



Source: OECD, UNESCO, Statistics Canada, EuroStat, Russia Ministry of Education, Higher Education South Africa, Center for Higher Education Transformation (South Africa), Council of Higher Education (Turkey) and i-graduate analysis. According to OECD and UNESCO data, the U.S. enrolled 475,169 international students in 2000 (3.6% of all 13,202,880 higher education students that year). In 2011, international students numbered 709,565 (3.4% of 21,016,126 total students)

Is U.S. higher education even “less international” than generally thought?

Is U.S. higher education actually less international than previously thought? Using OECD data, the U.S. is very much an outlier in terms of international student intensity. Despite enrolling more international students than any other country, only around 3.6% of all students in U.S. higher education were international. But is even that ratio higher than is supported by other data?

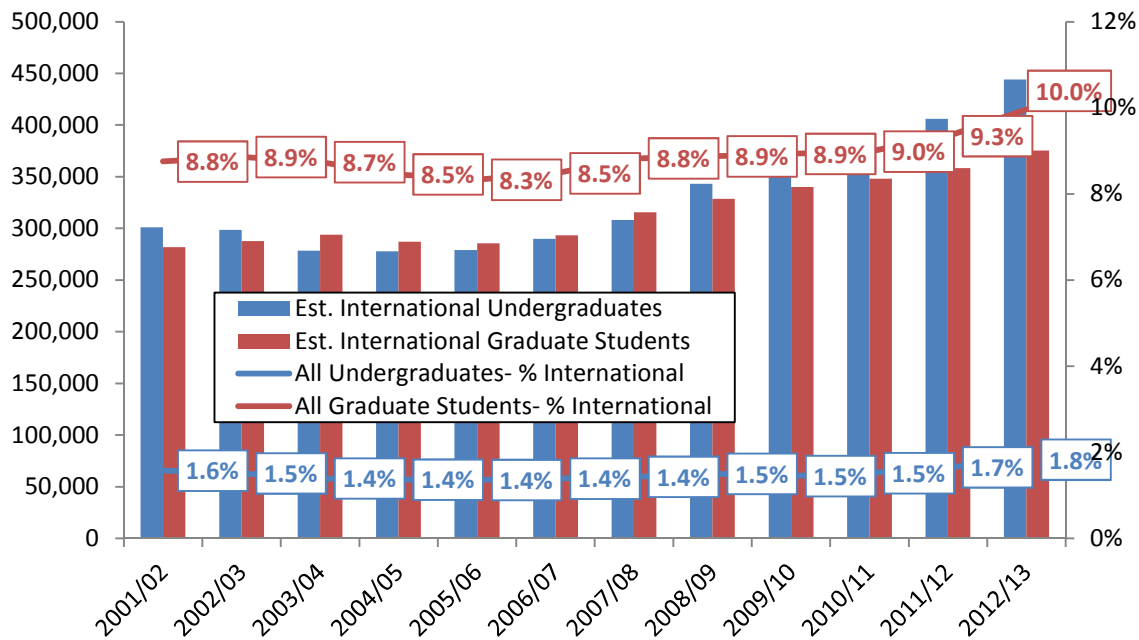
Perhaps surprisingly, the answer appears to be yes. The Institute for International Education (IIE- one of the key domestic sources of data on international students in the U.S.) routinely reports the proportion of all U.S. students that are international. For 2012/13, the most recent year available, the ratio given was 3.9%- 819,644 international students against a U.S. enrollment total of 21,253,000⁶. The problem is that the 21 million figure, taken from the U.S. Department of Education, is a Fall total only, whereas the IIE international student figure is 12-month unduplicated headcount for the academic year 2012/13.

This artificially inflates the international student ratio. The U.S. Department for Education (DoE) has yet to release the 12-month unduplicated 2012/13 enrollment total. However, a glance at the prior year’s

figure makes the point. According to the U.S. Department for Education, the 12-month total student figure for 2011/12 was 28,176,519⁷. It is true that total U.S. higher education enrollment has fallen in 2012 and 2013, so the 2012/13 figure may be in the region of 27,750,000. This would place the international ratio at only 3.0% (compared to IIE's 3.9% for 2012/13), almost 25% lower.

Figure 4 offers an estimated undergraduate versus graduate breakdown of U.S.-based international students over time, based on IIE and IPEDS. This required apportioning aggregated non-degree and OPT students, all of whom are either undergraduate or graduate, but are not reported as such by IIE. The table also indicates the international share of each category. Figure 4 is put forward as a more straightforward, comprehensive view of international student data in U.S. higher education.

Figure 4. Domestic Market Weakness Means U.S. International Student Ratios Finally Starting to Rise
(includes non-degree and Optional Practical Training)



Source: IIE *Open Doors 2012/13*, U.S. Department for Education IPEDS database, i-graduate analysis

With the benefit of estimated total undergraduate and graduate international student numbers, a more accurate view of the intensity of international enrollment in U.S. higher education is possible. The data indicates well-known greater international student intensity at graduate (9-10%) compared to undergraduate level (1.4-1.8%), but at lower levels than reported or implied by IIE. Both ratios were essentially flat over the past decade. Yet clearly the international ratios are now increasing, as domestic enrollment slips and schools turn to international students to compensate.

The overall estimated ratio of international to all students in the U.S. ran at around 2.5% over the period, hitting 2.9% in 2012/13. The undergraduate share of international students in the U.S. has crept up in recent years, from 48.6% in 2003/04 to 54.2% in 2012/13.

IIE will release 2013/14 enrollment data in the Fall, but the organization's Fall 2013 *Snapshot* survey⁸ reported 72% of about 380 institutions had experienced year-on-year growth in international student numbers, averaging 13%, which is much higher than final academic year growth figures from recent years. As IIE indicates, 13% growth may exaggerate underlying trends, but nonetheless signals strong momentum in this market. One should expect the international student ratio to rise also, given ongoing weakness in the domestic market.

How Many International Students is Enough?

i-graduate worked with the best available data at institutional level to formulate a comparison by country and institutional type. Figure 5 contrasts the international student ratio across selected types of U.S. and non-U.S. postsecondary education institutions.

Figure 5. Should England or Australia be the model for the U.S., or neither?

| Type/Location of Institution | Number of Institutions | % International Students, Fall 2012 | Standard Deviation ¹ |
|--|------------------------|-------------------------------------|---------------------------------|
| U.S. Doctoral Institutions | 286 | 8.3% | 6.8% |
| U.S. Master's Institutions | 585 | 3.1% | 5% |
| U.S. Baccalaureate Institutions | 749 | 2.8% | 4.3% |
| U.S. Community Colleges | 898 | 0.9% | 1.7% |
| English Universities- EU & non-EU students* | 92 | 15.4% | 13.1% |
| English Universities- Non-EU students only | 92 | 10.7% | 9.7% |
| UK Further Education Colleges- EU & non-EU students | 279 | 1.4% | N/A |
| UK Further Education Colleges- Non-EU students only | 279 | 0.8% | N/A |
| Australian Universities | 39 | 22.7% | 11.7% |
| Australian TAFE (Technical/Further Education Colleges) | 58 | 1.8% | N/A |

Source: IPEDS, UK Higher Education Statistics Agency, UK Association of Colleges, Universities Australia, TAFE Directors Australia and i-graduate analysis. * The English university total excludes a number of specialized

¹ The "Standard Deviation" column indicates the spread of international student ratios that make up an average. A higher standard deviation highlights a wider spread across institutions in a given category, emphasizing that institutions are not equally international. Indeed, the data shows that categories with the highest international student ratios also exhibit the biggest standard deviations. N/A refers to categories where only a sector average, rather than institution-level data, was available.

university-level institutions, and institutions designated universities within the past five years. This is to better align the UK and U.S. categories. The international ratios and standard deviations were calculated by i-graduate, using reported component data.

Figure 5 points to a wide range of international student ratios, varying by country and institutional type. Of course, national differences impede exact comparisons between sectors, but i-graduate argues that the exercise is nonetheless illuminating.

In general, universities exhibit higher international student ratios, while other kinds of institution, notably further education and community colleges, report much lower ones. Yet the university ratio in Australia (22.7%) is much higher than in England (15.4% if all non-UK students are included, and 10.7% if only non-European Union students are included⁹), and higher again than among U.S. doctoral institutions (8.3%). Other types of U.S. institution, Master's and Baccalaureate, present lower ratios still. The standard deviations, higher for sectors with larger international ratios, are a reminder that not every institution within a peer group is equally international with respect to students.

An analysis of institutional level data from 2006 makes it clear that the U.S. international ratios have grown substantially over time. For example, among U.S. Doctoral institutions, the international ratio was 6.5% in 2006. The 2012 ratio of 8.3% represents 35% growth in six years.

The 2012 comparisons suggest that leading U.S. universities are in fact not far behind English universities in terms of international student intensity, particularly if subsidized EU students are excluded from the English total. Yet leading U.S. universities are far behind their Australian counterparts. While smaller in number, the English and Australian universities are arguably more diverse than the U.S. Doctoral universities group, but many of the most prestigious and research-intensive English and Australian universities also boast among the highest international ratios. U.S. community colleges report lower international student ratios than their English and Australian counterparts, but in all three sectors the international ratio is <2%.

These comparisons might benefit from further refinement, but the point is to emphasize that despite recent strong growth in international students at many U.S. universities, there are national precedents elsewhere for considerably higher international student ratios. This is not to say that more international students is always better, but simply that the U.S. has considerable room for maneuver before concluding that any upper limit has been reached, however that might be defined or determined. Indeed, that is the ultimate question. With international student numbers caught between revenue pressure and high-minded internationalization, there is no more than a vague understanding of international student volume or intensity as a success variable.

Conclusions for Part 1: The Sleeping Giant Awakes, but Now What?

The thrust of this paper is that the U.S., despite enrolling far more international students than any other nation, has yet to truly leverage its brand strength. Compared to other leading nations, the international student ratio in the U.S., c.3% for the past decade, represents only modest internationalization. As discussed earlier in the paper, countries ranked #2-5 behind the U.S. in terms of international student headcount all have ratios of at least 10%, and some in excess of 20%. The sleeping U.S. giant, long content with the highest absolute number of international students, has left other nations, notably the UK and Australia, to leverage burgeoning international demand at much higher levels of intensity. With domestic demand weak, the giant is waking. Many U.S. schools have turned to international students as a way to make-up the shortfall.

Two key questions arise. First, as many U.S. schools ramp up international student numbers, how can negative associations between greater enrollment scale and poorer experience/service be avoided? This is the pattern that emerges from i-graduate's *International Student Barometer™* data, to be explored in Part 2 of this series. The second question is whether the rhetoric of internationalization amounts to more than expediency. Enjoying unrivaled brand equity abroad, at home U.S. education is under fire on a myriad of issues including low student completion rates, rising tuition and academic quality. Every U.S. school extols the experiential benefits of a more international student body, but a strategic framework to make that a reality tends to lag some distance behind the enrollment spike. Will additional revenue from international students amount to little more than shoring up the status quo, or might it be part of bigger strategic thinking? The other papers in this series will explore this question further.

Part 2 will examine data from the *International Student Barometer™*, the world's largest survey of international student satisfaction. The ISB has been conducted at hundreds of universities and colleges worldwide, over nearly a decade, presenting a unique opportunity to better explain why some institutions do well and some less well on this measure. The rhetoric of internationalization implies that more international students mean an enhanced student experience- does the i-graduate data bear this out?

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Appendix- But Which Data is Right? A critical look at the sources

Figures 1-3 of this paper use OECD data as a common source across countries for international student numbers, and UNESCO data as a common source for total higher education students. However, these figures do not neatly line up with prominent U.S. sources. In fact, OECD numbers substantially undercount the number of international students in the country. To ensure a more comprehensive account of international student numbers and intensity in U.S. higher education, it is important to compare OECD and UNESCO data to domestic sources. Resort to domestic sources also permits post-2011 data for the U.S.

The goal here is to not to pit one data source against another or engage in lengthy debate about esoteric definitions. Rather, the point is to strive for greater clarity and accuracy. In comparing the sources, i-graduate argues that the OECD data downplays the true scale international students in U.S. higher education, but also that standard presentation of U.S. data artificially inflates U.S. international student intensity.

Figure 6 contrasts the four key sources of international student data for the U.S.- the *Institute for International Education*, the U.S. government's IPEDS and SEVIS databases, and the OECD.

Figure 6. OECD, IIE, IPEDS and SEVIS do not agree on international student numbers

(U.S. Degree-Granting Colleges & Universities 2011/12- most recent year in common. SEVIS data is for Q1 2012)

| Source | Undergraduate | Graduate | Other Postsecondary (for-credit) | TOTAL |
|---------------------|----------------------|-----------------|---|--------------|
| OECD ¹⁰ | N/A | N/A | N/A | 709,565 |
| IIE ¹¹ | 309,342 | 300,430 | 154,723 | 764,495 |
| IPEDS ¹² | 531,664 | 368,999 | N/A | 900,643 |
| SEVIS ¹³ | 352,210 | 332,126 | c.70,000 | c.754,000 |

Source: OECD's *Education at a Glance 2013*, The Institute for International Education's *Open Doors 2012*, the U.S. Department of Education's IPEDS database and the U.S. Department of Homeland Security's SEVIS (Student and Exchange Visitor Information System) Quarterly Review, ending March 31 2011

The first task is to note the advantages and limitations of each source:

- **OECD**

- **Advantages:** The main advantage of OECD data on international students is routine comparisons between countries. The organization works to ensure at least broad comparability across often disparate higher education sectors around the world, putting national data in perspective
- **Limitations:** Aside from comparability challenges between nations, limitations include apparent exclusion of for-credit English language learners and OPT students (“Optional Practical Training”, a U.S. government initiative permitting some international students to work off-campus during or at the conclusion of their studies), and the absence of a simple undergraduate versus graduate breakdown

- **Institute for International Education (IIE)**

- **Advantages:** The IIE runs a dedicated annual survey, and has tracked international students in the U.S. for almost a century. Various subcategories are helpfully broken out (e.g. Associate’s, Bachelor’s, Master’s, English language, OPT)
- **Limitations:** The IIE survey appears to not reach all U.S. higher education institutions, notably for-profit schools. The separate English language, non-degree and OPT categories are not broken into undergraduate and graduate, inhibiting a simple aggregate view of those populations. Only limited institution-level data is in the public domain

- **IPEDS database, part of the U.S. Department of Education**

- **Advantages:** IPEDS covers essentially every accredited higher education institution in the U.S., as a condition of student access to federal financial aid, and offers institution-level data in the public domain. International student data extends back to the early 1990s. Aggregate undergraduate and graduate data is available
- **Limitations:** IPEDS appears to inflate the true number of international students physically present in the U.S. on relevant visas. IPEDS does not break out macro undergraduate and graduate data by degree level, and English language and OPT students are not distinguished. Very little IPEDS data on international students is published

- **SEVIS database, part of the U.S. Department of Homeland Security**
 - o **Advantages:** As a condition of participation in the U.S. visa system, universities and colleges must report international student activity to SEVIS, making the database comprehensive. SEVIS publishes quarterly summaries of trends, breaking out international students by degree level, English language learners and various other categories
 - o **Limitations:** SEVIS does not divide English language or certain other categories between degree-granting and other kinds of postsecondary institution, nor are OPT students distinguished. There appears to be no institution-level data in the public domain

Let's examine each source in turn, and attempt to explain discrepancies.

The most prominent U.S. source of international student data is the Institute for International Education and their annual *Open Doors* report. The *Open Doors* report for 2011/12, the period that best aligns with the most recent OECD data, counts c.765,000 international students in U.S. higher education. The IIE data comes from a survey of around 3,000 U.S. universities and colleges, and concerns the total unduplicated international student headcount over the academic year.

Another domestic data source is the U.S. Department of Education- the IPEDS database (Integrated Postsecondary Education Database System). All universities and colleges in receipt of federal financial aid for students must report annually to IPEDS, including international student numbers. For academic year 2011/12, the latest available, IPEDS reports 900,643 international students, considerably higher than the IIE total even for the subsequent year which was said to represent growth from 2011/12¹⁴. For 2011/12, IIE reported only 764,495 international students.

So are there really many more international students enrolled at U.S. colleges and universities than the go-to IIE data suggests? The SEVIS data may help clarify.

The SEVIS data, derived from the post-9/11 federal government's system to better track international visitors, is designed to be a census of international students, at all levels of education. As a condition of student visa procurement and maintenance, all eligible U.S. colleges and universities must report data to the SEVIS system. It is reasonable to assume that SEVIS should be the most accurate source of international student numbers in the country. The SEVIS data for 2011/12 comes very close to the IIE figure.

So why is the IPEDS total so much higher?

IPEDS covers around 4,100 unique degree-granting institutions, once individually listed but minimally autonomous branch campuses, typically under for-profit institutions, are removed from the total. The c.4,100 figure includes separately listed “branch campuses” of larger nonprofit colleges and universities, which while part of a broader institution, enjoy substantial autonomy. This distinction is consistent with how IIE counts individual institutions for *Open Doors*. IIE does not disclose the precise list of schools it surveys, but the higher education association partners it works with to conduct its survey exclude for-profit universities and colleges. For-profit degree-granting schools numbers in the hundreds in the U.S., the precise number depending on the counting method. If IIE does not survey for-profit schools, then that may help explain the bigger institutional total in IPEDS. However, U.S. for-profit degree-granting schools enroll relatively few international students- only around 23,500 in Fall 2012, according to IPEDS. So this alone does not explain the much bigger gap between the IIE and IPEDS international enrollment totals. Of course, international students at for-profit schools are included in SEVIS data.

Another factor may be that IPEDS includes international students that are not physically present in the United States, whether studying online, at a branch campus or through a partnership of some kind. There are a number of institutions known to the author where reporting to IPEDS appears to fit this pattern. These international students do not need U.S. visas and therefore fall outside the SEVIS infrastructure, and outside the scope of the IIE survey. Indeed, for-profit schools are among those most active in online education. International students enrolled at a U.S. institution but never physically present in the country, whether enrolled at for-profit or conventional schools, are not formally tracked at federal level. Wholly distance students, with international enrollment broken out, were reported to IPEDS for the first time for Fall 2012. However, it is not clear the extent to which these international online enrollments duplicate international students reported elsewhere within IPEDS. In Fall 2012, wholly distance international students enrolled in U.S. degree-granting institutions totaled only around 33,500.

While precise figures are not available, it is plausible to conclude that the higher IPEDS international student total may reflect inconsistent institutional reporting- specifically, the sometime inclusion of international students not physically present in the U.S. in figures that are supposed to be confined to international students with U.S. visas. The fact that the IIE total for 2011/12 appears to be somewhat higher than the SEVIS data, when IIE’s partial institutional sample might suggest a lower total, may reflect similar reporting ambiguities at some institutions. Both the IIE and IPEDS surveys are very clear on their focus on international students physical present in the U.S, on a relevant student visa. The reason the IPEDS data appears to suffer a greater amount of erroneous reporting may reflect the very broad nature of that survey, concerned with international students as only one of numerous data items, compared to IIE and SEVIS which are dedicated to international students. Survey focus may prompt better data collection and reporting, and may involve specialist international employees as opposed to more general institutional research staff. In addition, the fact that IIE and SEVIS data is regularly published, while IPEDS data on international students is rarely made public beyond access to the database itself, may also undermine reporting consistency and offer fewer opportunities for the data to be reviewed and refined.

OECD data is obtained from national governments, but exact definitions and sources are often less than transparent. The smaller OECD total may perhaps exclude English language learners enrolled in higher education institutions for-credit and/or individuals on “Optional Practical Training”. Both populations are explicitly part of the IIE figures, and implicitly part of IPEDS data. When compared to the presumably more accurate SEVIS and IIE data, and even IPEDS, there seems no doubt that the OECD figures substantially undercount total international higher education enrollment in the country.

It is reasonable to conclude, not surprisingly, that the SEVIS data is most accurate. However, the presence of different sources and, at least on the surface, different totals, presents a confusing picture for researchers, the media and the general public. Moreover, the fact that the organizations involved parse the data differently (e.g. degree and non-degree undergraduates are aggregated and disaggregated in very diverse ways) inhibits straightforward comparisons, as does different disclosure conventions. It is hoped that this analysis will stimulate further examination of these inconsistencies among the organizations concerned, and lead to revised guidance to eliminate any erroneous institutional reporting.

Finally, now IPEDS has commenced collection of wholly distance students enrolled outside the U.S., it would be another big step forward for an organization to routinely capture all international enrollment in U.S. universities and colleges, whether physically present, at a branch campus or through a partnership overseas, or online. This is now done in the United Kingdom, by the Higher Education Statistics Agency, and also in Australia by the national government and through a collaborative initiative among international directors at universities. These efforts reveal very substantial enrollment totals outside each country. A full appreciation of the international enrollment of U.S. schools requires the same reach.

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Endnotes

¹ Eduventures (2013) *Online Higher Education Market Update 2012/13*.

² The *International Student Barometer™* (ISB) is the world's largest survey of international student satisfaction. The association between higher international student numbers and weaker student satisfaction is explored in Part 2 of this series. See commentary elsewhere in this report and at www.i-graduate.org.

³ There is some inconsistency in UK data. The UK Higher Education Statistics Agency reports 435,000 international students for 2011/12, while the OECD reports 560,000. The latter may include a portion of students enrolled in UK academic programs but studying in their home country. Such "cross-border" students are excluded from this report's definition of "international student".

⁴ All figures are from OECD (2013) *Education at a Glance*. Table C4.7. (Web only) Number of foreign students in tertiary education, by country of origin and destination (2011), and market shares in international education (2000, 2011).

⁵ The UK, France and Germany data includes other European Union students who benefit from subsidies equivalent to domestic students. This may be judged an "easier" source of international recruitment for institutions in these countries, but still presents service and experience challenges akin to those for international student generally. Later in this report, looking at English universities, a comparison is made between EU and non-EU international student totals.

⁶ Institute for International Education (2013) *Open Doors 2103 "Fast Facts."*

⁷ U.S. Department for Education- *Digest of Education Statistics Table 308.10*: Total 12-month enrollment in degree-granting institutions, by control and level of institution and state or jurisdiction: 2010-11 and 2011-12.

⁸ Institute for International Education (2013) *Fall 2013 Snapshot Survey Finds Strong Growth in International Students*, press release November, 11.

⁹ These ratios are lower than the c.20% figure derived from OECD data for the UK as a whole, which may reflect differences within the United Kingdom, but also definitional differences.

¹⁰ OECD uses the ISCED typology to distinguish international students by level, but this obscures a clear undergraduate/graduate distinction.

¹¹ IIE separates non-degree international students from undergraduate and graduate, and also calls out students engaged in "Optional Practical Training", a U.S. government initiative enabling certain international students to work while studying or upon completion of their studies. A portion of these students remain enrolled at a U.S. institution and are therefore presumably counted in IPEDS data. The size of this portion is not clear, nor the proportion of OPT individuals no longer enrolled at a U.S. institution and who may therefore not be counted in IPEDS data.

¹² When reporting enrollment data, IPEDS does not separate "undergraduates" into Bachelor's, Associate's, certificate and English Language students; nor distinguish graduate certificate students.

¹³ SEVIS, at least in public reporting, does not distinguish English Language and non-degree postsecondary students by type of institution- i.e. degree-granting versus non-degree-granting institutions. This paper used IIE breakouts to generate estimates.

¹⁴ i-graduate obtained this figure directly from the IPEDS database, which is publicly available. The figure has not otherwise been published.