



The Economic Impact of International Students in Hawaii



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EXECUTIVE SUMMARY

The number of foreign students in the United States has grown substantially in recent years and this number is expected to increase in the future. During the 2005-2013 period, international students doubled nationally, while the number of foreign students in Hawaii increased only 3.3 percent. In terms of share of foreign students in the U.S., Hawaii's share has decreased from 1.0 percent of the U.S. total in 2005 to a mere 0.5 percent in 2013.

In order to examine the number of international students in Hawaii and their contribution to the economy, the Department of Business, Economic Development and Tourism (DBEDT) conducted a survey of the educational institutions with foreign students. The *2015 Hawaii International Education Survey* collected data during the academic year 2014/15 regarding the number of foreign students, the program length, the amount of money they spent in the state, and the country of origin of the international students.

This survey was a follow up to a survey conducted in 2009. In 2009, 24 institutions responded, representing a total of approximately 13,000 foreign students. In 2015, 35 institutions responded, representing approximately 10,100 international students.

The total direct economic impact of Hawaii's international students in 2015 was estimated at \$205.1 million, higher than \$165.4 million estimated in 2009. This estimate included the total living expenses and institutional tuition and fees. In addition to the direct impact, other economic benefits of international students for the 2014/15 academic year included:

- \$443 million added to the state's total economic output, including direct, indirect, and induced effects.
- 4,922 jobs were supported by foreign student spending.
- \$185 million in household income can be attributed to foreign students.
- \$29 million in state taxes was generated from the total economic output of foreign students.

In comparing the 2009 and 2015 surveys, one difference that emerged was an increase in the percentage of long-term students as opposed to short-term students. Although the number of long-term students remained about the same, the percentage of international students in long term programs increased from 41 percent in 2009 to 52 percent in 2015.

Tuition and fees for long-term students increased substantially between the 2009 and 2015 surveys, resulting in higher overall economic impact in 2015. The overall aggregate per student spending, including living expenses and tuition and fees, increased to \$20,295 in 2015, compared with just \$12,654 in 2009. This result was true for international students in both long and short-term programs.

Hawaii has international students from all over the globe. Japan remains the top country of origin for Hawaii's international students, with 3,183 students studying in Hawaii in 2014/15, or about 31 percent of Hawaii's foreign students. Japan was followed by South Korea with 941 students (9 percent), China with 815 students (8 percent) Switzerland with 580 (6 percent), and Taiwan with 356 students (4 percent).

I. INTRODUCTION

Hawaii has traditionally been a magnet for foreign tourists as well as students. However, while Hawaii remains a top destination for tourists, it has lost its competitive position as a destination for international students. The drastic drop in Hawaii's competitive position becomes clear when examining Hawaii's share in relation to the total number of international students in the United States. Hawaii's share of international students entering the state on visas issued for study has decreased from 1 percent of the U.S. total in 2005 to 0.5 percent in 2013. Between 2005 and 2013, the number of total student visas in the United States more than doubled, while the number of students on visas coming to Hawaii increased by a mere 3.3 percent.

In order to further understand the trends of international students studying in Hawaii, the Department of Business, Economic Development, and Tourism (DBEDT) conducted a survey of the educational institutions offering enrollment options for foreign students, the **2015 Hawaii International Education Survey**. This survey was a follow up to a survey conducted in 2009.

Just like the survey conducted in 2009, the 2015 survey collected data from the educational institutions on the following:

- The number of international students enrolled in various programs during the 2014/15 academic year.
- The length of academic programs international students participated in.
- The tuition and fees paid by international students.
- The country of origin for the international student population.

A copy of the **2015 Hawaii International Education Survey**, is available in the appendix. This report is structured as follows:

Section II broadly reviews the distribution and specifics of foreign students in the United States.

Section III looks at Hawaii's competitive position and analyzes ways this position has been diminished.

Section IV examines the direct and indirect impacts of international student spending on Hawaii's economy and the results of the **2015 Hawaii International Education Survey**.

Section V analyzes outcomes of the **2015 Hawaii International Education Survey**, such as specifics on student spending, financial aid, and countries of origin. This section also compares the current survey with the outcomes of the 2009 survey, where possible.

Section VI concludes by summarizing the findings of the survey.

The purpose of this report is analyze the trends of international students studying Hawaii and estimate the economic impact on the state.

II. OVERVIEW OF FOREIGN STUDENTS IN THE U.S.

Among the sources of reference for information on foreign students in the United States, the Institute of International Education (IIE) annual survey tracks foreign students in the U.S. The 2014 survey showed that in the 2013/14 academic year the number of international students at colleges and universities in the United States increased by 8 percent, compared with the previous academic year, to a record high of 886,052 students. The report notes that the United States hosts more international students than any other country in the world.¹

One of the primary sources of international student growth in the U.S. has been China. The 2014 IIE report showed that there were five times as many Chinese students in the U.S., compared with the 2000 report. A comparison of the 2000 and 2014 reports highlighted other countries with high growth rates including Saudi Arabia (10 times), Vietnam (7.5 times), and India (2.5 times).

Where are international students from? While students from China and Saudi Arabia together account for 73 percent of the growth, a wide range of countries contributed to the remaining increase, with India, Brazil, Iran and Kuwait together accounting for an additional 18 percent of growth. Students from the top three places of origin—China, India, and South Korea—now represent approximately 50 percent of the total enrollment of international students in the United States, with the number from China and India increasing, and the number from South Korea declining.

The IIE report also lists student population growth rates compared to the previous year. The fastest growing countries of origin for students for the 2013/14 year were from Kuwait, Brazil, and Saudi Arabia, compared to the previous year. On the other hand, the number of students from France, Malaysia, and Thailand remained relatively flat.

The fastest growing regions for the 2013/14 year were the Middle East and North Africa, with an increase of 20 percent of students enrolled in U.S. institutions of higher education over the previous year. There were 8 percent more students from Latin America and the Caribbean. Students from Asia increased by 8 percent.

On the other hand, the IIE report notes that there were also declines in the number of students over the previous year from: Japan (down 1 percent), South Korea (down 4 percent), Taiwan (down 3 percent), Turkey (down 4 percent), and Nepal (down 9 percent). The factors driving these declines likely include a mix of global and local economic factors, and in some cases expanded higher education opportunities at home.

Another report, *The Geography of Foreign Students in U.S. Higher Education: Origins and Destinations* by the Brookings Institution finds that most foreign students come from large fast-growing cities in emerging markets. Ninety-four (94) foreign cities together accounted for more than half of all students on an F-1 visa between 2008 and 2012, with the top five being Seoul, Beijing, Shanghai, Hyderabad and Riyadh.²

¹ The 2014 Open Doors Report on International Educational Exchange, <http://www.iie.org/en/Who-We-Are/News-and-Events/Press-Center/Press-Releases/2014/2014-11-17-Open-Doors-Data>

² The Geography of Foreign Students in U.S. Higher Education: Origins and Destinations, <http://www.brookings.edu/research/interactives/2014/geography-of-foreign-students#/M10420>

Where in the United States do foreign students study? California hosted the most students from abroad with more than 100,000 international students in 2014. California was followed by New York, Texas, Massachusetts and Illinois. Six of the top ten destinations saw double digit growth between 2012/13 and 2013/14: Ohio (14 percent), New York (12 percent), Pennsylvania (11 percent) and Florida (11 percent), Massachusetts (10 percent) and Michigan (10 percent).

The Brookings report found that New York City was the top metropolitan area for international students, with a 13 percent increase between 2008 and 2012. All of the top 25 metropolitan areas with the exception of Houston had increases this year, with particularly strong increases between 2008 and 2012 in Pittsburgh (27 percent) and Phoenix (25 percent).

What is the economic contribution to the US economy? The Brookings report also examined the economic impact of international students' spending on the U.S. economy. Using data from the U.S. Department of Commerce, the report estimated that international student spending contributed approximately \$27 billion to the U.S. economy in 2013. About 74 percent of all international students receive the majority of their funds from sources outside of the United States, including personal and family sources as well as assistance from their home country governments or universities.

What do foreign students study? The Brookings study also showed that foreign students primarily study science, technology, engineering, mathematics (STEM) and business fields, with two-thirds of foreign students pursuing a bachelor's or higher degree in STEM or business, management and marketing fields.

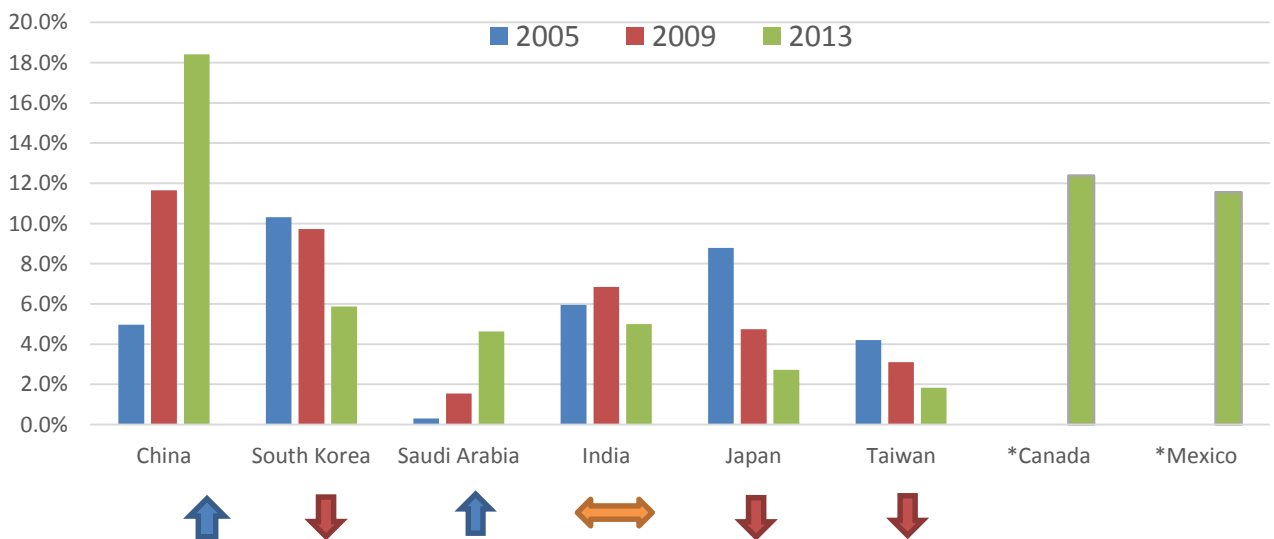
III. HAWAII'S COMPETITIVE POSITION

In addition to economic output, it is important to understand Hawaii's competitive position compared with the nation overall. The primary data source is IIE's Open Doors data, which is an annual survey of educational institutions conducted by the Institute for International Education. This is a comprehensive study that segments foreign students by country of origin, state, and field of study. The report includes time series data so that historical trends can be analyzed. However, one limitation of the Open Doors data is that it focuses exclusively on accredited institutions, which account for only about 43 percent of all foreign students in Hawaii (as reported by the U.S. Department of Homeland Security).

The second data source used for the competitive analysis is the Department of Homeland Security Yearbook of Immigration Statistics. Three visa classifications were used to calculate the number of foreign students: F-1 visa for academic students (78%), J-1 for exchange scholars (21%), and M-1 visa for vocational students (1%).

The number of foreign students in the United States has grown substantially in recent years and this number is expected to increase in the future. According to the Department of Homeland Security, the number of student and educational exchange/scholar visas has more than doubled during the 2005-2013 period, increasing from 972,298 in 2005 to 2,030,149 in 2013. Figure 1 shows the percentage of students admitted to United States on student visas by their country of origin, with the arrows indicating growth, decline, or approximately the same. The country that stands out is China, with their share of foreign student visas increasing from 5 percent in 2005 to 18.4 percent in 2013. Although the percentage of South Korean students has declined, the share remains fairly large. Saudi Arabia has shown strong growth increasing from a mere 0.3 percent in 2005 to 4.6 percent in 2013. There were also a large number of student visas issued for Canada and Mexico, but it is hard to track the growth due to data anomalies caused by changes in visa regulations.

Figure 1. Share of Student Visas by Origin Country 2005 – 2013: United States

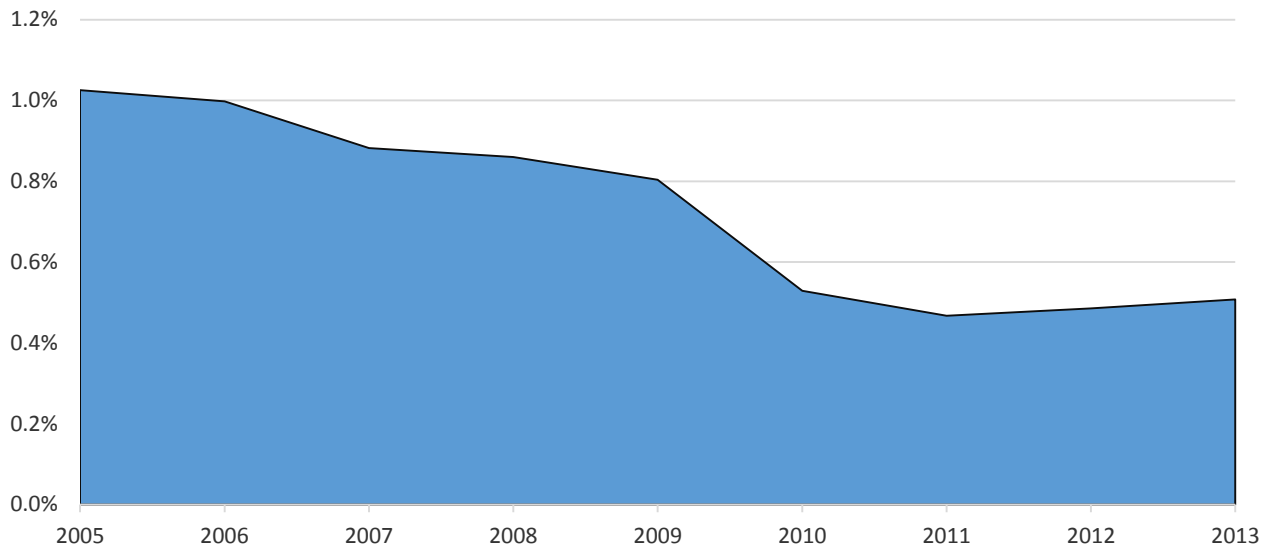


*Time comparison difficult for Canada and Mexico due to changes in visa regulations

Source: US Department of Homeland Security

In contrast to foreign students doubling at the national level, the growth of foreign students in Hawaii has remained fairly stagnant over the 2005-2013 period, increasing only 3.3 percent. This can be seen in Hawaii's competitive position as measured by the share of total foreign students in the U.S. This share has decreased from 1.0 percent of the U.S. total in 2005 to a mere 0.5 percent in 2013. (Figure 2). The State's loss of share can be primarily attributed to a shift in the origin country of foreign students.

Figure 2. Hawaii Foreign Student Share, 2005 – 2013

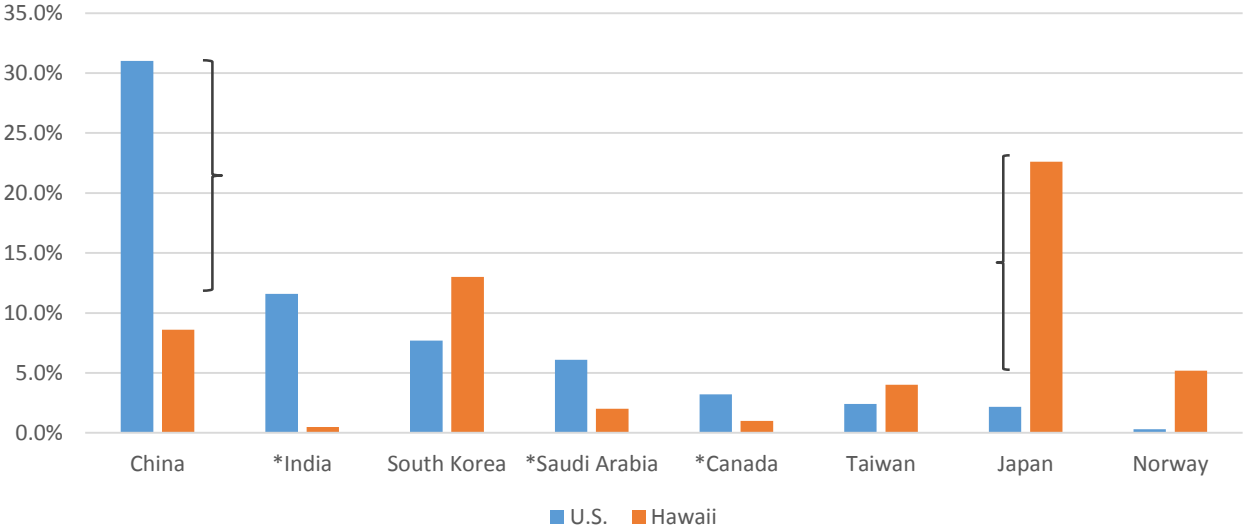


Source: US Department of Homeland Security

According to the Institute of International Education, in 2005, Japan had the second highest number of students studying in the U.S., comprising 8.8 percent of the total.³ However, Japan's share of total U.S. foreign students declined drastically to 2.7 percent by 2013/14 and this has had a direct impact on Hawaii. As shown in figure 3, Hawaii has had difficulty attracting students from growth countries, primarily China, but also including India and Saudi Arabia. From a strategic perspective, Hawaii has a large share of a shrinking market and a low share of growth markets.

³ Open Doors Data for the 2013/2014 academic year. <http://www.iie.org/>

Figure 3. Share of Foreign Students in United States and Hawaii, 2013/14



*Estimated for Hawaii

Source: US Department of Homeland Security

As referenced earlier, The Brookings Institution’s report, examines several comparative statistics regarding foreign students studying in the U.S. Hawaii ranks high on two of these metrics, concentration of foreign students (number of foreign students per 1,000 students) and foreign student retention (measured by the metropolitan area’s foreign graduates who found employment under the Optional Practical Training (OPT) program and remained in the area). For the first metric, concentration of foreign students, Hawaii ranks ninth in the nation⁴. For the second metric, foreign student retention, the Honolulu metro area ranks second in the country, with over 75 percent of students staying to work in the area under the optional program that allows the recent graduates to use and further develop their skills.

⁴ The Geography of Foreign Students in U.S. Higher Education: Origins and Destinations, <http://www.brookings.edu/research/interactives/2014/geography-of-foreign-students#/M10420>

IV. 2015 HAWAII INTERNATIONAL EDUCATION SURVEY– ECONOMIC IMPACT ANALYSIS

The estimate of the economic impact of foreign students in the State of Hawaii was calculated based on the results of the *2015 Hawaii International Education Survey*, conducted by DBEDT between January and March 2015. This survey was a follow up to a similar survey conducted in 2009.

Data Collection and Sources. Three methods were used to administer the survey; postal mail, e-mail, and an online survey. The sample frame consisted of 79 educational institutions located in Hawaii and identified by the US Department of Homeland Security’s (DHS) database called SEVIS (Student and Exchange Visitor Information System). A copy of the *2015 Hawaii International Education Survey*, is available in the appendix.

The survey asked educational institutions to report the number of international students and the estimated expenses for tuition, books and fees incurred by these students. The educational institutions were also asked the level and type of study programs their international students participated in during the 2014/15 academic year (e.g. middle and high schools students, undergraduate students, non-degree seeking students, etc.).

DBEDT received responses from 35 educational institutions in Hawaii, for a response rate of 44.3 percent. The institutions that responded accounted for 10,104 international students for the 2014/15 academic year. The number of foreign students covered by the survey was compared with other foreign student data sources to estimate the coverage of the survey. The main source for comparison was the U.S. Department of Homeland Security (DHS) annual *Yearbook of Immigration Statistics*. According to the *2013 Yearbook of Immigration Statistics* (the latest available), there were 10,298 people admitted to Hawaii on a student visa (type F-1 and M-1) and on an educational exchange/scholar visa (type J-1).

Although the 10,104 foreign students covered by the survey is similar to 10,298 student visas issued to study in Hawaii (*Yearbook of Immigration Statistics 2013*) indicating adequate sample coverage, these comparisons are not exact due to the following reasons:

1. *The Yearbook of Immigration Statistics* does not yet have the data for 2014, so DBEDT’s survey results and the *Yearbook of Immigration Statistics* cover different time periods (2013 versus 2014/15 academic year for survey)
2. *The Yearbook of Immigration Statistics* and the survey account for the total number of foreign students in different ways. *The Yearbook of Immigration Statistics* reports only international students admitted to Hawaii on student visas. Whereas, educational institutions responding to the survey reported all foreign students, not just the ones on student visas. They also reported international students who are in state as
 - a. permanent residents;
 - b. temporary visitors from visa waiver countries studying for short-term course (less than 90 days and, therefore, not requiring a visa - for example students

- from Canada, Western Europe, and some Asia-Pacific countries) as well as students in short-term programs on tourist visas (B-1); and,
- c. dependents, whose parents are in the state for reasons other than education.

With these caveats in mind, the survey does cover the majority of foreign students in Hawaii, since institutions that responded to the survey are some of the largest ones in the state. The majority of international students in Hawaii are concentrated in relatively few institutions and these responded to the survey. As a side note, weighting methodology was considered to estimate the impact of foreign students from institutions that did not respond. However, due to some international students not requiring a visa, using visa data from DHS for weighting proportions was not possible.

In addition to institutions that did not respond to the survey, another factor that was not included in the economic impact calculation was spending by family members living with international students. Furthermore, spending by friends and relatives that may come to visit was not included.

Therefore, the economic impact presented in this study is a conservative estimate and the actual figure is probably higher.

Methodology. The analysis presents two different estimates:

- 1) Direct Impact: This is an estimate of the direct dollars spent into Hawaii’s economy by foreign students including tuition, fees, and living expenses.
- 2) Direct + Indirect + Induced Impact: This is the direct impact plus the indirect and induced impact, which includes the ripple effect of foreign student expenditures on increased jobs, tax revenues, and household income.

1. Direct Economic Impact. In order to measure the direct impact of foreign students studying in Hawaii, an estimate must be derived for their tuition/fees plus living expenses minus the financial assistance they receive. The formula to calculate the direct economic impact of foreign students studying in Hawaii is:

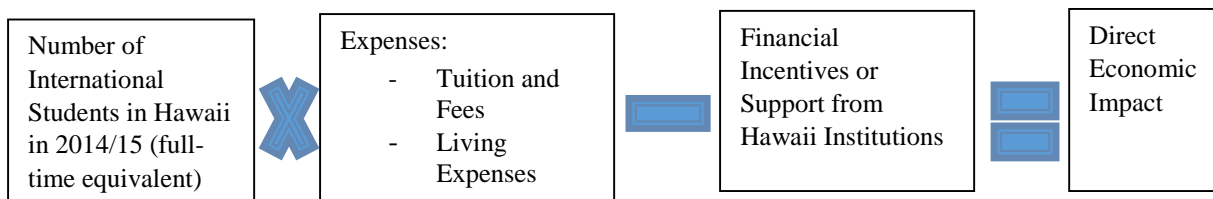


Table 1 presents a summary account of the different types of foreign students in Hawaii and how much they spent on tuition and fees and on living expenses. These categories show the direct economic impact of the students on the state. A majority of these students come to Hawaii to enroll in long-term academic study at the undergraduate or graduate level, working toward a degree. The long-term category also includes middle/high school students. The number of long-term students is 5,218, which is about 52 percent of the total.

**Table 1: Direct Economic Impact of International Students in Hawaii – Summary
Results of the 2015 Hawaii International Education Survey**

Category of International Students	Number of Students	Spending by International Students on	
		Tuition & Fees	Living Expenses
Long-Term Students	5,218	\$113,423,889	\$56,394,322
Middle/high school students	320	\$5,383,372	\$4,250,106
Degree seeking undergraduate students	3,877	\$70,985,429	\$39,823,107
Degree seeking graduate students	1,021	\$37,055,088	\$12,321,109
Short-Term Students	4,886	\$19,227,987	\$16,056,837
Non-degree seeking undergraduate students	911	\$9,137,959	\$5,469,580
Non-degree seeking graduate students	101	\$1,968,938	\$1,492,804
Short-term training program students/professionals	3,573	\$7,592,780	\$8,573,052
Students in summer/winter camps	275	\$524,830	\$315,133
Visiting scholars/teachers	19	\$3,480	\$206,268
Total	10,104	\$132,651,876	\$72,451,159

Source: DBEDT

2. Total Economic Impact and Number of Jobs Supported. The total economic impact for the State includes both the direct and indirect and induced impacts. The multipliers used for this calculation are from *The Hawaii State Input-Output Study: 2007 Benchmark Report (Revised December 2013)*. Type II final demand multipliers were used, which include direct, indirect, and induced effects. The following formula was used to calculate the total economic impact and the number of jobs supported by foreign students in Hawaii for 2014/15:

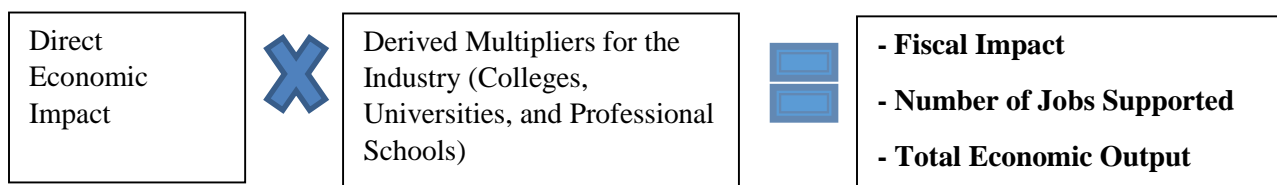


Table 2 summarizes the findings and shows the economic impact of foreign students studying in Hawaii. The first line of the table shows the **total number of jobs supported** generated by foreign students studying in Hawaii (Type II multiplier). Given an estimated economic impact of \$205.1 million in 2014/15, 4,922 jobs were supported.

Table 2: Total Economic Impact of International Students in Hawaii, 2014/15

Direct Impact (total spending from Table 1)		\$205,103,035
	Final Demand Multiplier (Type II)	Economic Impact (Type II)
Total Number of Annual Jobs (2014)	24 (per \$million)	4,922
Total State Taxes Generated	0.14	\$28,919,528
Total Income Generated	0.9	\$184,592,732
Total Output Generated	2.16	\$443,022,556

Source: DBEDT, calculations are based on the Hawaii State Input-Output Study: 2007 Benchmark Report (Revised December 2013)

In addition to the number of jobs supported by the foreign students in the state, the *total state taxes generated* line shows the estimated tax revenue that can be attributed to foreign students studying in Hawaii. Nearly \$29 million has been generated by the foreign students in the state in 2014/15.

Total household income generated refers to the estimated household earnings that can be attributed to foreign students studying in the State. Hawaii households earned an estimated total of close to \$185 million, thanks to the international students during the 2014–15 school year.

Finally, *total output generated* points to the total dollar change in output in all industries in the state, resulting from the inflow of money spent by foreign students in Hawaii. Total output generated by international students in Hawaii is estimated at over \$443 million.

V. SURVEY RESULTS

Data comparisons (2009 and 2015 surveys). Due to differences in the responses of the two surveys, caution must be used when comparing the results of the 2009 and 2015 surveys. In 2009, 24 institutions responded, representing a total of approximately 13,000 foreign students. In 2015, 35 institutions responded, representing approximately 10,100 international students. With this in mind, an analysis of the survey results between the two periods revealed broad trends that could be interpreted with caution.

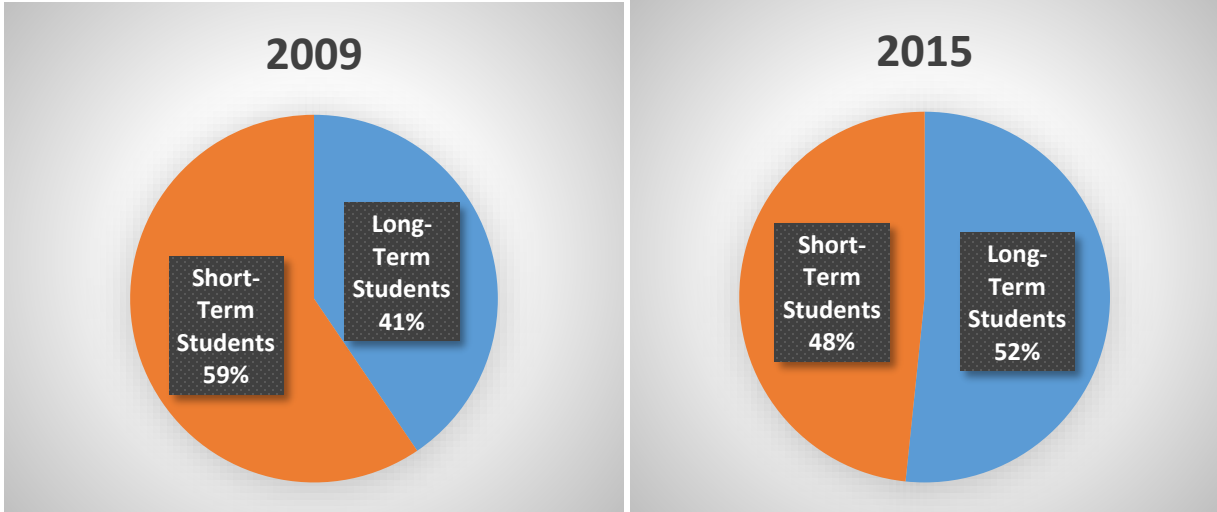
The decline in the number of international students between the two survey periods is similar to a decline in student visas issued for studying in Hawaii. According to the US Department of Homeland Security's *Yearbook of Immigration Statistics* the number international students entering the country to study in Hawaii declined from 10,640 in 2009 to 10,298 in 2013 (the latest year available).

Although the Department of Homeland Security student visa numbers are similar to the survey numbers, there is a slight discrepancy caused by the fact that some international students do not require visas. As mentioned above, this visa exempt group includes permanent resident visa holders, students from visa-waiver countries that attend short-term programs not exceeding 90 days, students attending language and other short-term programs on tourist visas, and, students who are in the state as dependents on their parents' visas.

Although the two periods showed a decline in international students, it is possible that the 2014/15 academic year had an increase in the number of visa exempt foreign students that came to Hawaii for a short-term programs including language training, educational exchange, visiting scholars, or summer/winter camps. While the number of students participating in short-term programs was estimated from the DBEDT survey data, the actual number is probably higher due to the non-response of some institutions.

Change in the categories of students. Given the cautionary notes above, a comparison of the 2009 and 2015 periods showed a proportional share shift from shorter-term programs to longer-term degree seeking programs. This shift is positive for the state because, even though the overall numbers declined, the amount of spending per international student is much higher for students participating in long-term programs. Figure 4 below highlights the shift from short to long-term programs.

Figure 4. Categories of Foreign Students in Hawaii, 2009 and 2015



Source: DBEDT, 2015 International Education Survey; 2009 International Education Survey

As noted above, the shift from short-term to long-term programs has a positive impact on the state due to a larger economic impact. It brings in more revenue to educational institutions as well as increases the economic ripple effect generated by the foreign students paying rent, buying groceries, along with other spending within the state.

As shown in Table 3, the long-term student impact on the local economy is significantly higher than the short-term student impact. Nonetheless, short-term programs are beneficial since they do generate tuition and spending and also serve as a bridge for foreign students to transition to longer-term programs.

Table 3. Spending by International Students in Hawaii by Program Length: 2014/15 Academic Year

Category	Long-Term Programs	Short-Term Programs
Number of Students	5,218	4,886
Average Length of the Program (days)	365	75
Total Spending (\$)	169,818,211	35,284,824
Living Expenses (\$)	56,394,322	16,056,837
Tuition and Fees (\$)	113,423,889	19,227,987
Average Spending per Student (\$)	32,545	7,222

Source: DBEDT, 2015 International Education Survey

Spending per student. There was a substantial increase in spending by international students between 2009 and 2015. The overall spending per student, including living expenses and tuition and fees, increased from an estimated \$12,654 in 2009 to an estimated \$20,295 in 2015 (including both short-term and long-term programs). Total spending by foreign students in the state increased 24 percent, from an estimated \$165.4 million in 2009 to \$205.1 million in 2015. This increase was in spite of the fact that there were fewer students reported in the 2015 survey.

The spending increase partially reflects the shift from short-term to long-term programs. As noted above, the percentage of students enrolled in long-term programs increased between 2009 and 2015, resulting in higher expenditures per student.

Another factor was the increase in tuition and fees. While the total number of long-term students remained about the same between 2009 and 2015 (5,296 foreign students in 2009 and 5,218 foreign students in 2015), tuition and fees for these students increased between the two periods.

Spending per student by category. Spending by international students working towards a degree at the *undergraduate level* has increased from 2009 to 2015. In 2009, average fees for foreign students enrolled in schools offering full-time bachelor programs totaled \$28,518 per year in tuition/fees and living expenses. For 2015, this amount increased to a total of \$36,760 per year (\$14,721 in living expenses and \$22,040 in tuition and fees) for full-time international students at colleges and universities in Hawaii. However, due to financial aid and other reported institutional resources, full-time undergraduate international students reduced the amount to an average of \$28,581, which was the net amount spent by a full-time student in this category. This net amount spent by the undergraduate international students is about 12 percent higher than in 2009.

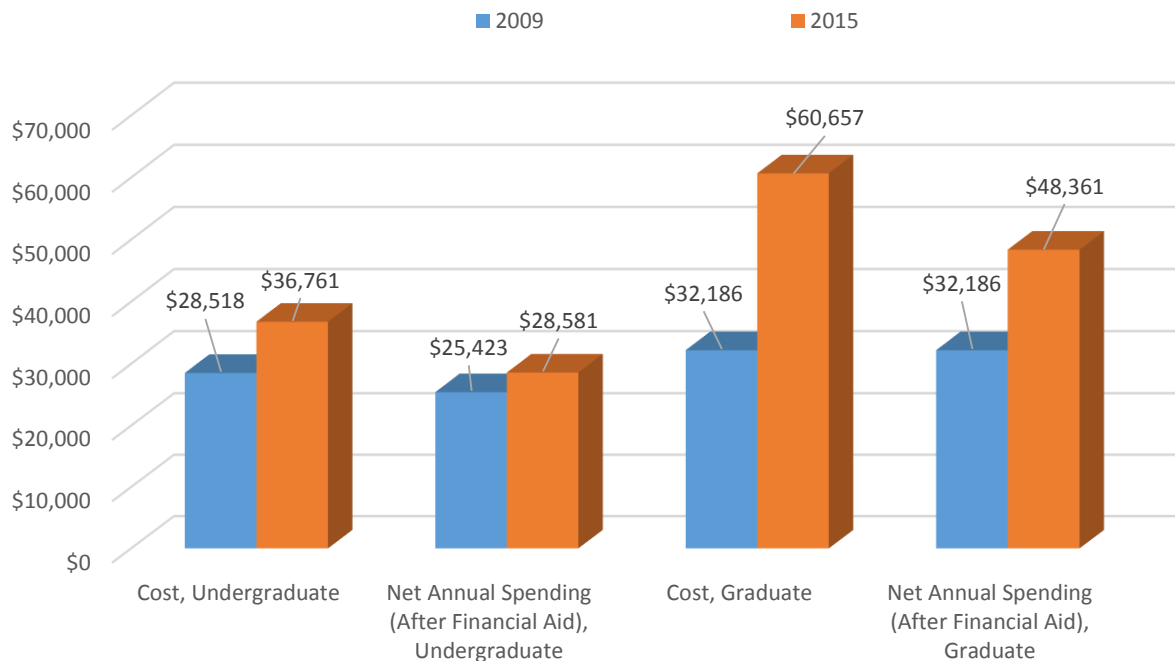
Costs increased even faster at the *graduate level*, fueled largely by tuition increases. In 2015, average fees for a full-time graduate or professional international student in Hawaii totaled \$60,657 (or \$16,363 for living expenses and \$44,294 for tuition and fees). This was a significant increase from \$32,186 needed for a year of graduate-level study in 2009. Graduate students have also benefitted from financial aid, which reduced the amount to \$48,361, which was the net amount spent by a full-time graduate foreign student in Hawaii in 2014/15. The net amount spent by the graduate foreign students is now substantially higher than in 2009, increasing by about 50 percent.

Average fees for international students in Hawaii at the *middle and high school* level totaled about \$27,649 per year (approximately \$10,781 for living expenses and \$16,686 in tuition and fees). The survey showed an increase in the number of students at the middle and high school level from 220 in 2009 to 320 in 2015. However, these results need to be interpreted with caution due to the small sample size for the middle and high school institutions in the 2009 survey.

Net spending per student and financial aid to foreign students. According to the results of the 2015 survey, institutions have increased the amount of financial aid available to foreign students. Most often, international students are eligible only for merit aid provided by the host

institutions (although students who are U.S. permanent residents -those with green cards-are also eligible for federal financial aid in addition to any institutional aid they may qualify for). At most institutions, financial aid is only provided for long-term students, who are taking classes for credit and are working towards completion of requirements for a degree.

Figure 5. Impact of Financial Aid to Foreign Students, 2008/09 and 2014/15



Source: DBEDT, 2015 International Education Survey, 2009 International Education Survey

Financial aid has increased for students at all levels. Both undergraduate/graduate and professional students have benefitted from financial aid, as seen in the graph above, reducing substantially their financial obligations to the host institutions. The increase in financial aid could partially reflect an increase in competition among educational institutions to attract international students. In addition to assistance, financial aid is an effective tool to attract and retain quality students.

Countries of origin of international students in Hawaii in 2014/15. Japan remained the top country of origin for Hawaii’s international students, with 3,183 students studying in Hawaii in 2014/15, or about 31 percent of Hawaii’s foreign students. Japan was followed by South Korea with 941 students (9 percent), China with 815 students (8 percent) Switzerland with 580 (6 percent), and Taiwan with 356 students (4 percent).

Table 4 lists the top 25 countries of origin for international students. Students from the top 25 countries account for about 82 percent of all foreign students in Hawaii in 2014/15. It is important to note that this table is based on survey data and varies slightly from the competitive analysis section which is based on IIE and visa data.

Table 4. Countries of Origin of International Students in Hawaii, 2014/15

Rank	Country	Number of Students
1	Japan	3,183
2	South Korea	941
3	China (including Hong Kong, Macao)	815
4	Switzerland	580
5	Taiwan	356
6	Norway	324
7	Germany	267
8	Brazil	203
9	Canada	160
10	Sweden	156
11	Philippines	146
12	Vietnam	135
13	Saudi Arabia	107
14	Marshall Islands	96
15	Thailand	94
16	Samoa	90
17	Micronesia	84
18	Australia	76
19	France	74
20	Mexico	72
21	Indonesia	69
22	Denmark	66
23	UK	62
24	Fiji	61
25	Spain	56

Source: DBEDT, 2015 International Education Survey

Unfortunately, it is not possible to compare the country of origin of foreign students with the *2009 Hawaii International Education Survey* due to survey differences. As an alternative, the Open Door 2014 survey report is used for comparison, with the limitations that only the top five countries are listed and the sample of students differs (only those enrolled for credit, i.e. long-term students). The pattern in the top five countries between the DBEDT and Open Door survey are similar with four out of the top five origins being the same: Japan (first), South Korea (second), China (third), and Taiwan (fifth). The difference is the fourth spot. The DBEDT survey results had Switzerland as fourth, whereas the Open Doors lists Norway (which is sixth in the DBEDT survey).

In order to further understand the data, the top 25 countries of origin were grouped into four segments with common traits:

The first is the Asia-Pacific segment. This group includes countries with strong historical and diaspora links to Hawaii such as Japan (number 1), China (number 3), South Korea (number 2), and Taiwan (number 5). It also includes countries in the Asia-Pacific region with an emerging middle class: Philippines (number 11), Vietnam (number 12), Thailand (number 15), and Indonesia (number 21).

The second is the emerging market segment. This group of students is from emerging market countries, such as Brazil (number 8), Saudi Arabia (number 13), and Mexico (number 20) will continue increasing, given better economic conditions in these countries and their expanding middle class.

The third is the colder/wetter climate segment. While this is not a regional segment per se, it includes countries where students may desire to escape the climate of their home country. This group includes Switzerland (number 4), Norway (number 6), Germany (number 7), Canada (number 9), Sweden (number 10), France (number 19), Denmark (number 22), and United Kingdom (number 23). International students from these countries will likely continue having strong interest in Hawaii and there appears to be potential to target these areas based on Hawaii's climate.

The fourth is the Pacific-Island Segment. This group includes the Marshall Islands (number 14), Samoa (number 16), Micronesia (number 17), and Fiji (number 24) as well as Australia (number 18). However, the potential of students from these countries is limited (except for Australia), given their relatively small populations.

VI. CONCLUSIONS

The data presented in this report were the results of the *2015 Hawaii International Education Survey*, supplemented with other data sources. DBEDT received responses from 35 out of 79 educational institutions with foreign students in Hawaii for a response rate of 44.3 percent. However, Hawaii's major educational institutions did respond and, therefore, a majority of Hawaii's international students were covered by the survey.

The total direct economic impact of international students for the 2015 survey (2014/15 academic year) was an estimated \$205.1 million (an increase from \$165.4 million estimated from the 2009 survey). This amount included tuition and fees plus living expenses. This is a conservative estimate and this amount covers international students at 35 educational institutions in Hawaii that responded to the *2015 Hawaii International Education Survey*.

One area the survey did not cover was spending by spouses and dependents of the international students studying in Hawaii. Therefore, the economic impact would likely be larger if family members were considered.

In addition to the direct impact, other economic benefits of international students for the 2014/15 period included:

- \$443 million added to the state's total economic output, including direct, indirect, and induced effects.
- 4,922 jobs were supported by foreign student spending.
- \$185 million in household earnings can be attributed to foreign students.
- \$29 million in state taxes was generated from the total economic output.

While the number of long-term students remained about the same between 2009 and 2015 (there were 5,296 foreign students in 2009 and 5,218 foreign students in 2015 enrolled in long-term programs), tuition and fees for these students increased substantially. The overall aggregate per student spending, including living expenses and tuition and fees, increased in 2015 to \$20,295 compared with just \$12,654 in 2009. This was the average for long-term and short-term programs combined.

As shown above, direct spending increased from \$165.4 million in 2009 to \$205.1 million in 2015. In addition to tuition increases, another contributing factor was a higher proportion of international students in long-term programs. The proportion of students in long-term programs increased from 41 percent in 2009 to 52 percent in the 2015 survey. Since these students reside in the state for a longer period, they spend more on annual basis and this increased the overall total.

The cost to attend a *full-time undergraduate program* in Hawaii increased for international students for the 2014/15 period. On average, full-time international student annual expenses were an estimated \$36,760, including tuition/fees and living expenses (\$14,721 in living expenses and \$22,040 in tuition and fees). However, thanks to financial aid and other reported institutional resources, full-time undergraduate international students have been able to reduce the total amount to an average of \$28,581. This is the net amount spent by a full-time student

in this category, having increased by about 12 percent from 2009.

Attending a *full-time graduate program* of study in Hawaii increased even more for an international student. This is largely due to tuition increases. In 2014/15, average expenses for a full-time graduate or professional international student in Hawaii totaled \$60,657 (or \$16,363 for living expenses and \$44,294 for tuition and fees) – a significant increase from fees amounting to \$32,186 for a year of graduate-level study in 2009. Graduate students also benefitted from financial aid, reducing their expenses to an average of \$48,361. The net amount spent by a full-time graduate or professional foreign student in Hawaii in 2014/15 is significantly higher than the net amount spent in 2009, increasing by about 50 percent.

Middle and high school international students spent on average \$27,649 per year (approximately \$10,781 for living expenses and \$16,686 in tuition and fees) in 2014/15. The 2015 survey covered a larger number of students (320) and educational institutions (15) than the 2009 survey.

Hawaii’s educational institutions welcome students from all over the globe. Japan remains the top country of origin for Hawaii’s international students, with 3,183 students studying in Hawaii in 2014/15, or about 31 percent of Hawaii’s foreign students. Japan was followed by South Korea with 941 students (9 percent), China with 815 students (8 percent), Switzerland with 580 (6 percent), and Taiwan with 356 students (4 percent).

The survey revealed other trends regarding the origin of international students. One interesting fact that emerged was that there were a significant number of students from countries located in the colder climates, such as Switzerland, Norway, Germany, Canada, Sweden, France, Denmark, and the United Kingdom. Students from these so-called “weather challenged countries” accounted for approximately 17 percent of the total.

Another important group with a substantial number of students in Hawaii is the Pacific Island region including the Marshall Islands, Micronesia, Samoa, Fiji, as well as Australia.

In addition to the regions above, there is tremendous opportunity to attract international students from emerging markets with large populations including Brazil, Philippines, Vietnam, Thailand, Mexico, and Indonesia. Students from these countries already compose an important group and also offer growth potential due to their growing middle class and links to Hawaii.

In looking towards the future, international students can serve as a bridge for Hawaii to grow connections with the global economy. Hawaii is well positioned to attract more international students with quality educational institutions, as well as cultural, geographic, and quality of life advantages.

APPENDIX: 2015 Hawaii International Education Survey

International Education Survey

Department of Business, Economic Development & Tourism

January, 2015

A. CONTACT INFORMATION

Contact name
Position title & Office
Institution
Address
City
State
Zip code
Telephone/Fax
Email

B. ENROLLMENT

Please choose the most applicable category or categories, then provide the number of enrollment:

	Summer 2014	Fall 2014	Spring 2015
Total enrollment			
INTERNATIONAL Students			
Middle/high school students			
Degree-seeking undergraduate students			
Non-degree-seeking undergraduate students			
Degree-seeking graduate students			
Non-degree seeking graduate students			

Number of INTERNATIONAL students enrolled between Fall 2014 to Spring 2015 (Please use the attached sheet if more than one)	Number of enrollment	Length of Program (days)
Short-term training program students/professionals		
Students in summer/winter camps		
Visiting scholars/teachers		

Number of INTERNATIONAL family members accompanying students/trainees (via invitation letters from your institution)

E. FINANCIAL SUMMARY: The average financial requirement needed per person per year for INTERNATIONAL students

	Cost of living	Tuition and fees
Middle/high school students		
Degree-seeking undergraduate students		
Non-degree-seeking undergraduate students		
Degree-seeking graduate students		
Non-degree-seeking graduate students		
Short-term training program students/professionals		
Students in summer/winter camps		
Visiting scholars/teachers		

F. FINANCIAL ASSISTANCE: Lump sum amount of financial assistance through tuition waivers, scholarships, and any other financial assistance to INTERNATIONAL students/scholars

	Dollar amount
Middle/high school students	
Degree-seeking undergraduate students	
Non-degree-seeking undergraduate students	
Degree-seeking graduate students	
Non-degree-seeking graduate students	
Short-term training program students/professionals	
Students in summer/winter camps	
Visiting scholars/teachers	

G. PLACE OF ORIGIN

	Number of students
American Samoa	
Argentina	
Australia	
Belgium	
Brazil	
Cambodia	
Canada	
Chile	
China, PRC	
China, Hong Kong	
China, Macao	
Colombia	
Costa Rica	
Czech Republic	
Denmark	
Ecuador	
Egypt	
Fiji	
Finland	
France	
French Polynesia	
Germany	
Greece	
Hungary	
India	
Indonesia	
Iraq	
Ireland	
Israel	
Italy	
Japan	
Jordan	
Kazakstan	
Kenya	
Kiribati	
Korea, South	
Laos	
Lebanon	
Lithuania	
Malaysia	
Marshall Islands	
Mexico	
Micronesia	
Mongolia	
Morocco	

Nepal	
Netherlands	
New Zealand	
Nicaragua	
Norway	
Pakistan	
Palau	
Peru	
Philippines	
Poland	
Portugal	
Romania	
Russia	
Saudi Arabia	
Singapore	
Slovakia	
South Africa	
Spain	
Sri Lanka	
Sweden	
Switzerland	
Taiwan	
Thailand	
Turkey	
Ukraine	
United Kingdom	
Uruguay	
Venezuela	
Vietnam	
Western Samoa	
Other (Please Specify)	

H. COMMENTS: Please use this section if you need to explain or clarify your responses.
