The Economic Value of International Student Enrollment to the U.S. Economy

Methodology by Jason L. Baumgartner
CEO & Founder, JB International

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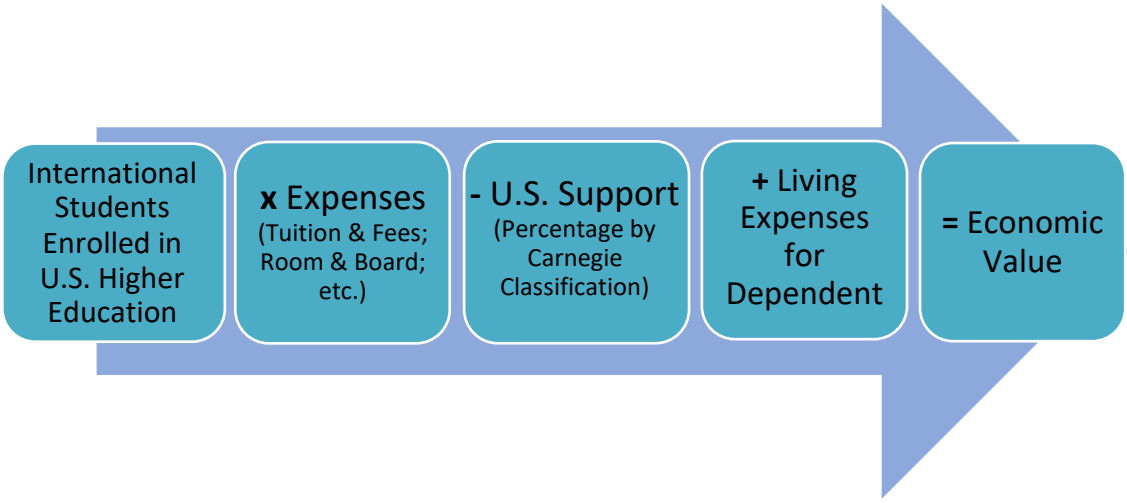
As displayed in NAFSA's *International Student Economic Value Tool Powered by JB International*, we define economic value as the amount of money that international students studying at U.S. colleges and universities collectively bring into the United States to pay for their education and to support themselves while they (and in some cases, their families) are here in the United States. The goal of our economic value analysis is to use data already collected for other purposes to provide a reasonable estimate of the economic resources that international students import to the United States to support their education here each year.

There are two main outputs from this analysis:

> Part (1): Estimate of Economic Value, which is the overall imported dollars from international students without any multiplier effect; and
>
> Part (2): Estimate of Jobs Created/Supported, which is both the direct and indirect (i.e. multiplier) of jobs created and supported via the import dollars from international students studying in the United States.

PART (1): ESTIMATE OF ECONOMIC VALUE

To determine the appropriate direct import dollars from international students studying at U.S. institutions of higher education, it is necessary to determine the costs associated with U.S. higher education along with living expenses, minus any U.S.-based financial support that an international student may receive. This allows us to determine the proper dollar-based monetary import estimate coming into the U.S. economy. The following algorithm outlines the effort for precision in this estimate, along with its comprehensiveness, to analyze as much of a complete picture as possible.



ECONOMIC VALUE ALGORITHM

DATA SOURCES

The data sets used for this year's analysis come from the following sources:

1. **The *Open Doors* Report on International Educational Exchange**
   Published annually by the Institute of International Education (IIE) in partnership with the U.S. Department of State's Bureau of Educational and Cultural Affairs, the report provides the overall numbers of international students enrolled at U.S. colleges and universities during the academic year. In many cases, this data provides separate totals for undergraduate, graduate, and non-degree students. Additionally, the report outlines sources of funding, as international students are required to provide evidence of funding for entry into the United States. https://opendoorsdata.org

2. **The U.S. Department of Education's National Center of Educational Statistics Integrated Postsecondary Education Data System (IPEDS)**
   IPEDS gathers information from every college, university, and technical and vocational institution that participates in federal student financial aid programs. The Higher Education Act of 1965, as amended, requires institutions that participate in federal student aid programs to report data on enrollments, program completions, graduation rates, faculty and staff, finances, institutional prices, and student financial aid. https://nces.ed.gov/ipeds/about-ipeds

3. **Petersons Data's Undergraduate Institutional Data**
   Petersons Data's Undergraduate Data Set is one of the most comprehensive and complete databases in the field of higher education. It features information highlighting nearly 4,200 two-year and four-year undergraduate institutions throughout the United States, Canada, Mexico, and a number of institutions abroad.

https://petersonsdata.com/undergraduate-institutional-data

4. **Common Data Set**
   The Common Data Set (CDS) initiative is a collaborative effort among data providers in the higher education community and publishers as represented by the College Board, Petersons Data, and U.S. News & World Report. Please note that CDS data are published by each individual institution on their respective websites. https://commondataset.org/

The extensive data provided by these sources, which gather it directly from surveys of U.S. colleges and universities, allow us to make our estimates sensitive to differences between institutions. The analysis is specific to each institution's student expenses and the type of student (i.e., undergraduate, graduate, non-degree) reported by each institution. Furthermore, the analysis is broken down by the tuition and fees at specific institutions and a derived living expense based upon the reported institutional living expenses plus estimated incidentals.

The Common Data Set (CDS) was introduced in the 2024-25 cycle as an additional check on institutional funding for international undergraduate students. In some cases, the U.S.-based funding information reported to *Open Doors* differs from what the same institution reported to CDS. There are two primary reasons for this. First, the surveys ask slightly different questions. *Open Doors* focuses on identifying primary sources of funding rather than collecting raw counts or dollar amounts. Second, there may be inconsistencies in how institutions report data to *Open Doors* versus to the CDS. Moving forward, the CDS will be an ongoing supplemental component of our analysis.

For over a decade, we have used IPEDS as our primary resource for U.S. college and university tuition and living expense data. Starting in 2024-25, IPEDS was unable to release expense data in time for this analysis. As a result, an alternative dataset was needed. Petersons Data had available undergraduate expense data but not graduate-level data. To address this, we used Petersons Data for the undergraduate data and applied the same percentage change observed between 2024-25 and 2025-26 to the 2024-25 graduate expense data from IPEDS to estimate 2025-26 graduate expenses. The practical assumption is that the rate of change would be similar across academic levels for most institutions. When IPEDS releases both undergraduate and graduate expense data early in 2027, we will review the results to determine whether this approach produced any significant variance compared to prior years when only IPEDS data was used.

Note: We only compute economic value for international student enrollment as collected by the *Open Doors* report. U.S. colleges and universities that do not submit enrollment data to the survey are not represented. Also, enrollment may represent peak enrollment, and not necessarily enrollment levels throughout the year.

ESTIMATE OF EXPENSES | OVERALL TUITION AND FEES PLUS LIVING EXPENSES

The estimates for tuition and fees plus living expenses are derived from a combination of IPEDS and Petersons Data collected on surveys completed by colleges and universities every year. We try to make our calculations sensitive not only to differing costs at these institutions, but differing costs for the following student groups:

1) **Undergraduates:** The number of undergraduate students at an institution is specified by the *Open Doors* data. Petersons Data provides undergraduate in-state and out-of-state tuition and fee amounts, books and supplies, on-campus and off-campus room and board amounts, and miscellaneous expenses.

2) **Graduate Students:** The number of graduate students at an institution is specified by the *Open Doors* data. IPEDS data provides graduate in-state and out-of-state tuition and fee amounts, books & supplies, on-campus and off-campus room and board amounts, and miscellaneous expenses. If there are no differentiated graduate expenses provided by an institution in the IPEDS data, then the undergraduate expenses would be applied. However, for this year, only the prior year's (2024-25) IPEDS expense data was available, and neither IPEDS nor Petersons Data could provide updated graduate-level data in time for our analysis. To address this, we calculated the percentage change in undergraduate expenses from 2024-25 to 2025-26 and applied that rate to the prior year's Petersons Data graduate expense data to estimate graduate expenses for 2025-26.

3) **Non-degree and University-based English Language Programs:** The number of non-degree and English language program students at an institution is specified by the *Open Doors* data. The same Petersons Data used for the undergraduate expenses was used for this population, except at 75 percent of the undergraduate tuition and fee amounts. Undergraduate estimates were also used for per student living and miscellaneous expenses.

4) **Students on Post-Completion Optional Practical Training (OPT):** These are individuals that have completed a degree program and are no longer enrolled. Additionally, we assume these students earn enough during their OPT to cover living expenses for the year and so import no added funds to the U.S. economy. Therefore, the net economic value of students pursuing OPT is zero.

Incomplete or invalid information (i.e., low reported numbers) will be derived for each of the above population groups. Derived tuition and fees are based on population type and the institution's Carnegie classification. Derived living expenses are based on population type and the state location of the institution.

The economic value of an international student equals tuition and fees (including books and supplies), plus 12-month annualized room and board, plus 12-month annualized miscellaneous expenses, minus any U.S. support. We assume that spring enrollment figures are the same as the

fall figures reported, that all students are enrolled full time for two semesters (or three quarters) a year, and that students primarily reside at the institution's metropolitan location for the full year. We assume students will be staying at that location with none to only very limited summer coursework, or traveling within the U.S., during some part of the summer term.

ESTIMATE OF EXPENSES | LIVING AND MISCELLANEOUS

As a baseline, miscellaneous expenses, as enumerated in the data from IPEDS or Petersons Data, average about 40 percent of room and board. The analysis done for this work, as outlined above, produces an annualized room and board expense amount. Then, for the derived miscellaneous expenses, we use a 50 percent figure as an approximation that includes all extra expenses except for international travel, as those expenses may not be directed back to the U.S. economy.

The resulting derived estimated living expenses, which are all non-education expenditures, essentially represent the derived annualized living expenses as containing 40 percent for accommodations (dormitories, apartments with utilities, etc.), 25 percent for food, dining, and nightlife, 20 percent for discretionary (entertainment, apparel, U.S. travel, all retail, etc.), 5 percent telecommunications (phone, data plans, internet), 5 percent for on-going transportation (gas, insurance, public transport), and 5 percent for health insurance. The annualized room and board expenses represent 65 percent for accommodations, food, dining, and nightlife. The derived miscellaneous expenses represent the remaining 35 percent from above.

ESTIMATE OF EXPENSES | DEPENDENTS

The *Open Doors* survey collects information from institutions about the percentage of married students by student type (i.e., undergraduate, graduate, etc.) This information is used to determine an estimate of additional living expenses necessary to support dependent spouses and children. There is an estimate that 85 percent of married international students have their spouses with them with an additional 25 percent increase in living expenses.* From the number of couples, there is an estimate that 60 percent have at least one child, with an additional 20 percent increase in living expenses for this child. The overall additional value measured for dependents is relatively small, and consistently less than 3 percent of the overall living expenses and less than 2 percent of the overall final economic value amount.

(*The estimated rate of 85 percent of married international students whose spouse accompanies them, along with the 60 percent likelihood of a child, is derived using a sample U.S. research university's population. Additionally, the rate increase of 25 percent for an additional spouse and the rate increase of 20 percent for an additional child align with other, similar rate increases such as the expenses detailed on a typical Form I-20 or DS-2019, along with other publicly available guidelines, such as the U.S. poverty guideline tables (see http://aspe.hhs.gov/poverty/).)

ESTIMATE OF U.S. SUPPORT

The *Open Doors* survey asks U.S. colleges and universities to report the percentage of international students who are self-funded, the percentage who have U.S. source income, etc.

The U.S. support percentage includes funding from a U.S. college or university, the U.S. Government, a U.S. private sponsor or current employment. For this analysis, the percentages are calculated based upon the institution's Carnegie classification and the academic career of the student.

This level of distinction is useful, as there are different levels of U.S.-based support. For example, an international PhD student at a U.S. research university is typically funded by the university. However, both international undergraduates and professional graduate students studying law or business, for example, are largely self-funded or funded from sources outside the United States. The calculated U.S.-based support is then a reduction of the economic value, as any U.S.-based money an international student receives and uses for tuition or living expenses must be considered a debit against the overall total economic value.

As stated earlier, starting in the 2024-25 cycle, additional funding data collected from the CDS has been incorporated into the analysis. The CDS provides another reporting source through which schools may indicate institutional financial aid awarded to undergraduate degree-seeking nonresidents (international students). This addition helps to address two potential issues. First, some students may receive institutional aid that does not constitute their primary source of funding and therefore is not reflected in *Open Doors* data. Second, and more impactful, discrepancies can occur between what institutions report to *Open Doors* and what they report to the CDS as these sections are not always completed consistently.

ADDITIONAL NOTES

As mentioned above, **all international students on OPT are excluded from the overall economic value calculation**, as they are largely post-degree students undertaking U.S.-based practical training and assume their earnings cover living expenses. However, they are included in the overall enrollment number.

In addition to only computing economic value for students at U.S. institutions that submit enrollment data to the annual *Open Doors* report, **we also do not publish individual U.S. institutions where the economic activity is below the amount sufficient to create or support at least one U.S. job.**

The *Open Doors* survey does collect enrollment data from higher education institutions in **Puerto Rico**, the **U.S. Virgin Islands**, the **Northern Mariana Islands,** and, new this year, **Guam**. Their data are included within the overall total enrollment and financial contribution figures cited. However, because the U.S. Department of Commerce does not include these U.S. territories in their datasets for calculating the multiplier effect of jobs created and/or supported by trade, we are unable to calculate a complete jobs analysis for each and therefore do not generate individual reports on their economic contributions.

About Fluctuations: There may be fluctuations between overall enrollment and overall economic value at the national, state, congressional district, or institution level. This is due to several variables that comprise the economic value calculation. For example, an institution could

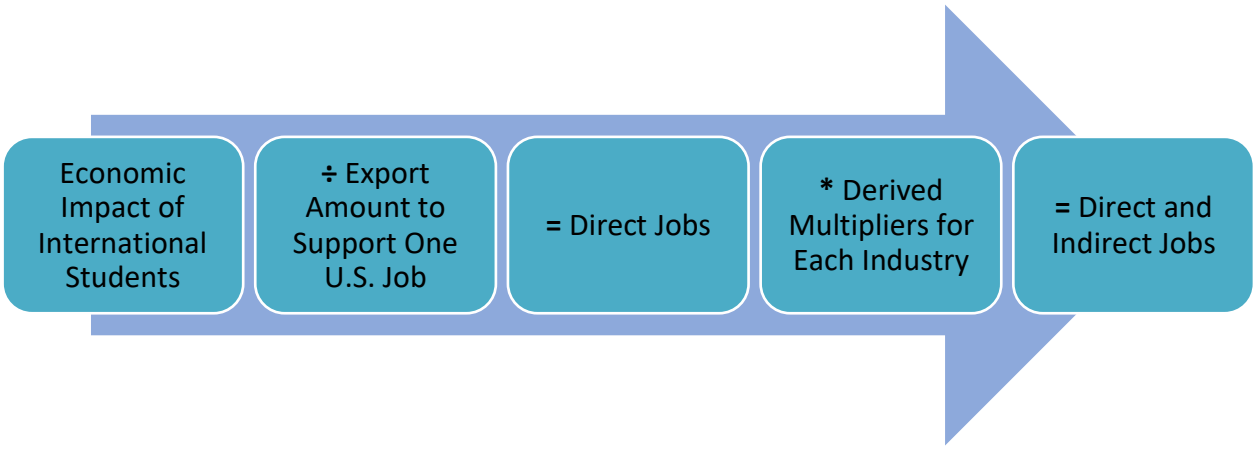
have a slight decrease in international student enrollment with a slight increase in tuition and living expenses, resulting in an overall increase in economic value. Another institution could have an overall increase in their international student enrollment, but with a different mix of undergraduates, graduates, and those on OPT. That mix could result in a lower economic value, for as cited earlier, graduate students generally receive more university funding, while those on OPT have a zero impact on the economic value calculation. All these variations are accounted for within the overall analysis. In fact, we are seeing a faster expansion of OPT than actual enrollment in recent years and for the first time in the 2025-2026 academic year, students pursuing OPT now represents just over 29 percent of the international student population in the U.S.

PART (2): ESTIMATE OF JOBS CREATED/SUPPORTED

The goal here is to determine the appropriate direct and indirect (multiplier effect) number of U.S. jobs created and/or supported, based upon the above estimate of economic value of direct import dollars from international students studying at U.S. institutions of higher education. The following algorithm provides for both direct and indirect jobs created and/or supported.

Note that the derived data is in decimal format and rounded when summed at various groupings at the congressional district, state, and national level. The rounding at these different levels may have a fractional difference when compared between the rounded grouped values.

JOBS CREATED/SUPPORTED ALGORITHM



DATA SOURCES

The data sets used for this analysis come from the following sources:

1) Part (1): Estimate of Economic Value from above provides the direct dollar value at the institutional, congressional district, state, and national level. http://nafsa.org/economicvalue

2) The U.S. Department of Commerce's International Trade Administration (ITA) provides information concerning the amount of export dollars necessary to directly support a U.S. job. This provides a means to calculate the number of direct jobs. http://www.trade.gov/

   Additional Reports:

   "Jobs Supported by Exports, 1993-2011", Martin Johnson and Chris Rasmussen, Office of Competition and Economics Analysis, Manufacturing and Services, International Trade Administration, U.S. Department of Commerce, October 2012. https://legacy.trade.gov/mas/ian/build/groups/public/@tg_ian/documents/webcontent/tg_ian_003978.pdf

   "Jobs Supported by Exports 2016: An Update", Chris Rasmussen, Office of Trade and Economic Analysis, International Trade Administration, U.S. Department of Commerce, August 2017. https://legacy.trade.gov/mas/ian/build/groups/public/@tg_ian/documents/webcontent/tg_ian_005543.pdf

3) The U.S. Department of Commerce's Bureau of Economic Analysis (BEA) provides datasets for calculating the multiplier effect of jobs created and/or supported by international trade. http://www.bea.gov/

4) The U.S. Department of Labor's Bureau of Labor Statistics (BLS) provides monthly consumer price index (CPI) changes that reflect inflation. https://data.bls.gov/timeseries/CUUR0000SA0&output_view=pct_12mths

5) Research on an extended multiplier effect that occurs in innovation sectors by Enrico Moretti, PhD, professor of economics at the University of California, Berkeley, as detailed in his book, *The New Geography of Jobs* (2012). http://emlab.berkeley.edu/~moretti/

DEFINITIONS OF DIRECT AND INDIRECT JOBS

Direct Job: This is a job directly created and/or supported by the import of revenue from outside the United States as a result of any export trade. In this case the export trade is higher education, along with living expenses, for an international student during their time in the United States while using money from their home country.

Indirect Job: This is a job that is created and/or supported indirectly from the above direct job's existence. This is a multiplier effect in which the spending from a directly supported job will thus help to indirectly create and/or support other jobs in the workplace.

ESTIMATE OF DIRECT JOBS CREATED/SUPPORTED

ITA provides annual amounts of U.S. exports in goods and services necessary to create and/or support a job. For years not provided, it is derived from prior findings in an incremented fashion. **For the 2025-2026 academic year, this derived estimate is calculated to be $358,000 in export value necessary to support one U.S. job.** We arrive at this calculation by using the average inflation rate published by BLS over the academic year of July 2025 through June 2026 and then rounded to the nearest thousand resulting in the new derived estimated value. This is an increase of 2.9 percent from the prior year's calculation ($348,000). It is this value that is applied to the results of Part (1) from above to determine the direct number of U.S. jobs supported by international students studying in the United States.

ESTIMATE OF INDIRECT JOBS CREATED/SUPPORTED

BEA provides datasets for calculating the multiplier effect of jobs created and/or supported by trade. These datasets, known as RIMS II, are specific to industries at the state level. The specific industry datasets used in this analysis include datasets for education, accommodations, food services and drinking places, retail trade, telecommunications, transit and ground passenger transportation, and insurance carriers. This enables us to conduct the analysis separately for the tuition revenue, based on the RIMS II education area, and the living expenses, proportionally based on the other RIMS II industry areas.

According to University of California, Berkeley economics professor Enrico Moretti, as outlined in his book, *The New Geography of Jobs* (2012), in the case of research universities, as defined by Carnegie classification, the multiplier effect from the RIMS II education used on the tuition revenue is only adjusted based on the level of research activity. Starting with the 2025-26 cycle, Carnegie now provides research activity designations. For those in Research 1: Very High Research and Doctorate Production, the multiplier on tuition only is tripled from 1.2 – 1.8 multiplier range to 3.6 – 5.4 multiplier range. For those in Research 2: High Research Spending and Doctorate Production, the multiplier on tuition only is now doubled from 1.2 – 1.8 multiplier range to 2.4 – 3.6 multiplier range. All others, regardless of institutional Carnegie classification, do not get this additional multiplier. This is a change from applying the triple effect on all previously designated Research 1 institutional designation.

Moretti states that innovation "has a disproportionate effect on the economy of American communities. Most sectors have a multiplier effect, but the innovation sector has the largest multiplier of all: about three times larger than that of manufacturing." Accordingly, large U.S. research universities, such as MIT, Purdue, Indiana University, UC Berkeley, etc., all have a teaching and research mission. Many of these institutions also have extensive research parks, labs, and direct connections to moving their innovations from the institution to the broader market. Thus, citing Moretti's research, we can show a larger multiplier effect from jobs supported at U.S. research universities than from jobs supported by other types of U.S. colleges and universities.

ESTIMATE OF TYPES OF JOBS CREATED/SUPPORTED

In estimating the type of direct jobs created/supported by the economic value of international students, we used the same proportions as defined in Part (1) above. Tuition and fees fully support direct jobs in higher education. Living expenses support direct jobs in the areas of accommodations (dormitories, apartments with utilities, etc.) at 40 percent, food, dining, and nightlife at 25 percent, discretionary (entertainment, apparel, U.S. travel, all retail, etc.) at 20 percent, telecommunications (phone, data plans, internet) at 5 percent, on-going transportation (gas, insurance, public transport) at 5 percent, and health insurance at 5 percent.

In estimating the type of indirect jobs created/supported, we used BEA's RIMS II datasets, along with Professor Moretti's research findings on the upward multiplier revision for innovation jobs connected with U.S. research universities. The outcome of this analysis, while tied to the appropriate primary industry, will also have indirect jobs created and/or supported across various other industries.

Jason Baumgartner, CEO & Founder of JB International, LLC (JBI), developed the methodology and has conducted the annual analysis for 25 years. The Trilby Suite software platform for immigration compliance is also developed and maintained by the JBI team. Before launching JBI, Jason spent 20+ years working at Indiana University-Bloomington. During that time, he created the sunapsis software solution, which is used by over 100 U.S. universities and colleges for immigration compliance. Ned Hummel, JBI's Lead Data Engineer, is now equally involved in all aspects of this annual project.