

The Economic Impact of International Students in Spain

2020

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SPAIN EDUCATION PROGRAMS

Executive Summary

This is the sixth issue of the study of the economic impact of international students in Spain first launched by the Association of North American Programs (APUNE) in 2006. In this edition we have continued to incorporate educational categories to include US study abroad, Erasmus+, language and culture, undergraduate, graduate, and the Instituto Cervantes' programs.

The research, supported by the ICEX and the association EDUESPAÑA, maintains its initial aim to serve as an information piece to advocate with Spanish authorities and stakeholders for the removal of barriers that negatively impact enrollments, and to inform the greater public on the benefits of this economic activity. The analysis herein not only measures expenditures made by these international students in Spain, but also accounts for the considerable multiplier effect of those expenditures.

Our findings show that 1,044,898 internationals enrolled at Spanish institutions in the 2018-2019 academic year. We determine that their overall economic impact on the Spanish economy amounts to 3,795,740,732 euros and that the multiplier effect for student spend is 2.27. A multiplier effect of 2.27 indicates that for each euro spent on their academic program, these international students spent an additional 1.27 euros on a broad range of sectors of the Spanish economy.

Enrollment in Spanish language programs is the most numerous, accounting for 47% of the total. IC students completing courses at centers abroad and candidates for the institute's standardized testing follow, with 27%. The remaining 26% includes master's, undergraduate, US study abroad, and Erasmus+ students.

Master's programs remain the category with the largest impact, followed by undergraduate degrees, Spanish language, US study abroad, and ERASMUS+. Instituto Cervantes' activities have a negative impact, as the result of the public funding received by the institute which exceeds its yearly revenue. The highest per-student impact is also that of internationals enrolled in master's degrees followed by undergraduates. These two categories represent 15% of the international student population, yet they account for 65% of the overall economic impact from the export of education. These findings place universities and graduate professional schools at the forefront of the industry.

Spain has remained a preferred educational destination for international students throughout the past three decades, a trend which continued in 2018-2019. This was also the last academic year before the COVID-19 pandemic impacted the globe, bringing student mobility almost to a dead stop. It is important to employ these findings as a base on which to predict how different categories of programs can best recover, helping Spain regain its place as a privileged global destination.

A 2.27 multiplier indicates a high level of dependence on students attending onsite programs. In all categories, except for master's degrees, participants spend more on the extra academic aspects of their experience than on their tuition. Even if these categories migrate to strong online components, a lack of internationals arriving in the country will result in immense indirect losses of revenue across industries.

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International students and the academic providers that recruit them contribute to the financing of the Spanish taxation system in two ways. First, a portion of their indirect spending (2,122,311,675 euros) is subject to a value added tax of 4% to 21%. Second, at least three types of programs (study abroad, language schools, and Instituto Cervantes) hire 7,791 faculty and staff for whom they make payments to the social security administration¹. If not for the international education market, this highly qualified personnel will likely become part of the unemployed population obliged to survive on public funding.

To these we should add all jobs created as the result of the indirect spending of students in their host communities, including neighborhood cafés and restaurants, grocery stores, gyms, pharmacies, clothing stores, travel and transportation, hotels, etc. It is important that those who have not worked in international education understand that this is not an industry of large corporations. Most stakeholders are mid to small schools, professionals and public servants who believe in the social impact of their work, local businesses, and citizens who profit from internationalization experiences.

While the focus of this study is on the economic impact of this sector on the Spanish economy, we highlight the need for the recognition of all added social benefits of the export of education as a pending subject with the broader public in Spain. This comprises the constructive social outcomes that derive from the presence of international students, including: the modernization of educational institutions², the internationalization of host communities, the development of the socio-cultural environment, and eventually the enhancement of the policies and politics that will shape Spain's international relations. The carbon footprint estimates for these categories³ should also be considered and become a component of future studies,

Leontief's input-output model, which served as a conceptual framework for this study, "can be applied to any kind of economic system during any phase of its development"⁴. Our analysis, as in any other economic impact study, is an approximate process where "output numbers should be regarded as a 'best guess' rather than as being inviolably accurate"⁵. Nonetheless, producing these measures allows us to raise awareness on the benefits of this activity, helps advocate for reasonable legislation, provides data for strategic planning, and favors the quality of educational programs of all types. All of these fortify the country's assets as an excellent educational destination for all kinds of students.

¹ We considered that Erasmus+, undergraduate, and masters' programs did not require hiring additional personnel to host international students.

² Dr. Alvaro Escribano, Director of the Carlos III International School at Universidad Carlos III de Madrid. Personal communication, March 2, 2017

³ Wiedmann, T. (2009). A review of recent multi-region input-output models used for consumption-based emission and resource accounting, *Ecological Economics*, Volume 69, Issue 2 (pp. 211-222)

⁴ Miernyk, William H., "The Elements of Input-Output Analysis" (2020). Web Book of Regional Science. 6. <https://researchrepository.wvu.edu/rri-web-book/6> (p. vi)

⁵ Journal of Travel Research, p. 81, A Guide for Undertaking Economic Impact Studies: The Springfest Example, retrieved June 20, 2016, from http://agrilife.org/cromptonrpts/files/2011/06/3_4_7.pdf

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Introduction

The purpose of this study is to estimate the overall economic impact of international students attending various types of programs based in Spain during the 2018-2019 academic year, to inform public and private stakeholders, help shape more effective institutional policies and legislation, and provide a data-based advocacy tool to further international exchange and cooperation.

This research continues to broaden its scope in comparison to earlier versions of the same study⁶. To the four categories in the 2019 edition, we now add the impact of undergraduate students and that of candidates participating in Instituto Cervantes' (IC)⁷ activities. Also, while in the prior edition we had focused on graduate business degrees, we have now expanded this category to include internationals enrolled in all master's programs.

The six categories of educational programs subject of this study are: US Study Abroad (SA), Erasmus+, Spanish Language, Undergraduate Degrees, Master's Studies, and courses and official testing of the Instituto Cervantes.

Scope of the Study and Expected Outcomes

The purpose of this study is to assess the economic impact of international students in Spain, including the multiplier effect for other industries.

To achieve this goal, we seek responses to the following questions:

1. Which are the most relevant indicators of the economic impact of these international students in the Spanish context?
2. How many international students enrolled and for what length?
3. How should the direct and indirect effects, generated by students attending each of these programs, be quantified?

Review of Existing Literature

To determine what research design will best produce a realistic estimate of the overall effects of this economic activity, we review similar studies completed in other countries, examine economic impact articles outside the field of education, and explore different data-collection and analysis methods⁸.

⁶ See the Economic Impact of International Students in Spain 2019, at [Economic-Impact-of-International-Students-in-Spain-2018-FINAL.pdf \(spaineduprograms.es\)](https://spaineduprograms.es/Economic-Impact-of-International-Students-in-Spain-2018-FINAL.pdf)

⁷ The IC "was founded by the Spanish government in 1991 to promote the teaching, use and study of the Spanish language and to contribute to the advancement of Spanish, Hispanic and Latin American cultures throughout the world".

⁸ See Annex 1 for additional information on literature.

Research Design

The conceptual framework for this research is Professor Wassily Leontief's input-output analysis based on economic interdependence, focused on the quantitative relations among the components of an economic system and their effect on one another⁹. We adopt Miller and Blair's more contemporary application of this model¹⁰ to clarify the types and roles of multipliers, and how employing these would best contribute to the purpose of our study.

Miller and Blair distinguish between Type I or *simple multipliers*, when only direct and indirect effects are considered; and Type II or *total multipliers*, when direct, indirect, and induced effects are employed. Type I multipliers are likely to produce lower estimates of economic impact than Type II, as the latter include also the induced effects resulting from a specific trade activity.

Within Leontief's framework, using an input output model as a base for analysis, and according to Miller and Blair's more contemporary applications we make assumptions, as follow:

- Direct effects are the expenditures related to the delivery of an academic program, including fees paid to local schools and, in some cases, professors' salaries.
- Indirect effects result from direct impacts and occur as international students attending an educational program in Spain spend money on other sectors of the economy, such as: housing, travel, cultural activities, transportation, and leisure.
- Induced effects are secondary effects to indirect impacts, which can: (a) happen during or after the educational program; and (b) be the result of spending by individuals other than the student. Examples of induced impacts are family and friend's visits, future return trips, an increase in the consumption of Spanish goods abroad, and the strengthening of commercial bonds between Spain and the students' home countries.

Identifying the most relevant measures of the economic impact of international students in Spain is fundamental for our research to produce accurate findings. As in our previous study, we must choose whether to consider the direct, indirect, and induced effects of the economic activity (Type II multipliers), or to address only the first two (Type I multipliers).

While we acknowledge the relevance of induced consequences brought about by visiting international students, measuring these is beyond the scope of our work. Thus, we employ Type I indicators (direct and indirect impacts) and postpone the evaluation of the induced effects which remains a relevant topic for future research.

⁹ Wassily Leontief (1906-1999) earned the Nobel Prize in Economics for his development of this model.

¹⁰ Miller, Ronald E.; Blair, Peter D. *Input-Output Analysis: Foundations and Extensions*. Cambridge, GBR: Cambridge University Press, 2009. Retrieved February 10, 2017, from: <http://site.ebrary.com/lib/mitlibraries/Doc?id=10329730&ppg=44>, (p. 244)

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Methodology and methods

We approach this as a quantitative study that requires identifying trusted sources and employing various methods for data collection (see Table 1). We complete a member check process for data, rationales, and analysis, with experts in each of the fields.

Table 1: Sources and types of data used to quantify direct and indirect impacts

	SOURCES	TYPE OF EXPENSE
Study Abroad	APUNE program directors	→ Academic program delivery → Extra-academic items and services → Student/personnel ratio
	→ APUNE survey on salaries → Instituto Nacional de Estadística → ADECCO / Infojobs report → Régimen General de la Seguridad Social	Personnel costs
	APUNE students	Living and leisure expenses
Erasmus	→ SEPIE → The European Commission	Public funding for outgoing Erasmus participants
	→ SEPIE → Public (online) sources	Living and leisure expenses
Language and Culture	→ EDUESPAÑA → FEDELE	→ Academic program delivery → Student/personnel ratio
	Public (online) sources	Living and leisure expenses
Undergraduate Degrees	→ Ministry of Science, Innovation and Universities / EDUCABASE → Public (online) sources	→ Tuition → Living and leisure expenses
	Graduate Schools	→ Ministry of Science, Innovation and Universities / EDUCABASE → AEEN → EDUESPANA → RUCT → Professional schools' websites → Universities' websites
Public (online) sources		Living and leisure expenses
Instituto Cervantes	Instituto Cervantes	→ Courses, exams, and other fees collected → Personnel in Spain → Public funding received by the IC

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In response to Research Question 1: Which are the most relevant indicators of the economic impact of these international students in the Spanish context?

The complete list of direct and indirect effects for each student cohort, employing Type I indicators, is displayed in Table 2.

Table 2: Conceptually clustered matrix displaying the direct and indirect effects of international students

STUDENTS	DIRECT EFFECTS	INDIRECT EFFECTS
US Study Abroad	<ul style="list-style-type: none"> ▪ Academic program delivery ▪ Personnel: leadership and staff, plus Seguridad Social benefits 	<p><u>Paid for by programs:</u></p> <ul style="list-style-type: none"> ▪Housing ▪Orientation and welcome ▪Local cultural activities ▪End of semester workshops, receptions, and other activities ▪Medical insurance ▪Excursions <p><u>Paid for by individual students:</u></p> <ul style="list-style-type: none"> ▪Local transportation ▪Cell phone ▪Travel ▪Leisure activities
Erasmus	(Public funding awarded to Spanish Erasmus students attending programs abroad)	<p><u>Paid for by individual students:</u></p> <ul style="list-style-type: none"> ▪Housing: room and board ▪Local transportation ▪Independent travel ▪Leisure ▪Shopping and others
Language and Culture	Language program delivery	
Undergraduate Degrees	Academic program delivery	
Master's Degrees	Academic program delivery	
Instituto Cervantes	<ul style="list-style-type: none"> ▪ Course fees ▪ Test fees ▪ (Public funding awarded to the Instituto Cervantes) 	

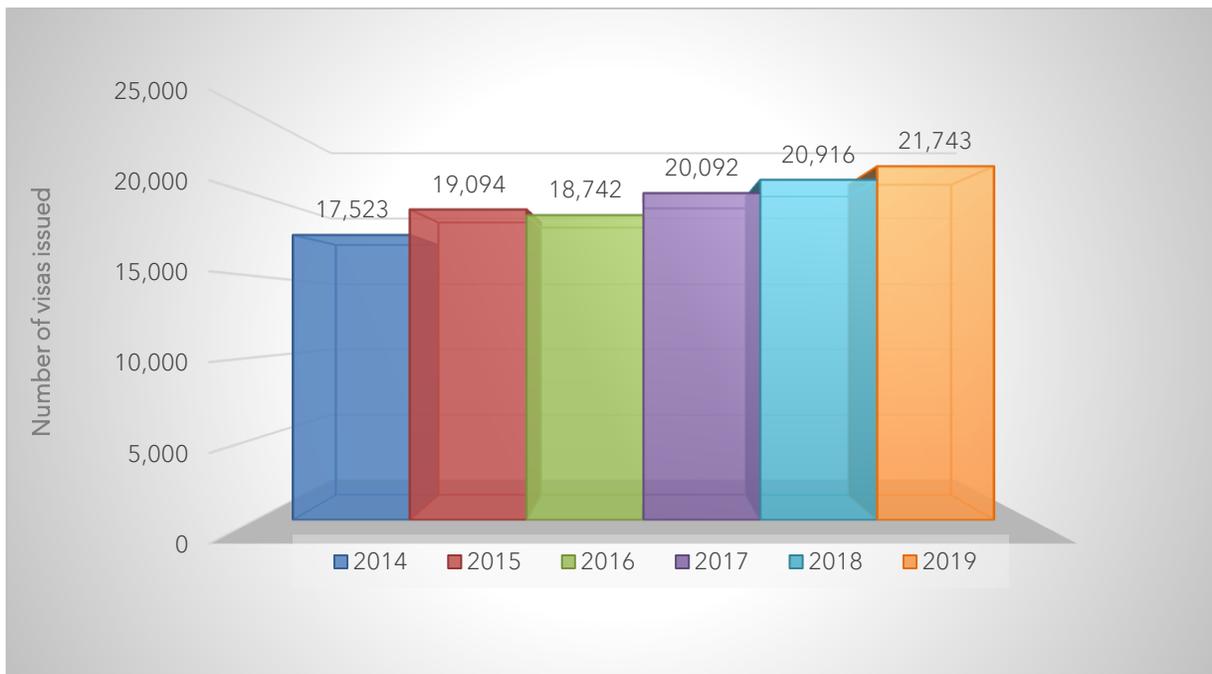
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In response to Research Questions 2 and 3: How many international students enrolled and for what length? and how should the direct and indirect effects generated by students attending each of these programs be quantified?

US STUDY ABROAD (SA)

The Ministry of Inclusion, Social Security and Migrations records numbers of mandatory visas granted to US students per calendar year. The average number of visas granted for 2018¹¹ and 2019¹² for stays longer than 90 days was 21,329¹³, sustaining a growth trend since 2016 (see Chart 1).

Chart 1: Trend for Spain visas issued in the US



We determine percentages of students attending programs of different lengths employing Open Doors 2019 Graphics' data¹⁴, as follow:

- 65% attended programs of less than 8 weeks
- 33% attended semester, one quarter or two quarter programs
- 2% studied abroad for the academic year

¹¹ Retrieved July 2020, from *Visados expedidos en oficinas consulares 2018*, at:

<http://extranjeros.inclusion.gob.es/es/Estadisticas/operaciones/visados/index.html>

¹² Retrieved July 2020, from *Visados expedidos en oficinas consulares 2019*, at: [PORTAL DE INMIGRACIÓN.](https://portal.inmigracion.gob.es/)

[Visados expedidos en oficinas consulares. Resultados \(inclusion.gob.es\)](https://portal.inmigracion.gob.es/visados-expedidos-en-oficinas-consulares-resultados)

¹³ This is the average of 20,916 students in 2018 and 21,743 students in 2019. While there are typically more students enrolled in the spring than in the fall, we assume that the average per-semester in 2018 balances with the average per-semester in 2019.

¹⁴ Retrieved August 31, 2020, from: <file:///C:/Users/CG/Downloads/Open-Doors-Graphics-2019.pdf>

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Semester¹⁵, two quarters, and academic year SA students would have applied for a student visa. Based on the average of the past five years¹⁶, we determine that 2.3% of participants attended one-quarter programs in 2018-2019 (see Table 3). Subtracting the percentage of one-quarter students, we assume that 32.7% of US students applied for a visa to enter Spain.

Table 3: Percentage of US SA students who enrolled in a quarter program

	YEAR	2013/14	2014/15	2015/16	2016/17	2017/18
Percentage of quarter students		2.4	2.2	2.3	2.2	2.4
5-year average		2.3%				

Applying the Open Doors percentages¹⁷, the visas issued by the Ministry would account for 32.7% of the total number of students who attended programs in Spain, and the remaining 67.3% would have attended programs of 13 weeks or less. We infer that a total of 65,226 US study abroad students attended programs in Spain in 2018-2019. Figures, by length of stay, are displayed in Table 4.

Table 4: Number of SA students in Spain, in the 2018-2019 academic year, by length of stay

PROGRAM LENGTH	NUMBER OF VISAS ISSUED	PERCENTAGE OF STUDENTS	NUMBER OF STUDENTS
Summer & others, less than 13 weeks	0	67.3%	43,897
Semester or 2 quarters	20,024	30.7%	20,024
Academic year	1,305	2%	1,305
Total	21,329	100%	65,226

Study abroad classes are delivered via various models –typically programs will offer direct enrollment at a local institution, *cursos de extranjeros*, and or US university courses set up by providers. Most participants are enrolled in courses specifically designed for internationals and or offered by a US program provider, with few students opting for direct enrollment¹⁸. In addition to tuition, study abroad programs usually provide a broad range of student services for which they hire local personnel including

¹⁵ We assume the length of a semester to be between 14 and 16 weeks.

¹⁶ Retrieved August 31, 2020, from: <https://opendoorsdata.org/data/us-study-abroad/duration-of-study-abroad/>

¹⁷ The difference between our visa-based figures and those provided in the *Open Doors* reports could respond to the fact that not all US institutions whose students attend programs in Spain report their data to the IIE.

¹⁸ According to Monica Perez-Bedmar, Executive Director of APUNE, direct enrollment typically requires a high command of Spanish and the ability to adapt to teaching styles with a strong direct instruction component (M. Perez-Bedmar, personal communication December 2, 2020).

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staff and management. Faculty and staff will typically start each term's work prior to the first day of class and will end work a few days later, so we adopt the following work/class term lengths (see Table 5).

Table 5: Term lengths for employees and students

TERM	LENGTH FOR EMPLOYEES	LENGTH FOR STUDENTS
Academic Year	Nine months	Eight months
Semester	Four ½ months	Four months
Summer & other short terms	One ½ months	One month

Quantifying the direct effects of SA students

The surveys completed by APUNE program directors helped us define the costs of academic program delivery, personnel, and student services. Most of the items returned clear quantitative values from which we can produce average per student per term amounts. Personnel costs require collecting additional data and making some qualitative decisions prior to quantifying their impact.

To determine personnel expenditures, we look at data in a 2018 APUNE survey (Program Questionnaire) where the average salary for a program director was quoted as being 60,000 euros per year. According to the same source, the average salary for staff amounted to 31,200 euros per year.

We add benefit amounts, using data drawn from the country's Seguridad Social administration, to produce the total compensation costs. We presume that most staff would fall under the *Oficiales Administrativos* category, who contribute 9,450 euros, for nine months of work per year¹⁹. For leadership positions (likely under: *Ingenieros y Licenciados, Personal de Alta Dirección*), the average social security adds up to 17,596.8 euros per year. The resulting personnel costs for the SA cohort, including wages and mandatory social security benefits, are 40,650 euros per staff member and 77,597 euros per leadership position.

With student to staff ratios from the APUNE surveys, we determine how many personnel would be hired to work for these programs (14.83/1) which we round to 15 students per employee. We use Spain's standard –employees receive 12 months of compensation for 11 months of work– to turn months of employment into full time equivalents (FTEs) (see Table 6).

¹⁹ Retrieved September 5, 2020, from: BASES DE COTIZACIÓN MENSUALES, at <http://www.seg-social.es/wps/portal/wss/internet/Trabajadores/CotizacionRecaudacionTrabajadores/36537#36538>

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Table 6: Study Abroad personnel costs

TERM/STUDENTS	STUDENT/STAFF		PERSONNEL MONTHS	FTEs	WAGES	TOTAL COST
Summer 43,897		Total	4390	399		
		Staff	3512	319	40,650	12,977,549
		Leadership	878	80	77,597	6,193,212
Semester 20,024	15/1	Total	6007	546		
		Staff	4806	437	40,650	17,759,468
		Leadership	1201	109	77,597	8,475,264
Academic Year 1,305		Total	783	71		
		Staff	626	57	40,650	2,314,833
		Leadership	157	14	77,597	1,104,696
SUM			11180	1016		€ 48,825,022

The direct impact of SA students results from adding academic program delivery and personnel costs (see Table 7).

Table 7: Direct impact of SA students (in Euros)²⁰

		YEAR	SEMESTER	SUMMER	TOTAL
Number of Students		1,305	20,024	43,897	65,226
Academic program delivery	Per student	6,000	3,000	1,000	
	All students	7,830,000	60,072,000	43,897,000	111,799,000
FTE Personnel	Staff	57	437	363	34,837,050
	Leadership	14	109	91	16,605,758
Total Direct Impact SA					€ 163,241,808

Quantifying the indirect effects of SA students

We survey directors of US university programs²¹ to identify the main items and services on which institutions and participants made expenditures during a term in Spain. Results are displayed in Table 8.

²⁰ Given the minimal levels of inflation in Spain, we assumed that both academic program delivery and students' spending had remained the same as that of 2017-2018 (see Table 6).

²¹ The number of responses from APUNE member institutions has continued to increase throughout the various editions, with 60% more directors participating this year than in the previous edition.

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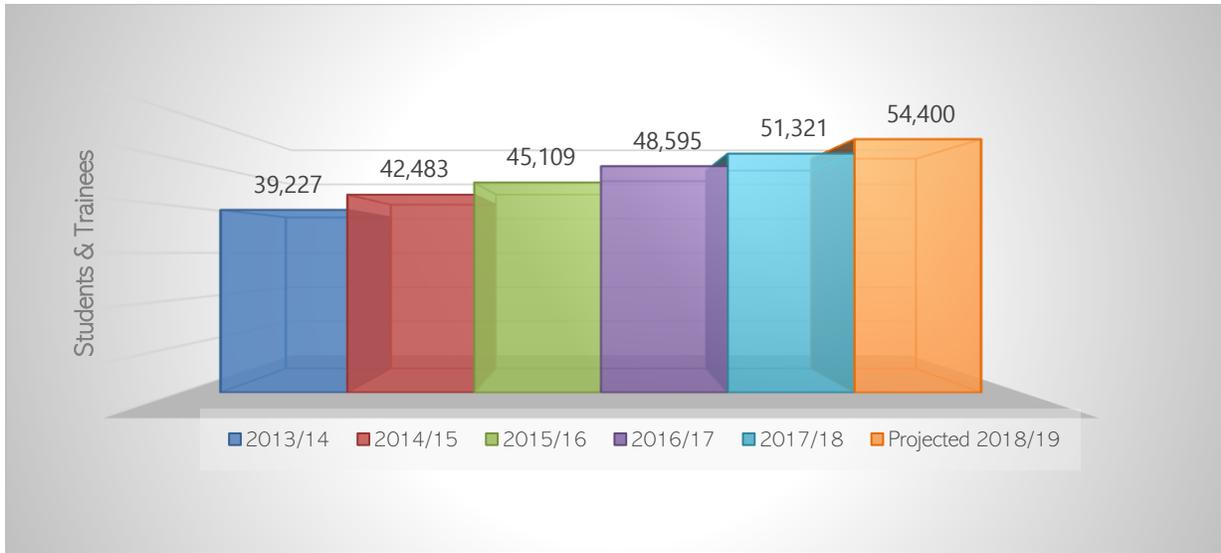
Table 8: Indirect impact of SA students (in Euros)

		YEAR	SEMESTER	SUMMER	
	ITEM	STUDENTS	1,305	20,024	43,897.00
EXPENDITURES MADE BY PROGRAMS					
Housing / month	Per student	6,800	3,400	850.00	
	All students	8,874,000	68,081,600	37,312,450.00	
Orientation & Welcome	Per student	540.78	270.39	270.39	
	All students	705,718	5,414,289	11,869,309.83	
Local cultural activities	Per student	711.2	355.6	177.80	
	All students	928,116.00	7,120,534.40	7,804,886.60	
End of semester activities	Per student	191.52	95.76	47.88	
	All students	249,933.60	1,917,498.24	2,101,788.36	
Medical insurance	Per student	160.48	80.24	40.12	
	All students	209,426.40	1,606,725.76	1,761,147.64	
Excursions	Per student	2,018.78	1,009.39	504.70	
	All students	2,634,507.90	20,212,025.36	22,154,596.42	
Sum (programs)	All students	13,601,702	104,352,673	83,004,178.85	
EXPENDITURES MADE BY INDIVIDUAL STUDENTS					
Local transportation	Per student	424	212	53.00	
	All students	553,320.00	4,245,088.00	2326541.00	
Cell phone	Per student	208	104	26.00	
	All students	271,440	2,082,496	1141322.00	
Travel	Per student	4,264.00	2,132.00	533.00	
	All students	5,564,520	42,691,168.00	23397101.00	
Leisure activities	Per student	1,888.00	944.00	236.00	
	All students	2,463,840	18,902,656	10359692.00	
Other	Per student	784	392	98.00	
	All students	1,023,120.00	7,849,408.00	4301906.00	
Sum (students)	All students	9,876,240.00	75,770,816.00	41526562.00	
Sum (All Expenses made by Programs and Individual students)		23,477,942	180,123,489	124,530,740.85	
TOTAL INDIRECT SA IMPACT				€ 328,132,171.77	

ERASMUS+

Both the overall numbers of participants in Erasmus/Erasmus+ programs and the funding awarded by the European Commission have regularly increased for the past 30 years, with Spain remaining the top destination since 2001. Lacking official incoming figures for the 2018-2019 year, which will not be published until 2021, we make a projection based on the average percentage of growth from 2013-2014 until 2017-2018²² to estimate a total of 54,400 Erasmus+ internationals attending programs and internships/training in Spain in 2018-2019 (see Chart 2).

Chart 2: Erasmus+ incoming higher education students and trainees 2013/14 to 2018/19



As for outgoing students, we make a prediction based on growth percentages for the past four years, as shown in Table 9.

Table 9: Projected number of higher education outgoing students on Erasmus+ programs

YEAR	NUMBER OF OUTGOING STUDENTS	PERCENTILE CHANGE
2013/2014	37,235	
2014/2015	31,995	-14%
2015/2016	39,223	23%
2016/2017	40,079	2%
2017/2018	40,226	0%
AVERAGE CHANGE		3%
PROJECTED 2018/2019	41,433	3%

²² Retrieved on September 2, 2020, from the SEPIE: *Erasmus+ 2018 In Numbers*, at http://www.sepie.es/doc/comunicacion/publicaciones/erasmusplus-factsheet-es_en.pdf

Quantifying the direct effects of ERASMUS+ students

Erasmus+ participants pay tuition at their home institutions and join the official degree programs offered at their destination, so incoming students do not have a direct economic impact on the host country. However, to promote mobility within the EHEA the Spanish national government and the autonomous states grant public funding to participants. That disbursement, made by national and regional administrations, would not happen without the international exchange so we consider it a negative direct economic impact that results from the specific activity.

According to SEPIE, the average monthly funding for university students, in 2018, was 250 euros. That amount was supplemented in the following cases: when students had a prior Government scholarship or a scholarship from the Basque Government, for those who had filed for refugee status, and for students in internship programs²³. For 2017-2018, the European Commission determined that the average amount of funding received by Erasmus+ participants was 336 euros per month.

We assume that funding has not decreased and opt to employ the average between the European Commission amount and the figures provided by the SEPIE, thus assuming each Spanish student attending an Erasmus+ higher education studies or training abroad would have received average funding in the amount of 293 euros/month for a period of 5.1 months (see Table 10). This amount, adding up to 61,913,332, is much higher than the 29,000,000 euros²⁴ in funding we accounted for last year. But the allocation of the present cost is more accurate, as it reflects both Spanish Government and autonomous states' support.

Quantifying the indirect effects of ERASMUS+ students

In its *2018 Erasmus+ Report*, the European Commission stated the average length of stay abroad for its higher education programs was 5.1 months²⁵ in 2017-2018, which we apply to Erasmus+ incoming students to produce their indirect impact.

Incoming Erasmus+ participants incur in living and leisure expenses, which are itemized and priced in a varied range of web sites and materials made available by private and public entities. We use these public data sources to identify the most relevant indirect effects of this population, to find an average per student monthly spending of 885 euros.

The overall impact of ERASMUS+ students is shown in Table 10.

²³ Retrieved September 4, 2020, from: *Información sobre financiación y prioridades de los proyectos financiados por SEPIE*, at http://sepie.es/doc/convocatoria/2018/Informacion_financiera_y_prioridades_2018.pdf

²⁴ Retrieved September 5, 2020, from: *The Economic Impact of International Students in Spain 2018*, at <http://www.spaineduprograms.es/wp-content/uploads/Economic-Impact-of-International-Students-in-Spain-2018-FINAL.pdf> (p.29)

²⁵ Retrieved September 2, 2020, from: *Infographic statistics from the 2018 report*, at https://ec.europa.eu/programmes/erasmus-plus/resources/documents/infographic-package-statistics-annual-report-erasmus-2018-numbers_es

Table 10: Direct and indirect impacts generated by ERASMUS+ students

	ITEM	Contribution/ Month	Students	Total for 5.1 months
DIRECT	Academic program delivery (incoming students)			N/A
	Public funds awarded to Spanish students attending Erasmus+ abroad	(293)	41,433	(61,913,332)
INDIRECT	Living and leisure expenses (incoming students)	885	54,400	245,534,400
	SUM			€ 183,621,068

SPANISH LANGUAGE SCHOOLS

There is not an official registry listing how many language schools operate in Spain and how many students attend these, a fact that complicates data gathering. To determine the number of institutions and their enrollment, we collect and triangulate data from three sources: EDUESPAÑA, the Federación de Escuelas de Español como Lengua Extranjera (FEDELE), and Instituto Cervantes (IC). We also contact the Federación Española de Centros de Enseñanza de Idiomas (FECEI), whose President refers us to FEDELE's data²⁶.

Through these sources, we identify six types of institutions:

1. Instituto Cervantes' Accredited Schools
2. FEDELE schools
3. FECEI schools²⁷
4. Independent schools
5. Language centers at universities
6. Foundations

Each of the associations provided their membership list. The number of Independent Schools was determined by employing the IC database, which includes both accredited and independent schools, and adding a set of additional institutions provided by EDUESPAÑA. The lists of language centers at universities and at foundations were also drawn from EDUESPAÑA's databases.

²⁶ S. Markham. Personal communication, November 13, 2020

²⁷ Among FECEI schools we included only those that teach Spanish as a foreign language.

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The FEDELE association produces a yearly document [El Español en España], based on data gathered from its members. On October 5, 2020, we interview Mr. Daniel Escalona who is responsible for their research and decide to use the findings in their 2018 report²⁸ adopting the following average measures: Enrollment for the year was 1,405 students, and length of stay was 2.4 weeks²⁹.

To apply for FEDELE membership, schools need to hold IC accreditation³⁰ which means both groups share many common traits. Thus, we adopt FEDELE's average enrollment and length of stay for IC-accredited non-FEDELE and FECEI institutions.

Our source at EDUESPAÑA³¹ also determined that independent schools, i.e., those that do not belong to an association, have a smaller yearly average enrollment of 400 students. We apply this to independent schools and foundations and calculate the average number of students at language schools at universities from data in the IC database.

Matching records from the three sources of information allows us to avoid duplicating schools that belong to more than one association (see Table 11). While there might be additional schools, these are probably small and hard-to-trace independent entities run locally³².

Table 11: Spanish Language Schools, by cohort

ASSOCIATION/ GROUP	SCHOOLS	AVERAGE STUDENTS	TOTAL STUDENTS	STAY (weeks)	TOTAL WEEKS
IC-ACCREDITED	48	1,405	67,440	2.4	161,856
FEDELE MEMBERS	98	1,405	137,690	2.4	330,456
FECEI SCHOOLS	90	1,405	126,450	2.4	303,480
INDEPENDENT SCHOOLS	155	400	62,000	2.4	148,800
LANGUAGE AT UNIVERSITIES	57	1,568	89,376	8	715,008
FOUNDATIONS	10	400	4,000	2.4	9,600
TOTAL	458		486,956		1,669,200

²⁸ There was a change in the methodology from 2018 to 2019 (D. Escalona, personal communication, October 5, 2020), which made the prior version better suited to our study.

²⁹ FEDELE: *Español en España 2018*. Retrieved May 18, 2020, from: <https://fedele.b-cdn.net/wp-content/uploads/2020/07/Informe-Sectorial-2018.pdf> (p. 9)

³⁰ Dossier FEDELE. Retrieved September 28, 2020, from: <https://fedele.org/wp-content/uploads/2019/07/Dossier-FEDELE-Directorio-Escuelas-ESPA%C3%91OL-Final.pdf> (p. 3)

³¹ O. Berdugo. Personal communication, September 29, 2020

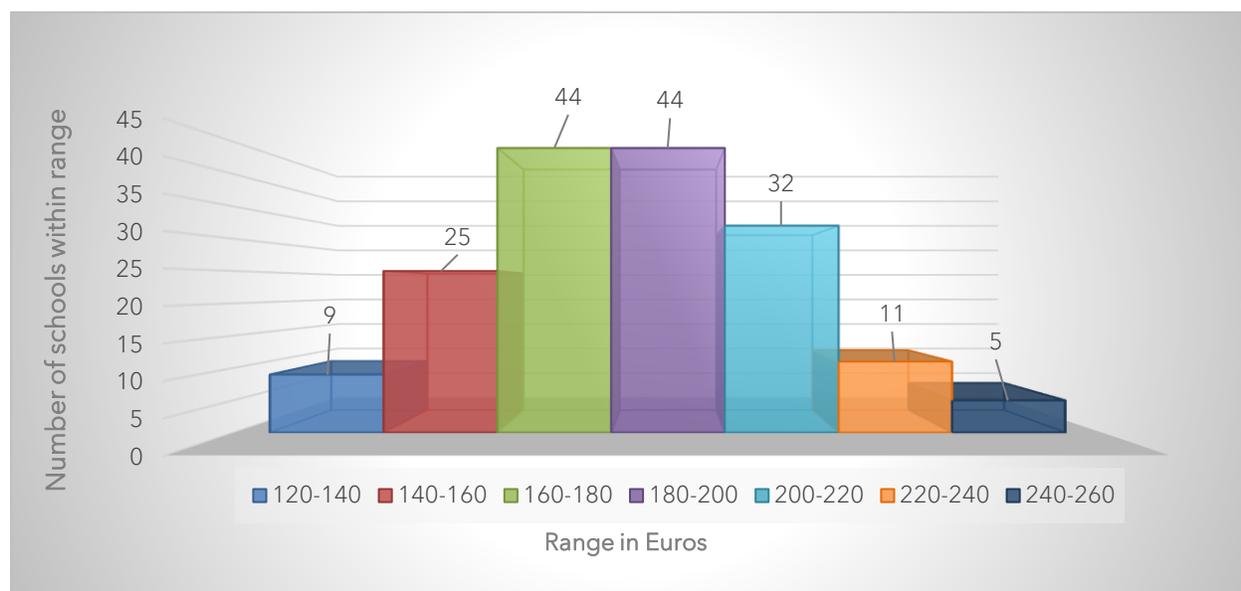
³² Ibid

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Quantifying the direct effects of students enrolled at language schools

We survey 170 schools in the IC database, including both accredited and non-accredited entities, to find an average tuition per-week of 184 euros (see ranges of fees at Chart 3). We apply this tuition to all schools except for language centers at universities.

Chart 3: Tuition per week, for Spanish language schools (*n*170)



The average weekly fees for students enrolled at language centers of universities is 197 euros. The length of stay for students ranges from 2 to 14 weeks, so we adopt an average of 8 weeks. The direct impact of students attending Spanish schools is shown in Table 12.

Table 12: Direct impact of internationals enrolled in Spanish language schools

ASSOCIATION/ COHORT	TOTAL WEEKS	FEES/WEEK	TOTAL TUITION
IC-ACCREDITED	161,856	184	29,781,504
FEDELE MEMBERS	330,456	184	60,803,904
FECEI SCHOOLS	303,480	184	55,840,320
INDEPENDENT SCHOOLS	148,800	184	27,379,200
LANGUAGE AT UNIVERSITIES	715,008	197	140,856,576
FOUNDATIONS	9,600	184	1,766,400
DIRECT IMPACT SUM	1,669,200	€	316,427,904

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Personnel expenses are covered by each language school, and that cost is embedded in the weekly registration amounts paid by individual students. Under this scheme the only direct effect of language schools would be the fees they charge. However, the number of employees for this category is relevant to Spain's job market, with schools hiring these professionals and paying for their social security benefits. This will be discussed in the Conclusion section of this study.

Quantifying the indirect effects of students enrolled at language schools

The indirect impact of internationals enrolled in Spanish language and culture programs, derives mainly from their living and leisure expenses while in Spain. We adopt the same average spending of Erasmus+ students, which amounts to 885 € per month. We divide the total number of weeks (see Table 12) by 4.2 to produce the total number of months for each of the groups in this category (see Table 13).

Table 13: Indirect impact of internationals enrolled in Spanish language schools

ASSOCIATION/ COHORT	TOTAL WEEKS	TOTAL MONTHS	TOTAL SPENDING
IC-ACCREDITED	161,856	38,537	34,105,371
FEDELE MEMBERS	330,456	78,680	69,631,800
FECEI SCHOOLS	303,480	72,257	63,947,571
INDEPENDENT SCHOOLS	148,800	35,429	31,354,286
LANGUAGE AT UNIVERSITIES	715,008	170,240	150,662,400
FOUNDATIONS	9,600	2,286	2,022,857
TOTAL	1,669,200	397,429	€ 351,724,286

UNDERGRADUATE DEGREES

The number of international students enrolling at Spanish universities to complete their undergraduate degrees has increased at a steady pace since 2015-2016³³ (see Table 14), largely due to an access path that ensures their academic level while considering their educational background³⁴ (Alvaro Escribano, personal communication, November 30, 2020). To assess their economic impact, we look at their tuition and living and leisure expenses for the year.

³³ Número de estudiantes extranjeros matriculados en el Sistema Universitario Español. Retrieved November 27, 2020, from EDUCABASE, at: [Estadísticas de Educación. EDUCABase \(mecd.gob.es\)](https://estadisticas.educacion.gob.es/)

³⁴ Dr. Alvaro Escribano is the Director of Carlos III International School (C3IS), Dean of Applied Economics, Director of the Master's in Industrial Economics and Markets, and a Governing Board of Universidad Carlos III de Madrid.

Table 14: International undergraduates attending Spanish universities

	2015-2016	2016-2017	2017-2018	2018-2019
UNDERGRADUATE ENROLLMENT	53,928	57,685	61,967	66,937
CHANGE		7%	7%	8%

Quantifying the direct effects of international undergraduate students

According to the data provided by the Ministry of Science, Innovation and Universities, 45,341 internationals enrolled in public universities and 21,596 attended private institutions in 2018-2019.

At public universities, the average tuition for Spanish and other EU candidates was 1,053 euros³⁵ (see Graph 1). There are various Spanish states where public institutions of higher education can establish higher tuition for non-EU undergraduates³⁶, such as the Autonomous Community of Madrid. For example, at Universidad Carlos III de Madrid those considered locals/EU pay an average of 1,442 euros vs. 7,470 euros for students from other world regions.

Graph 1: Per-credit tuition for undergraduate students at public universities

Estadística de precios públicos universitarios

Precios públicos medios del crédito	Grado	Máster habilitante	Máster no habilitante	Tutela Acad. Doctorado
Curso 2019-20	17,03	22,89	31,06	254,43
Curso 2018-19	17,55	23,65	32,24	254,18

Adapted from Ministerio de Universidades: Estadística de precios públicos universitarios

We were unable to produce a more realistic measure for the average tuition at public Spanish universities and decided to assume all internationals would pay as local students, i.e., 1,053 euros per academic year. However, we acknowledge that the actual figure is likely to be considerably higher.

There are 34 private universities in Spain, which typically charge the same tuition to local and international students from all world regions. We gathered data from 184 majors at 14 private institutions of higher education and came up with an average tuition of 9,280 euros per academic year. The sample includes all universities which make their fees public displaying them in their institutional web site.

³⁵ Retrieved November 30, 2020, from: [Estadística de precios públicos universitarios | Catálogo de datos | Estadísticas e Informes Universitarios | Universidades - Ministerio de Ciencia e Innovación \(es\)](#)

³⁶ Non-EU undergraduates are internationals from countries that do not belong to the EU and who do not hold a Spanish/EU passport.

Quantifying the indirect effects of international undergraduate students

The indirect effects for international undergraduate students derive from their living and leisure expenses in Spain during an average 9-month stay. Our assumption is that students in this category spend the same monthly amount as internationals in other cohorts (i.e., 885 euros/month). The combined direct and indirect impacts for undergraduates at public and private universities are displayed in Table 15.

Table 15: Direct and indirect impact of international undergraduates at Spanish universities

	Students	Average Tuition	Total Tuition	Living & Leisure Expenses	TOTAL
Public Universities	45,341	1,053	47,744,073	361,141,065	408,885,138
Private Universities	21,596	9,280	200,411,312	172,012,140	372,423,452
SUM	66,937		248,155,385	533,153,205	€ 781,308,590

MASTER'S PROGRAMS

There are several types of institutions offering different types of master's programs, onsite and online, attracting international students. In addition to master's at public and private accredited universities, there are professional degrees offered by a wide range of specialized institutions. For a better understanding of the characteristics of different master's degrees in Spain please refer to Luque (2019)³⁷.

We treat institutions of higher education and specialized graduate schools as two separate subgroups within this category.

Students enrolled in master's degrees at accredited universities

According to the EDUCABASE database of the Spanish Ministry of Science, Innovation and Universities, a total of 46,777 internationals enrolled in online and onsite master's programs at accredited Spanish institutions³⁸ (see Chart 4). For public universities, these data show three types of programs: onsite, online, and special. Unable to identify the characteristics of special programs, we assume these are blended and treat these 308 students as attending online.

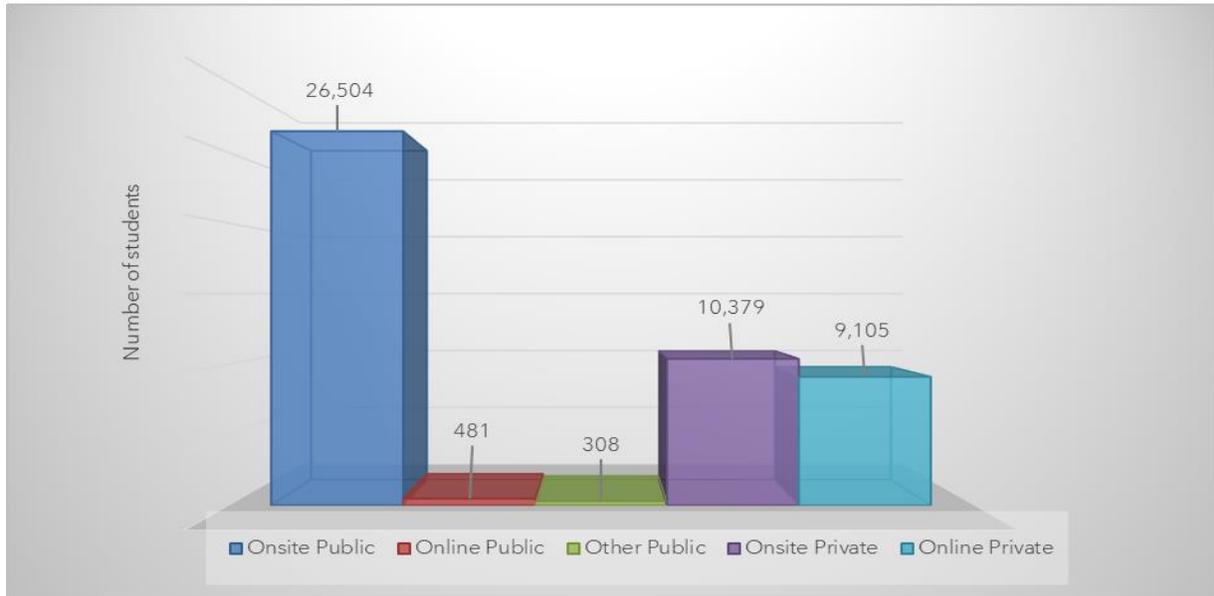
Master's at Spanish universities take from one to two years of full-time study to finish depending on the number of ECTS that need to be completed (between 60 and 120). Analyzing the average length of master's programs at 46 institutions, we assume that internationals are likely to enroll in one-year/60-credit programs. Those attending programs onsite remain in Spain for an average length of 10.5 months.

³⁷ Luque, T (2019). Apuntes para reflexionar sobre los másteres oficiales. Retrieved November 2, 2020, from: [Apuntes para reflexionar sobre los másteres oficiales - Universidad, sí \(universidadsi.es\)](https://apuntespara.com/apuntes-para-reflexionar-sobre-los-maestros-oficiales/)

³⁸ Matriculados por tipo y modalidad de la universidad, tipo de centro, sexo, zona de nacionalidad y ámbito de estudio. Retrieved on October 28, 2020, from EDUCABASE, at: http://estadisticas.mecd.gob.es/EducaJaxiPx/Datos.htm?path=/Universitaria/Alumnado/Nueva_Estructura/Master/Matriculados//I0/&file=Mat_Master_Sex_Nac_Amb_Tot.px

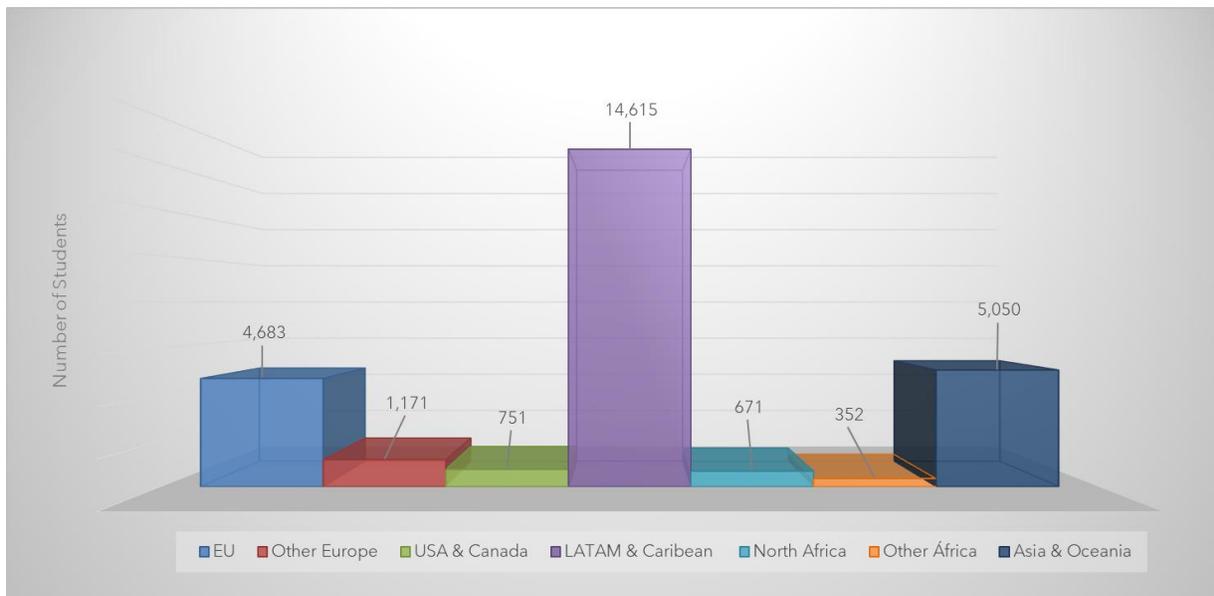
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Chart 4: International students enrolled at master's in Spanish universities



From EDUCABASE, we identify the global regions of origin of these students (See Chart 5). This information is relevant as, at public universities, tuition for students from other world regions is higher than fees for locals and nationals of EU countries; thus, the need to distinguish between EU and non-EU internationals.

Chart 5: Students enrolled in master's at public universities in Spain, by their global region of origin



Direct effects of international students at master’s degrees of accredited universities

We adopt the 1,677 € per-year Ministry of Universities’ average local tuition for all candidates from EU countries (see Graph 2). For the average tuition applicable to non-EU countries, we perform a random search of 25 degrees where internationals are likely to enroll at 22 public universities and come up with average academic yearly fees of 6,933 euros. Given the small percentage of internationals completing online master’s at public universities (less than 3%), we do not calculate a different tuition for these programs.

Graph 2: Per-credit tuition for graduate EU students at Spanish public universities

Estadística de precios públicos universitarios

Precios públicos medios del crédito	Grado	Máster habilitante	Máster no habilitante	Tutela Acad. Doctorado
Curso 2019-20	17,03	22,89	31,06	254,43
Curso 2018-19	17,55	23,65	32,24	254,18

Adapted from *Ministerio de Universidades: Estadística de precios públicos universitarios*³⁹

Unlike public institutions, private universities do not typically offer a lower tuition to local/EU students. We collect data for 36 degrees where internationals are likely to enroll, offered at 24 private institutions⁴⁰, and come up with an average tuition of 15,956 euros. Of all internationals completing master’s at private universities 53% do so onsite while 47% opt for online. These institutions charge a lower tuition for online programs, which we calculate to be on average 40% less than onsite, i. e. 9,574 euros.

There is no indication that public or private universities in Spain hire additional faculty and staff for their international enrollment, thus we assume that the only direct impact from this subgroup is their tuition (see Table 16).

³⁹

<https://www.ciencia.gob.es/portal/site/MICINN/menuitem.7eeac5cd345b4f34f09dfd1001432ea0/?vgnnextoid=84906add7c0de610VgnVCM1000001d04140aRCRD>

⁴⁰ This was not a random sample, as there are private institutions that do not release their fees to the public. We drew data from those with fees posted in their web sites.

Table 16: Direct impact of international students at master’s degrees of accredited universities

INSTITUTION & TUITION/PROGRAM TYPE	STUDENTS	AVERAGE TUITION	TOTAL
Public EU	4,683	1,677	7,853,391
Public Non-EU	22,610	6,933	156,755,130
Private Onsite	10,379	15,956	165,607,324
Private Online	9,105	9,574	87,171,270
SUM	46,777		€ 417,387,115

Indirect effects of international students at master’s degrees of accredited universities

The indirect impact of internationals enrolled at master’s of Spanish universities results from the living and leisure expenses of 36,883 students who attended programs in Spain for an average of 10.5 months (see Table 17).

Table 17: Indirect impact of international students enrolled in master’s at Spanish universities

INSTITUTION	STUDENTS	MONTHS	TOTAL
Public ONSITE	26,504	278,292	246,288,420
Private ONSITE	10,379	108,980	96,446,858
SUM	36,883	387,272	€ 342,735,278

Students enrolled in master’s degrees at specialized schools

In addition to master’s at accredited universities, there are professional master’s degrees offered by a wide range of specialized institutions. Within this subgroup, there are independent entities and those that are members of the association AEEN [Asociación Española de Escuelas de Negocios]. These institutions are typically focused on business-related areas.

To locate independent entities attracting international students we use seven search engines, including: ClubMBA.com, Universia.es, Emagister.com, EligeMBA.com, Mundoposgrado.com, Educaweb.com, and GuiaMBA.com. Through our quest we identify 40 independent schools granting master’s degrees.

Data from degrees at these specialized schools produce the following averages:

- Tuition: 24,375 €
- Program length: 11.3 months

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In addition to the previous independent entities, we collect data on AEEN's member institutions from their websites. Information available from 43 of the 52 entities produces the following averages:

- Tuition: 8,694 €
- Program length: 10.4 months

While there is a great amount of data available both at search engines and institutional web sites, these provide no information on enrollment figures, participants in onsite vs. online programs, and onsite vs. online tuition. Given the similarities between these specialized degrees and master's offered at private universities in business-related areas, we adopt their same measures for average enrollment, percentage of onsite and online students (see Table 18), and differences between onsite and online tuition (see Table 19).

Table 18: Internationals enrolled at master's in business-related areas at private Spanish universities

	BUS. ADMIN. & LEGAL	ADMIN. & MANAGEMENT	COMMERCE & CORPORATE	TOTAL STUDENTS	PERCENT	AVERAGE
Onsite Master's	6342	4648	810	11,800	74%	347
Online Master's	2276	1187	650	4,113	26%	121
Sum of students	8,618	5,835	1,460	15,913	100%	468

Direct effects of international students enrolled at specialized graduate schools

The direct impact of international students enrolled in master's programs at specialized schools derives from their tuition expenses (see Table 19).

Table 19: Direct impact of master's at specialized schools

	STUDENTS	TUITION	TOTAL
Independent Schools Onsite	13,880	24,375	338,325,000
Independent Schools Online	4,840	14,625	70,785,000
AEEN Schools Onsite	18,044	8,694	156,874,536
AEEN Schools Online	6,292	5,216	32,821,589
Sum	43,056		€ 598,806,125

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Indirect effects of international students enrolled at specialized graduate schools

The indirect impact of these students derives from their living and leisure expenses while in Spain (see Table 20). AEEN international students enrolled in online master's attend onsite courses in Spain for an average of 12 weeks per year⁴¹

Table 20: Indirect impact of international students enrolled in master's programs at specialized schools

SCHOOL TYPE	TOTAL ENROLLMENT	LENGTH OF STAY/MONTHS	TOTAL MONTHS	SPENDING/MONTH	TOTAL
Independent ONSITE	13,880	11.3	156,844		138,806,940
AEEN ONSITE	18,044	10.4	187,658	€ 885	166,076,976
AEEN ONLINE	6,292	2.9	18,247		16,148,418
SUM	38,216		362,748	€	321,032,334

The overall impact for international students enrolled in master's degrees in Spain, includes the subgroups of universities and professional graduate schools. Findings are displayed in Table 21.

Table 21: Overall impact for international students enrolled in master's degrees

TYPE OF INSTITUTION	DIRECT IMPACT	INDIRECT IMPACT	TOTAL
Universities	417,387,115	342,735,278	760,122,393
Specialized Schools	598,806,125	321,032,334	919,838,459
SUM	1,016,193,240	663,767,612	€ 1,679,960,852

INSTITUTO CERVANTES

The Instituto Cervantes is a non-profit organization founded by the Government of Spain in 1991, "to promote the Spanish language and cultures of Spanish-speaking countries"⁴². Its headquarters are in Madrid and Alcalá de Henares (Spain), and there are an additional seventy centers in countries throughout the world.

Among a broad range of activities, the IC offers Spanish courses, the Diploma of Spanish as a Foreign Language (DELE), and the SIELE standardized online testing certification to thousands of students outside Spain. Individuals enrolled in their courses and candidates taking official tests pay fees that revert to

⁴¹ J. Ruiz. Personal communication, July 2020

⁴² Institutional Presentation of the Instituto Cervantes. Retrieved November 3, 2020, from: https://londres.cervantes.es/en/about_us_spanish.htm

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Spanish public institutions. The IC receives funding from the Spanish Government for its operations worldwide.

The direct impact of internationals taking language courses and official IC tests derives from fees collected for these and other activities of the institute. There is no indirect impact for this category.

Direct impact of international students enrolled in IC activities abroad

The revenue-generating activities of the IC abroad and the HH. RR. they employ are made public in their report *El Instituto en Cifras*⁴³, as follow:

- A total of 148,670 internationals enrolled, of whom: 126,051 were onsite students, 13,971 were teachers in professional development courses, and 8,648 were individuals who acquired licenses for the virtual Spanish classroom [Aula Virtual de Español].
- A total of 118,586 candidates took the DELE, and an additional 14,290 took the SIELE exam.
- The IC maintained a staff of 214 FTEs in Spain.

The IC charges different amounts for each course level and exam and fees differ by country, a system that complicates allocating specific revenue amounts to each of the three areas described above. The 2018-2019 report details total resources of 123,942,110 €, of which 57,633,081 € were generated through the IC activities and an additional 66,309,028 € were funding received from the Spanish Government.

This implies that the IC had a negative economic impact of 8,675,948 euros. However, it is important to highlight the activities of the institute and the benefits of this entity as it undoubtedly stimulates the interest of students worldwide, spurring their aspirations to eventually complete further studies and or travel to Spain.

⁴³ Retrieved September 12, 2020, from: https://www.cervantes.es/memoria_ic_web/memoria_ic_web_2018-2019/pdf/01_cifras.pdf

Conclusion

The overall economic impact of international students in Spain is the addition of all direct and indirect effects (Type I indicators) for the six categories in this study (see Table 22).

Our research supports that 1,044,898 internationals enrolled at Spanish institutions in the 2018-2019 academic year, including individuals in study abroad, Erasmus+, language and culture, undergraduate degrees, master's, and the Instituto Cervantes courses and standardized testing. We determine that their overall economic impact on the Spanish economy amounts to 3,795,740,732 euros and that the multiplier effect for student spend is 2.27.

Miller and Blair (2009)⁴⁴ define multipliers as a notion that "rests upon the difference between the initial effect of an exogenous change and the total effects of that change". The multiplier is an indicator of the spillover effect that the international students' presence triggers on sectors of the Spanish economy other than education. A multiplier effect of 2.27 indicates that for each euro spent on their academic program, these international students spend an additional 1.27 euros on a broad range of sectors of the Spanish economy.

Table 22: Overall impact of international students in Spain

CATEGORY	DIRECT IMPACT	INDIRECT IMPACT	TOTAL
US Study Abroad	163,241,808	328,132,172	491,373,980
ERASMUS+	-61,913,332	245,534,400	183,621,068
Language & Culture	316,427,904	351,724,286	668,152,190
Undergraduates	248,155,385	533,153,205	781,308,590
Master's programs	1,016,193,240	663,767,612	1,679,960,852
Instituto Cervantes	-8,675,948	0	(8,675,948)
SUM	€ 1,673,429,057	€ 2,122,311,675	€ 3,795,740,732
Multiplier Effect	2.27		

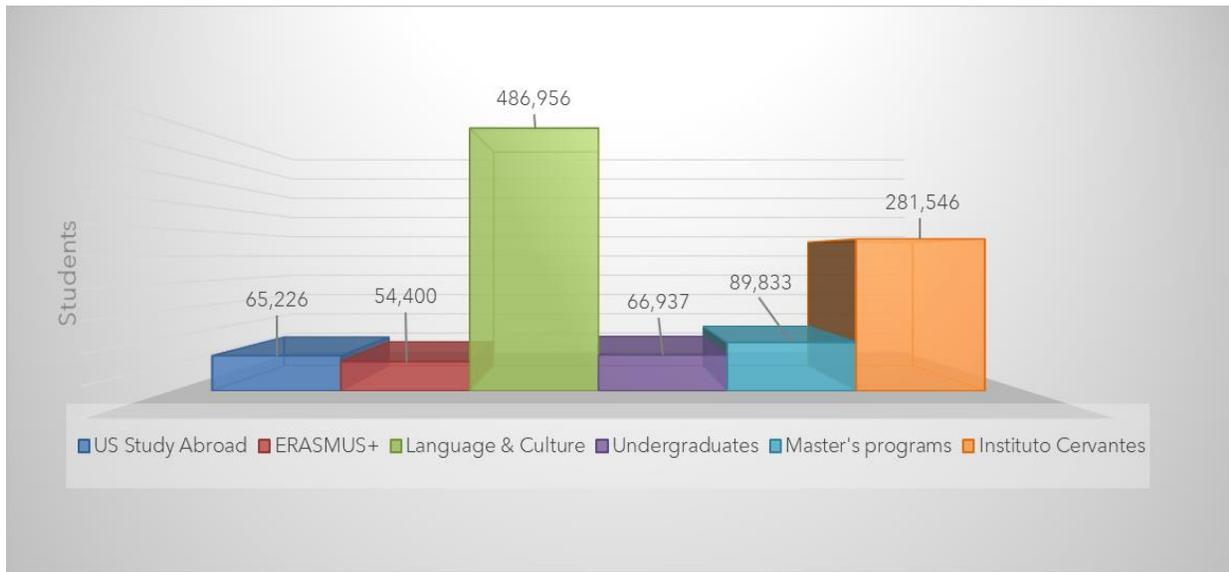
ENROLLMENT BY CATEGORY

The number of internationals enrolled in Spanish language schools is the most numerous, accounting for 47% of the total. IC students completing courses at their centers abroad and candidates for their standardized testing follow, with 27%. The remaining 26% includes master's programs, undergraduates, US study abroad, and Erasmus+ participants (see Chart 6.)

⁴⁴ Miller, Ronald E.; Blair, Peter D. Input-Output Analysis: Foundations and Extensions. Cambridge, GBR: Cambridge University Press, 2009. Retrieved February 10, 2017, from: <http://site.ebrary.com/lib/mitlibraries/Doc?id=10329730&ppg=44>, (p. 244)

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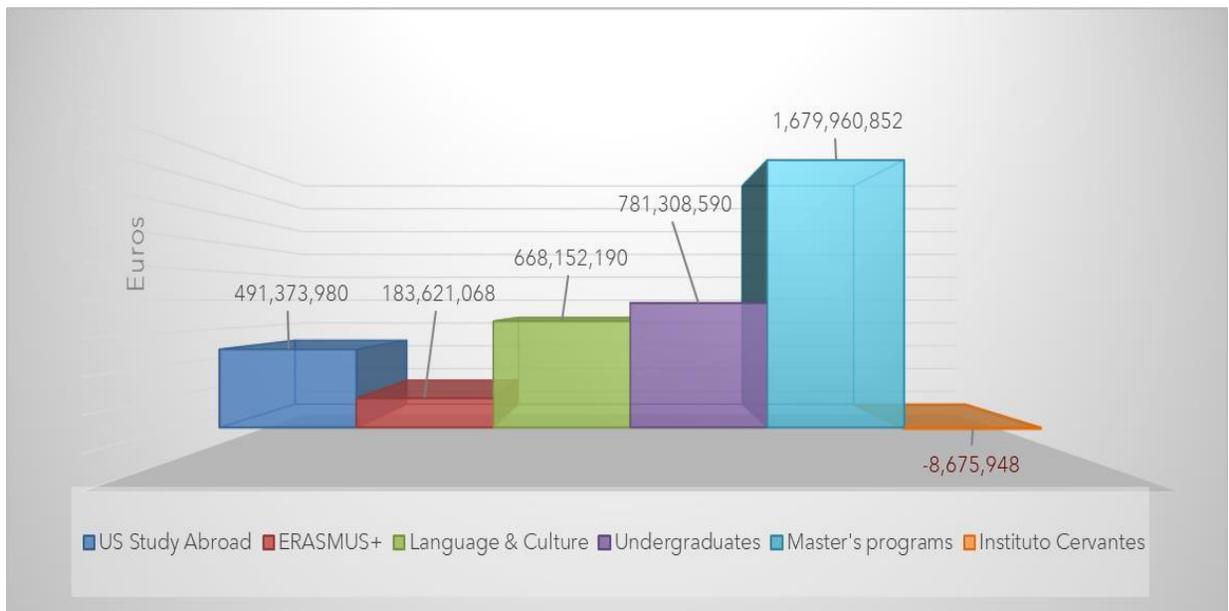
Chart 6: Number of students in each category.



IMPACT BY CATEGORY

Master's programs are the category with the largest impact, followed by undergraduates, Spanish language, US study abroad, and Erasmus+. Instituto Cervantes' students and test candidates have a negative impact, as the result of the public funding received by the institute, which exceeds their yearly revenue (see Chart 7).

Chart 7: Economic impact by category

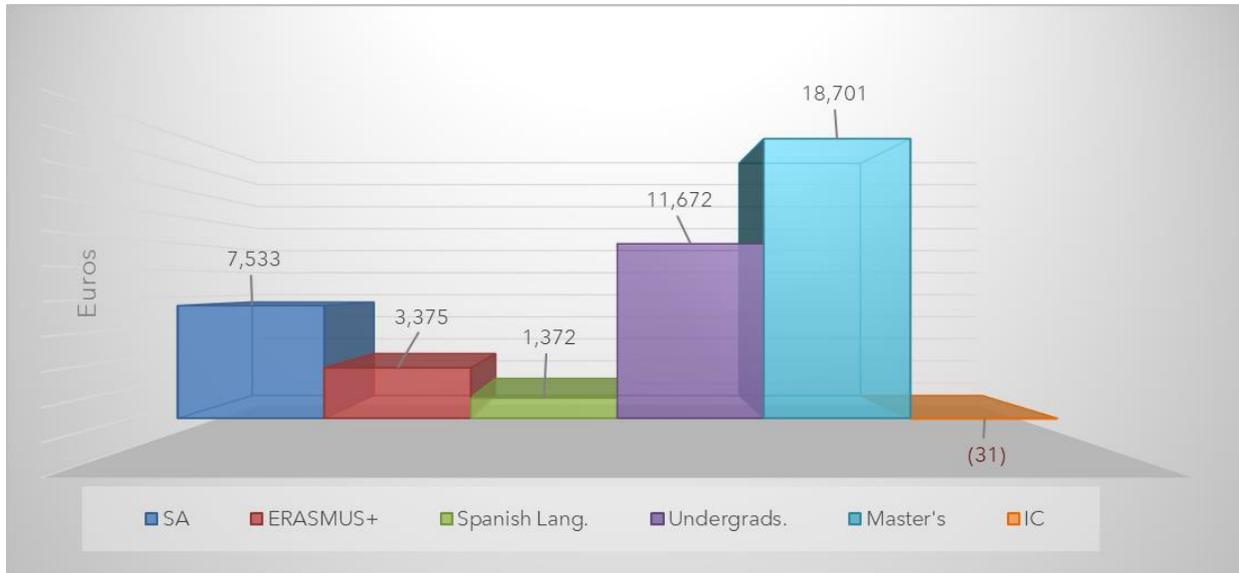


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PER-STUDENT IMPACT

The highest per-student impact is also that of internationals enrolled in master’s degrees, estimated at 18,701 euros. Undergraduates follow, with 11,672 euros/student. Study abroad participants contribute 7,533 euros/student, and Erasmus+ and Spanish language students ensue with 3,375 and 1,372 euros respectively, while IC students and official tests’ candidates have a negative per-student impact of 31 euros (see Chart 8).

Chart 8: Average economic impact per individual student



Master’s candidates and undergraduates represent 15% of the international student population, yet they account for 65% of the overall economic impact from the export of education. As for individual effects, master’s candidates and undergraduates spend 262% and 164% above the average amount for an international student. These findings place universities and graduate professional schools at the forefront of the industry.

DATA AND GLOBAL REGIONS OF ORIGIN

The sources of data we employ provide important information that should continue to be made available to researchers, legislators, and actors within the sector as it can help identify trends, regions with potential and those where additional work needs to be done. More detail would contribute to more specific analyses that would support effective strategic planning across the sector to maximize the greater good.

The increasing amount of data on these international categories includes the global regions of origin of students. We assume most participants in Study Abroad programs are from the US. The FEDELE report ranks enrollment by country and provides their average length of stay. EDUCABASE, the public database of the Ministries of Science, Research and Universities, offers ample data on regions of origin for internationals enrolled at Spanish universities, and distinguishes by type of university attended, type of

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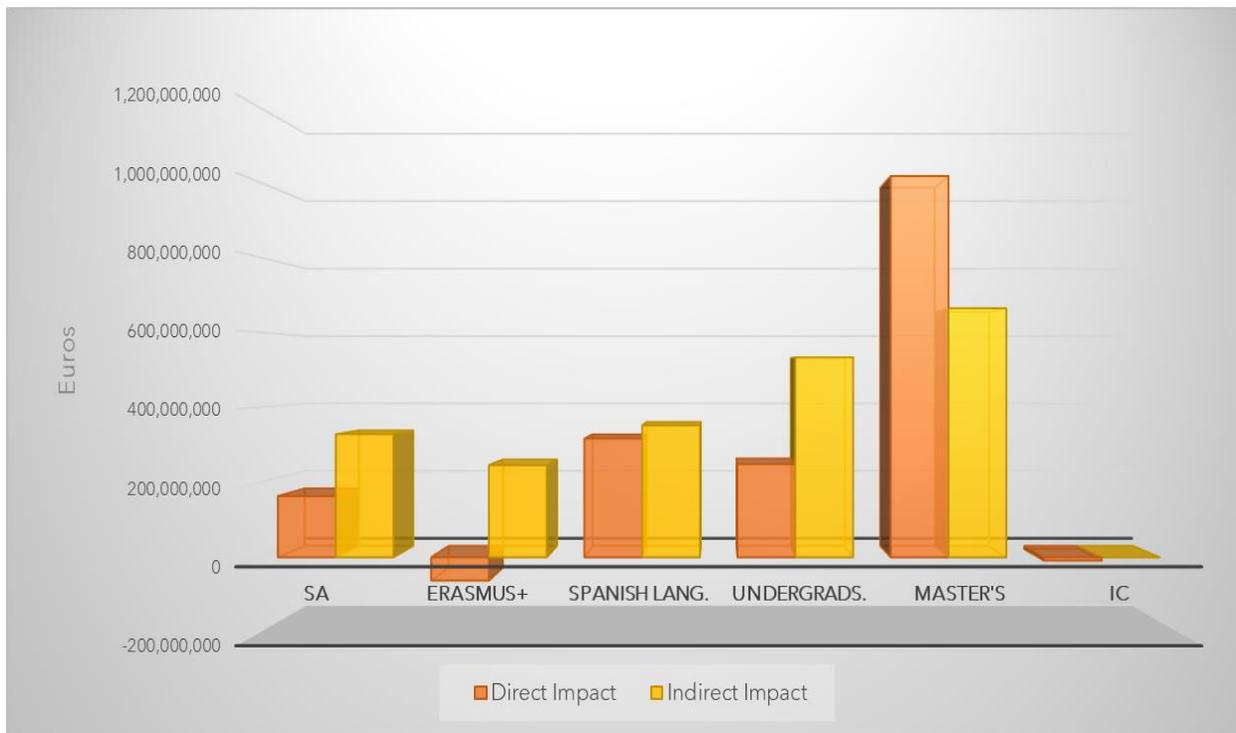
program, gender, and level and field of study both for undergraduate and graduate students⁴⁵. The SEPIE distributes data published by the European Commission, on destinations and origins of participants, funding, and length of stay. And the IC also gathers and publishes data for each of the locations where their programs are accessible.

Regions of origin are relevant, but the analysis must be combined with data on the ability of students to pay for their studies in Spain and with the extra-academic benefits that internationalization will bring to the host communities and the home countries upon return.

MULTIPLIER EFFECT

The multiplier effect of 2.27 for the 2018-2019 year is a useful indicator to assess the investment that students are making in extra-academic items and services vs. their academic expenditures (see Chart 9). Indirect effects are greater than direct effects in all categories except for master's students, a finding that emphasizes opportunities for growth and areas of dependence.

Chart 9: A comparison of direct and indirect impacts for the six categories



⁴⁵ Matriculados por tipo y modalidad de la universidad, tipo de centro, sexo, zona de nacionalidad y ámbito de estudio. Retrieved on October 28, 2020, from EDUCABASE, at: [http://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva Estructura/Master/Matriculados//I0/&file=Mat_Master_Sex_Nac_Amb_Tot.px](http://estadisticas.mecd.gob.es/EducaJaxiPx/Tabla.htm?path=/Universitaria/Alumnado/Nueva_Estructura/Master/Matriculados//I0/&file=Mat_Master_Sex_Nac_Amb_Tot.px)

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On the positives, there could be a competitive advantage over other destinations when improving and highlighting the quality of living and leisure items and services in Spain. To strengthen student services, educational institutions can incorporate them into their programs and or outsource them to specialized providers.

There is room for innovating and improving how and which amenities are delivered. Several new actors have joined the housing market bringing a novel approach to these services, such as: large modern dorms owned by companies like NEXO Residencia; direct rentals of rooms, homes or apartments, through Madrid Easy; placements with Spanish families; and even online search engines created by City Councils or Governments of autonomous states, like Vivir en Madrid⁴⁶.

Housing is probably the service with the largest impact on the student experience, but there are other varieties such as online intercultural communities, mentoring, cultural activities, volunteering in sustainability or social work, specialized internships, and pre-programmed visits for family and friends. Programs of all types should choose quality differentiating options that best align with the desired learning outcomes for their students.

On the challenges to be faced, a 2.27 multiplier indicates a high level of dependance on students attending onsite programs. Participants in all categories, except for master's degrees, spend more on the extra academic aspects of their experience than on their tuition. If the sector is unable to reactivate the flow of internationals arriving in the country, the losses in indirect effects will be immense.

TAXES & PERSONNEL WORKING IN THE FIELD

International students and the academic providers that recruit them contribute to the financing of the Spanish taxation system in, at least, two ways. First, their indirect spending (2,122,311,675 euros) is subject to a value added tax of 4% to 21%. Second, at least three types of programs (study abroad, language schools, and Instituto Cervantes) hire faculty and staff for whom they make payments to the social security administration⁴⁷.

Study abroad programs hired a total of 1,071 staff, Spanish language and culture schools employed 6,506 teachers and administrators, and the Instituto Cervantes appointed 214 employees in Spain. Thus, the number of professionals holding positions in these international education groups combined amounted to no less than 7,791 FTEs.

If it were not for the international education market, this highly qualified personnel would likely become part of the unemployed population obliged to survive on public funding. To these we should add all jobs created as the result of the indirect spending of students in their host communities, including neighborhood cafés and restaurants, grocery stores, gyms, pharmacies, clothing stores, travel and transportation, hotels, etc.

⁴⁶ [Vivir en Madrid. Alojamiento para universitarios | Comunidad de Madrid](#)

⁴⁷ We considered that Erasmus+, undergraduate, and masters' programs did not require hiring additional personnel to host international students.

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BEYOND 2018-2019

This report is published in 2020, as the COVID-19 pandemic continues to impact the globe. The academic year 2018-2019 will become the reference for what was the last “normal” term, before the health crisis erupted bringing student mobility almost to a dead stop. It is important that we employ our findings as one of the elements that can help predict how different categories of programs can best recover, helping Spain regain its place as a privileged global destination.

Study Abroad Students

Study abroad programs closed their facilities and sent students back to the US in March 2020. With very few exceptions, these institutions of higher education will not receive new students until January 2021. For the months following the closing of SA Spain-based operations, APUNE joined forces with the SEPIE to advocate for regulations that would facilitate the passage of participants through Spanish borders. US students are now able to enter Spain without a visa to attend educational programs shorter than 90 days. While there are requirements to be met, these are both reasonable and feasible.

Few US students have been able to take advantage of study abroad opportunities anywhere in the world during summer and fall 2020, and spring 2021 is still dubious at many destinations. Our prediction is that these Americans will be eager to embrace safe and reputable options in traditional preferred destinations such as Spain as soon as these become available. As Paul Krugman suggests “spending will surge once the pandemic subsides and people feel safe to go out and about”⁴⁸. In the meantime, APUNE programs and the SEPIE are taking the right steps.

Study abroad students will return and, after their time here, will continue to promote Spain and its products in the USA. In the future, some will get to positions where they can strengthen the international and commercial relations from leadership roles in corporations in the private sector. And others will promote international relations among the two countries from government posts or through a diplomatic assignment as in the case of Ambassador Buchan⁴⁹.

Erasmus+ Participants

Erasmus participants take all their courses with local peers, experiencing a full immersion in the Spanish higher education system. According to José Manuel González Canino, Director of the Higher Education Unit at SEPIE,

Spain's performance in the EHEA continues to be a great accomplishment: having consistently led in numbers of received students since 2001 and sending greater numbers than countries with larger populations such as Italy⁵⁰.

⁴⁸ Krugman, P. (Nov. 19, 2020). Making the Most of the Coming Biden Boom. Retrieved, Nov. 19, 2020, from: <https://www.nytimes.com/2020/11/19/opinion/joe-biden-economy.html?searchResultPosition=2>

⁴⁹ “Ambassador Buchan has had strong ties to Spain for almost 40 years. He studied at universities in Valencia and Seville and has travelled extensively throughout the country. A longtime supporter of international education and study of the Spanish language and culture, Ambassador Buchan and his family established a successful exchange program between students in Spain and the United States”. Retrieved January 30, 2017, from <https://es.usembassy.gov/u-s-ambassador-richard-duke-buchan-iii-arrives-madrid/>

⁵⁰ José Manuel González Canino. Personal communication, January 10, 2019

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In a survey of international divisions of Spanish universities, in October 2020, SIOs predicted an average loss of 57% of the international students they had in the previous academic year (2019/20)⁵¹. Erasmus+ participants account for the majority of those. But borders between EU countries have only been closed at short intervals of time and, without the need for a visa, it is probable that the flow of students will continue to recover.

According to González Canino, Erasmus programs were designed to promote values, and the pandemic has brought solidarity to the forefront of European principles. Erasmus is a big family of higher education institutions, students, faculty, and staff. As participants state “once Erasmus, always Erasmus”⁵².

For the 2020-2021 academic year, the European Commission has created blended mobilities, combining pre online (at the country of origin) and post onsite (at the destination) components. When asked about the future for Erasmus programs, González Canino talks about the great expectancy of the European higher education system while awaiting details of a new and innovative 2021-2027 program, with 30-billion euros in funding, still being discussed among member countries. He is convinced that it will not only maintain but increase the interest of students to participate.

Spanish Language Students

As in previous editions language students attended programs in Spain in numbers larger than those of all other categories. The role of these specialized academies and the associations they have formed must continue to promote best practices and widespread quality. Organizations such as FEDELE play a key role in advancing this market and their leadership should be praised for their state of the field reports. This type of research sets the foundation to strengthen the sector in a highly competitive market and helps advance the global relevance of the Spanish language.

In November (23rd-27th) 2020, FEDELE organized a Digital Spanish Week, where experts, professionals, and students from all over the world were able to attend 40 hours of free seminars, workshops, courses, and presentations to promote the study of Spanish as a foreign language⁵³ at their member institutions. While this is an indicator that language schools have transitioned to quality online platforms, that media is hardly their forte.

In an interview with FEDELE, Mr. Daniel Escalona (head of marketing and research) explained how the association’s members lost 90% of their enrollment in the months following March 2020. Deloitte’s division of Higher Education published a report in May 2020 that applies well to this sector, where they identified “two critical uncertainties: the overall severity of the pandemic and the level of collaboration within and between countries”⁵⁴. These schools, with enrollment and personnel averaging 1,405 students and 19 FTEs, do not have the financial stability of a university or the support of important European entities on which Erasmus initiatives are based. They depend on the evolution of the scenario and the

⁵¹ Grasset, C. (2020). Spanish universities reveal their international strategies. Retrieved November 20, 2020, from: [Spanish-Universities-Reveal-their-International-Strategies-for-2020_21.pdf \(spaineduprograms.es\)](#)

⁵² José Manuel González Canino. Personal communication, November 24, 2020

⁵³ Semana Digital del Español. Retrieved November 25, 2020, from: [Semana Digital del Español - FEDELE Español en España](#)

⁵⁴ Higher education remade by COVID-19. Retrieved September 2020, from: [us-higher-education-remade-by-COVID-19\(1\).pdf](#)

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mobility of their prospect students. More than any other group in the field of international education, they will need Government support until their clients are able to return.

Undergraduates

The number of internationals attending Spanish institutions of higher education to complete their undergraduate degrees has been on a steady growth path for the past three years. One of the key factors contributing to this trend was a change of regulation that provided a special application path for students who had not completed their high school studies in Spain.

Most Spanish universities offer strong undergraduate degrees at tuition rates and living costs that are competitive compared to other global destinations, such as the US or the UK. As more institutions of higher education in Spain offer degrees in English, they gain the potential to attract larger numbers of candidates from outside the country's borders.

There is a trend in the US where increasing numbers of local and international students question the return on investment of undergraduate degrees requiring a six-figure expenditure, while they can attend an institution of higher education abroad for a fraction of that cost. We have evidence of this from our recruitment trips to US high schools and, according to Ogden and Cope, "The current upheavals in the United States higher education landscape appear to be driving greater numbers of US students to consider full degrees abroad"⁵⁵. Advancing to attract more of these candidates will require a feasible and rational access process that ponders the diverse high school backgrounds of the applicants.

Master's Candidates

In Spain, master's programs of diverse types are being successful in attracting international students from all world regions. This is the category with the strongest economic impact, the highest spending per individual student, and the only group where internationals make a stronger investment in tuition than in living and leisure items and services. We have analyzed data on master's at public and private universities and specialized schools, and each of these subgroups deserves a separate deeper analysis.

Public universities have a strong potential to recruit larger numbers of internationals if their reputable master's remain affordable. The Master's in Biotechnology of Environment and Health (MBEH), a two-year degree taught in English at Universidad de Oviedo (UNIOVI), is among these. According to the Coordinator of the MBEH, Dr. Maria T. Fernandez⁵⁶, the access to scholarships is a determining factor for their international candidates. In 2020-2021, in the midst of the pandemic, when UNIOVI has granted local tuition to applicants from all LATAM and some northern African countries their international enrollment has doubled from 9% to 18% in one year.

Some of the more-powerful institutions, both universities and specialized schools, and particularly those located in the main economic hubs have invested resources to attain prestigious accreditations and appear at the forefront of international MBA and related rankings⁵⁷. In that, they must be recognized for their achievements and used as an example to attract internationals with strong economic backgrounds.

⁵⁵ Ogden A. and Cope D. (2020). Is the US the next big market for outbound students? Retrieved October 3, 2020, from University World News, at: [Is the US the next big market for outbound students? \(universityworldnews.com\)](https://www.universityworldnews.com/2020/10/03/is-the-us-the-next-big-market-for-outbound-students/)

⁵⁶ Dr. Maria Teresa Fernandez, Coordinator of the MBEH at Universidad de Oviedo. Personal communication, December 3, 2020

⁵⁷ Three Spain-based MBAs are ranked consistently among the 50 best in the world

However, we find a trend of diminishing enrollment in business-related areas coupled with a growth in other professional fields that should be further assessed by these schools.

LATAM students enroll in master's at Spanish universities in numbers larger than those of any other world region⁵⁸. While we lack country of origin data for internationals attending specialized schools, our guess is that LATAM is also well represented. For this cohort Spain offers a common language and a similar culture, within a European socio-economic context.

LATAM should continue to be a strong feeder region for graduate programs of all kinds, closely followed by Asia and the EU. The thousands of students who are obtaining their graduate degrees in Spain will return to their home countries to bring about change and internationalization, using their global connections and Spain as foundations.

Instituto Cervantes Candidates

The IC has a key role in promoting the Spanish language in all its versions throughout the globe. We believe it should be publicly funded to focus on building global connections through the advancement of Spanish language and cultures. It should continue to grow and develop into a role like that of the British Council for the UK's export of education.

We trust Spanish public institutes, such as the Cervantes, will not be held accountable for the revenue they generate but for the quality, prestige, and positive outcomes of their initiatives.

FINAL REFLECTIONS

While the focus of this study is on the economic impact of this sector on the Spanish economy, we highlight the need for the recognition of all added social benefits of the export of education as a pending subject with the broader public in Spain. It is a topic that must be researched, and the product of that work should be widely distributed.

We must continue to highlight the constructive social outcomes that derive from the presence of these international students, including: the modernization of educational institutions⁵⁹, the internationalization of host communities, the development of the socio-cultural environment, and eventually the enhancement of the policies and politics that will shape Spain's international relations. The carbon footprint estimates for these categories⁶⁰ should also become a component of future studies.

Our analysis, as in any other economic impact study, is an approximate process where "output numbers should be regarded as a 'best guess' rather than as being inviolably accurate"⁶¹. Nonetheless, producing these measures of the economic impact of international students in Spain allows us to raise awareness on the benefits of this activity, helps advocate for favorable legislation, and can help strengthen the quality

⁵⁸ Among students enrolled in graduate and professional programs, LATAM has the largest representation with 31% of the total. Asia and the EU contribute with 11% and 10% respectively, while students from the rest of the world enroll in much lower percentages

⁵⁹ Dr. Alvaro Escribano, Director of the Carlos III International School at Universidad Carlos III de Madrid. Personal communication, March 2, 2017

⁶⁰ Wiedmann, T. (2009). A review of recent multi-region input-output models used for consumption-based emission and resource accounting, *Ecological Economics*, Volume 69, Issue 2 (pp. 211-222)

⁶¹ Journal of Travel Research, p. 81, A Guide for Undertaking Economic Impact Studies: The Springfest Example, retrieved June 20, 2016, from http://agrilife.org/cromptonrpts/files/2011/06/3_4_7.pdf

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of educational programs of all types. All of these fortify the country's assets as an excelling educational destination for all kinds of students and contribute to exploring Spain's potential for other international cohorts.

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We are especially obliged to Ms. Juliana Moreno who has had a key role collecting data, and serving as a liaison with Spanish Language Schools, AEEN, IC and other sources. Her expert insight on the sector of Spanish Language Schools helped greatly improve that section, and we are grateful for her involvement and dedication.

In Madrid. December 14, 2020

ANNEX 1: Review of Existing Literature

To determine what research design would best produce a realistic estimate of the overall effects of this economic activity, we reviewed similar studies completed in other countries, researched articles on economic impact outside the field of education and explored different data-collection and analysis methods.

Studies on the economic impact of international students

Some of the best-known reports on the economic impact of international students are those regularly published in the US by NAFSA (*International student economic value tool*) and the Institute of International Education (*Economic impact of international students*). Relevant reports have also been published in other nations including: *The value of international education to Australia*; *Assessing the economic impact of international education in Canada*; and *The economic impact of export education*, in New Zealand. Although these works included other types of university students, they helped set the base for our research. In 2018 Southern Cross Consulting published *Understanding US Study Abroad in Ireland: Economic impact and future possibilities*⁶², a new study which we also reviewed in our literature.

NAFSA regularly analyzes the contribution made by international students attending US colleges and universities, and their families, to the US economy in terms of income and jobs generated. According to the latest findings, released in 2018: 1,094,792 students contributed \$39 billion, and helped create 455,622 jobs⁶³. For this yearly report NAFSA employs international enrollment data from the Institute for International Education (IIE) and the US Department of State; draws living expenses from the US Department of Education's National Center of Educational Statistics Integrated Postsecondary Education Data Systems; and assesses overall benefits and derived jobs applying formulas developed by Jason Baumgartner, Director of Information Resources at the [Office of International Services of Indiana University - Bloomington](#).

According to IIE's special report *Economic impact of international students*, published in 2017, 67% of all international students in the US received most of their funds from sources abroad, including personal and family resources as well as assistance from their home country governments or universities.

In 2017, the continued growth in international students coming to the U.S. for higher education had a significant positive economic impact on the United States. International students contributed more than \$42.4 billion to the U.S. economy, according to the U.S. Department of Commerce⁶⁴.

⁶²

<https://www.educationinireland.com/en/Publications/Understanding%20US%20Study%20Abroad%20in%20Ireland.pdf>

⁶³ Retrieved December 10, 2018, from:

http://www.nafsa.org/File/_econvalue_2018.pdf?_ga=2.43727205.1317972023.1545571970-1402398561.1545419751

⁶⁴ Retrieved December 10, 2018 from: <https://www.iie.org/Research-and-Insights/Open-Doors/Data/Economic-Impact-of-International-Students>

Two additional works published in the US addressed the methodology of economic impact studies in higher education. In 2007 Siegfried, Sanderson, and McHenry (2007) published an article describing the "methodological approaches and pitfalls common to studies of the economic impact of colleges and universities"⁶⁵. The authors highlighted the most common shortcomings of this type of reports, warning against a lack of quality of the research and asserting that studies often magnify the contribution made by institutions of higher education to their regions.

In May of 2013, the Association of American Universities (AAU) and the Association of Public Land-grant Universities (APLU) sponsored an Economic Impact Workshop, where three authors from the Bureau of Economic Analysis of the U.S. Department of Commerce recommended using input-output analysis to assess the contributions made by universities to regional economies⁶⁶. In their presentation, Ambargis, Mead, and Rzeznik suggested best practices to apply input-output models. In line with Siegfried, Sanderson, and McHenry (2007), they warned against the risk of double-counting which leads to unreasonably high estimates and suggested "a transparent framework for presenting results" (p. 1). The authors provided several useful examples to illustrate how to complete a study on the regional impact of a university in the US.

The authors of *Assessing the economic impact of international education in Canada* "combine the estimated number of international students in Canada by level of study in each province and territory and estimates on educational and living costs"⁶⁷, to assess the total expenditure during their studies. They conclude that "international education services for long-term students alone contribute to the equivalent of 17.2% of Canada's total export in goods to the world" for an amount of \$12 billion, and that the activity generates 158,300 jobs.

In addition to the US and Canadian reports, several other studies look at the contribution made by *education exports*. The following three, carried out in Australia and New Zealand, also address the effects of international students' expenditures on other national industries, and determine the multiplier effects of this economic activity.

The economic impact of export education (2008) was "developed with funding from the Export Education levy and managed by Education New Zealand on behalf of the Ministry of Education"⁶⁸. Its authors define economic impact as the contribution to Gross Domestic Product made by tuition fees, students' living expenditures, earnings from offshore education, "and flow-on effects through the wider economy" (par. 5). According to these researchers, the previous assessments (published in 1999, 2001 and 2004) had been less comprehensive, lacked "a dedicated survey of expenditure by foreign fee-paying students", and failed to include the provision of educational goods and services abroad by companies and institutions.

⁶⁵ Siegfried, J. J., Sanderson, A. R., & McHenry, P. (2007). The economic impact of colleges and universities. *Economics of Education Review*, 26(5), 546-558, p. 546

⁶⁶ Ambargis, Z. O., Mead, C. I., & Rzeznik, S. J. (2014). *University Contribution Studies Using Input-Output Analysis* (No. 0105). Bureau of Economic Analysis, retrieved June 2016, from: https://www.bea.gov/papers/pdf/BEAWP_UniversityContributionStudiesIO_022014.pdf

⁶⁷ Retrieved February 18, 2017, from: http://www.international.gc.ca/education/report-rapport/economic-impact-economique/sec_6.aspx?lang=eng

⁶⁸ Retrieved February 16, 2017, from: <https://www.educationcounts.govt.nz/publications/international/35324>

A summary in the *Education Counts* website details how the previous deficiencies were addressed in the 2008 study:

Over 2007/08 the export education industry generated around \$2.3 billion of foreign exchange, of which \$70 million came from offshore provision. The industry's contribution to New Zealand's gross domestic product is estimated at approximately \$2.1 billion after allowing for flow-on effects to other industries and leakages offshore (par. 3).

The earliest study we found in Australia including multiplier effects was completed by McKay in 1998 and focused on the impact of international students on the city of Wollongong's economy. In his research, McKay found that each dollar invested in attracting international students would generate \$1.8 of household income and contribute to create a vast number of jobs. In 2015 the Australian Government commissioned Deloitte Access Economics to complete a similar study, which would also produce multipliers. This was to be a much broader research, including data from the entire country.

In the report, Deloitte valued exports from international education, including "international students studying at schools, vocational education and training (VET) providers, higher education providers and those studying English Language Intensive Courses for Overseas Students (ELICOS) courses"⁶⁹. The total impact was estimated at \$18.8 billion, and researchers determined that the activity was supporting over 130,700 full time employees. There were an additional \$400 million in government revenue as the result of consumption taxes, and \$336 million attributed to tourism activities of students, their families, and friends. In the document the authors describe the role of multipliers,

A widely used measure of the spill-over of activity from one sector to another is captured by the ratio of the total to direct change in economic activity. The resulting estimate is typically referred to as 'the multiplier'. A multiplier greater than one implies some indirect activity, with higher multipliers indicating relatively larger indirect and total activity flowing from a given level of direct activity (p. 72).

The latest figures, published by Universities Australia in August of 2018 after their release by the Australian Bureau of Statistics, indicate records of international students in the country contributing 32 billion to the economy "boosting Aussie jobs and wages"⁷⁰. Australia sets an example for other world regions in the success of strategies and funding employed to promote the country as an educational destination, the data-collection and analysis processes, and the circulation of results.

In *Understanding U.S. Study Abroad in Ireland* (2018)⁷¹, a group of researchers led by Gill Roe completed a thorough analysis of the character, economic impact, and future of this sector. They collected data on six different types of study abroad programs, to assess their direct, indirect, and induced effects on the

⁶⁹ Retrieved February 16, 2017, from: <https://internationaleducation.gov.au/research/research-papers/Documents/ValueInternationalEd.pdf>, p. 1

⁷⁰ Retrieved November 12, 2018, from: <https://www.universitiesaustralia.edu.au/Media-and-Events/media-releases/International-students-inject--32-billion-a-year-into-Australia-s-economy---boosting-Aussie-jobs-and-wages#.XB5cylxKhPY> par. 1

⁷¹ Retrieved November 18, 2018, from: <https://www.educationinireland.com/en/Publications/Understanding%20US%20Study%20Abroad%20in%20Ireland.pdf>

Irish economy. The study constitutes a tool to advocate for the benefits of international educational experiences both for the host and the sending countries, and especially for the communities with a more direct role in the exchange.

In 2019, Dr. R. Choudaha published a report estimating that international tertiary education had a global impact of \$300 million during the 2016 year⁷². According to the author this amount reflected the direct, indirect, and induced effects of all students attending universities abroad. Choudaha suggests that the key to future growth will reside in removing barriers to obtain visas and sustaining affordable costs.

In March 2019, the Higher Education Policy Institute (HEPI) and Kaplan International Pathways (Kaplan) published "new research commissioned from London Economics on the financial contributions of international students who graduate from higher education and stay in the UK to work"⁷³. This study, according to Nick Hillman, Director of HEPI, argues for the benefits that international students bring to the UK.

Among these benefits is the economic contribution of graduates, both from EU countries and the rest of the world who remain in the UK to work, amounting to £3.2 billion. In addition, the HEPI study shows that "international graduates who find employment in the UK typically do so in sectors that suffer from acute skills shortages. Rather than displacing domestic graduates, international graduates are plugging skills shortages"⁷⁴.

HEPI was founded "to influence the higher education debate with evidence" and this report is an excellent example of data-based advocacy used to remove administrative barriers and informing the public on the positive economic impact of international education.

Economic impact studies in fields other than education

The American Independent Business Alliance (AMIBA) employs the multiplier effect to assess the economic impact on communities of local businesses vs. national franchises. AMIBA promoted a series of studies to communicate and advocate for the importance of the local economic multiplier effect or *local premium*. The organization recommended the input-output model be employed as a key part of effective *buy local* and public education campaigns, and we found their advocacy approach⁷⁵ somehow transferable to the field of international education.

In their *Guide for undertaking economic impact studies*⁷⁶, John L. Crompton, Seokho Lee, And Thomas J. Shuster (2001) use the Ocean City, Maryland, Springfest as an example for tourism professionals to apply in their communities. They focus on the principles that are key to the integrity of the assessment process, when determining the return on residents' taxes used by the City Council to fund the festival. The authors suggest assessing the overall impact from "nonresident visitors who spend money in the local community both inside and outside of the event or facility that they visit". Their process includes

⁷² Retrieved July 2020, from Studyportals, at: [Beyond \\$300 Billion: The Global Impact of International Students | Studyportals](#)

⁷³ Retrieved July 2020, from the Higher Education Policy Institute, at: [Just one cohort of international students who stay in the UK to work pay £3.2 billion in tax - and they aren't taking jobs from UK citizens - HEPI](#)

⁷⁴ Ibid

⁷⁵ Retrieved February 14, 2017, from: <http://www.amiba.net/resources/multiplier-effect/>

⁷⁶ *A guide for undertaking economic impact studies: The Springfest example*, John L. Crompton, Seokho Lee, and Thomas J. Shuster, 2001, *Journal of Travel Research*, Vol. 40, August 2001, 79-87 © 2001 Sage Publications

using surveys to measure the total direct expenditures made by non-residents at the Springfest, as well as their indirect impact on sales, personal income, and employment in the local community.

Economic interdependence: Input-output studies

In his 1965 book, *The elements of input-output analysis*, William H. Miernyk⁷⁷ introduces students to the historical context in which the thought of economic interdependence developed, starting with the works of Francois Quesnay and his *Tableau Economique* (1758) and culminating in the 1930s with Professor Wassily Leontief's approach to economic interdependence studies. Leontieff focused on quantitative relations among the components of an economic system and their effect on one another. Although his input-output model is based on linear equations, Miernyk covers the essentials of the process in non-mathematical terms to help his readers understand how it works. His book influenced our choice of a research design that would focus on economic interdependence.

Miller and Blair (*Input-output analysis: Foundations and extensions*, 2009)⁷⁸ explore Leontief's framework as it applies to the regional level, detail the extensions that have been developed in the past seven decades, and describe how the model is applied in different contexts. This text was especially useful in clarifying the types and roles of multipliers, and how employing these would best contribute to the purpose of our study. They define multipliers as a notion that "rests upon the difference between the initial effect of an exogenous change and the total effects of that change". These authors distinguish between Type I or *simple multipliers*, when only direct and indirect effects are considered; and Type II or *total multipliers*, when direct, indirect, and induced effects are employed. Type I multipliers are likely to produce lower estimates of economic impact than Type II, as the latter include also the induced effects resulting from a specific trade activity.

In December 2014, The Association of Public and Land-grant Universities (APLU), through its Commission on Innovation, Competitiveness, and Economic Prosperity (CICEP), and the Association of American Universities developed their *Economic impact guidelines*, acknowledging that "APLU's member institutions are increasingly being asked to demonstrate their economic value and relevance"⁷⁹. They encouraged higher education institutions to "focus efforts not only on telling their economic engagement story well, but also growing, improving, and advancing their economic engagement enterprise and thereby accelerating economic development in their regions, nationally" (p. vii). Regarding economic engagement, the framework developed by CICEP is based on four basic suggestions for universities: knowing what they are doing well and what needs to be improved; measuring their degree of engagement; telling how they contribute to economic development; and engaging with stakeholders to have a meaningful impact. While our study seeks to assess economic impact at a national level, it aligns with the CICEP guidelines.

⁷⁷ The Web Book of Regional Science, sponsored by The Regional Research Institute of West Virginia University. Retrieved February 8, 2017, from: <http://www.rri.wvu.edu/WebBook/Miernykweb/new/index.htm>

⁷⁸ Miller, Ronald E.; Blair, Peter D.. *Input-Output Analysis : Foundations and Extensions*. Cambridge, GBR: Cambridge University Press, 2009. Retrieved February 10, 2017, from: <http://site.ebrary.com/lib/mitlibraries/Doc?id=10329730&ppg=44>, (p. 244)

⁷⁹ Retrieved December 7, 2018, from: <https://www.aau.edu/sites/default/files/AAU%20Files/Key%20Issues/Research%20Administration%20%26%20Regulation/AAU-APLU-Economic-Impact-Guidelines.pdf>, p. vii