

The Effect of Study Abroad on Grade Point Average

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Abstract

I analyze the effect of study abroad on undergraduate GPA. In order to identify a causal effect, I control for selection into the study abroad program by only using students that were accepted. I address differences between students that study abroad and those that stay by controlling for academic and demographic backgrounds. I find that study abroad has a significantly positive impact on GPA; that this benefit is greater for females, non-transfers, and high-GPA students; and that long programs have the same effect as short ones.

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1 Introduction

Study abroad is an influential experience in the lives of an increasing number and percentage of undergraduates in the United States. As globalization gains momentum and international experience becomes an asset for working in a more integrated world, this trend is expected to continue. Although student-returnees, parents, and scholars have praised the importance of studying in a different country, there lacks a focused literature on the costs and benefits of all aspects of study abroad. This dearth of scholarly work is possibly due to difficulties of controlling for program selection and for self-selection by the students that decide to go. In this paper, I overcome these challenges to explore the effect of studying abroad on the most important barometer of undergraduate education, grade point average (GPA).

The first section of this paper explores channels through which students might be academically influenced upon return from studying abroad. I then describe the data that I collected, its particularities, and the methodology I use which corrects for problems that previous studies have failed to address. Finally, I present regressions on the sample and various sub-groups, offering explanations for the variation in these results.

I find that studying abroad significantly raises the portion of GPA earned from grades after the program ends by .059 for females and .028 for males. The coefficients for low-GPA students and for transfers are smaller and are not significant. When the sample is restricted to students applying to programs with a duration of at least two quarters, the study abroad coefficients are not significantly different from the unrestricted ones, suggesting that short and long programs have the same effect. In general, the study abroad coefficients increase when a transfer student dummy is included, but this halves the sample.

2 Background

Before presenting the data and regressions, I discuss how studying abroad could conceivably change a student academically. I only touch on the possible links and at the most provide a starting point for further qualitative exploration concentrated on each one of these channels in the context of studying abroad.

Experiential Learning

Studying abroad likely involves an important educational tool, experiential learning, whose theory is gaining acceptance in literature on study abroad programs (Andreasen, 1999). According to the theory, students that are able to take what they learn in the classroom and apply that knowledge to extracurricular experiences learn the material better.

Social science students, the largest group to study abroad,¹ might benefit

¹Social sciences, which includes anthropology, economics, history, political science, sociology, and urban studies, are the field of study of 32.9% of the sample used in this paper.

the most from experiences abroad, according to experiential learning. Visiting historical landmarks, living in a different political system or culture, and using universal healthcare could all complement a social science student's education. Students abroad, in particular, have learning experiences that reinforce the theory that they previously and subsequently acquire from classes (Montrorse, 2002).

Spillovers of Foreign Languages and Communication Skills

Immersion is the best way to learn a foreign language (Genesee, 1985). Study abroad, although not the only type of immersion, is one of the most valuable. The knowledge of a foreign language might benefit students in other areas of study as well. Cooper (1987) examines positive correlations between foreign language learning and Scholastic Aptitude Test (SAT) scores. Controlling for economic background and the possibility that good students take more foreign language classes, Cooper finds that increased knowledge of foreign languages causes an increase in SAT scores. An important conclusion of his study is that "the verbal scores of students who had taken four or five years of foreign language were higher than the verbal scores of students who had taken four or five years of any other subject" (p. 381). One might assume that the effects of foreign language study on SAT scores come mainly from the advantage of being able to recognize more words because of Latin roots. However, Cooper finds that the highest scorers studied German. Similarly, Oller and Perkins (1978) find that increased knowledge of foreign languages causes improvements of scores on most types of intelligence tests.²

A study by Lafford (1995) concludes that returnees from Second Language Acquisition programs in a study abroad context benefit from improved communication skills. According to Lafford, students that go abroad are better able to extract information when they return. Furthermore, regardless of whether students gain foreign language skills abroad, simply being in a different cultural setting might have communication spillovers. By communicating more effectively, students are likely more prepared for interaction with other students, teaching assistants, and professors.

Motivation and Academic Direction

Kauffmann et al. (1992) find that students that go abroad value grades less than before. Ironically, by placing more emphasis on knowledge than on grades and memorization, students probably end up learning more, and as a result get better grades in the long-run. Table 1 shows the results of a survey in which students reported academic changes after studying abroad, across programs of all lengths. Students that did not study abroad might have also increased

²This topic is debatable and many scholars disagree with the idea that knowledge of a foreign language increases general intelligence (see Boyle, 1987). Nevertheless, it is possible that such knowledge increases academic performance, whether or not this signifies an increase in intelligence.

their appreciation of education over time; however, 84% of summer program participants claimed to have been affected, suggesting that the causal factor was study abroad and not time.

As will be discussed in the methodology section, grades from classes abroad are potentially subject to an inflating effect, causing GPA earned abroad to be speciously improved over pre-program GPA. Oblivious to this distortion, students abroad might become used to getting better grades and as a result set their standards higher when they return. This higher expectation could have a positive effect on grades received after the program if returnees were able to raise their academic performance accordingly; or, it could have an adverse effect if they became depressed for receiving lower grades and thought they digressed.

Table 1: Survey of Study Abroad Students on Return

	Year	Fall	Spring	Summer	Total
Enhanced interest in academic study	81%	80%	79%	84%	80%
Influenced subsequent educational experiences	91%	85%	86%	84%	87%

source: (Dwyer, 2004)

Benefits of Multiple Universities and Peer Effects

In American universities, most classes share a set of defining characteristics, some a result of university rules and others of convention. On the first day of class, professors typically distribute syllabi with required texts clearly marked. Students know, for the most part, what is expected of them on tests; and in many classes, professors even provide practice tests. Montrose (2002) likewise acknowledges this traditional approach in the U.S., which has been refined over decades and shown to be effective. However, experiencing different pedagogical methods and viewpoints allows students to diversify their academic portfolios. Kauffmann et al. (1992) find that study abroad encourages “systematic thinking, familiarity with different schools of thought, development of one’s own point of view, and the acquisition of knowledge from different disciplines and from independent work” (p. 45). Upon return, students are able to supplement the traditional American learning environment with the new tools they learned abroad.

In addition to a different academic environment, undergraduates that decide to participate in study abroad programs become surrounded by a distinct group of students. Betts and Morell (1999) show that undergraduate GPA is affected by the demographics and environment of students’ highschools. Sacerdote (2001) find that peer effects on GPA take place specifically at the dormitory room level. Students abroad often live, travel, and study together. Study abroad programs facilitate and encourage interaction between participants. As a result, the select group of students in the program likely affect each other academically.

3 The Data

There is a large variety of study abroad programs (Huebner, 1998); and it is likely that each program attracts and accepts different types of students. Thus, conclusions drawn on one program likely apply not only to the specific program, but also to a distinct population. For this study, I use data on undergraduates at the University of California, San Diego (UCSD) that were accepted to the Education Abroad Program (EAP) between 1997 and 2006.

EAP only accepts students from University of California campuses, and comprises several types of programs, located in 35 countries. These programs include field study, language and culture study, internships, and travel study. Although data from internships and work could not be filtered out, more than 90% of the data used in this study are on students that were accepted to study programs.

The study programs of EAP vary in several ways. Linguistically, there are three main types of programs in countries where English is not the main language: programs instructed in English; programs taught in a foreign language, but which only contain American students or other foreigners; and full-immersion programs in which students attend classes that have a majority of local students and instruction is in a language other than English.³ There is also important curricular variation among the programs: some allow students latitude in choosing courses while others are more focused on specific themes, such as studying the language or culture of the host country.⁴

EAP has two characteristics that create two possible biases. First, EAP is selective, having a strict GPA requirement which usually ranges from 3.0 to 3.5.⁵ The summary statistics of accepted UCSD students in Appendix Table A.2 show EAP admits students with high GPAs at the start of the program (3.30).

Second, grades received abroad on EAP affect GPA. These grades are not comparable to grades at UCSD: subjects in classes abroad are treated differently; the classmates with which a study abroad student is being compared are different from those at UCSD; there is often a language of instruction other than English; and the teaching methodology is distinct. Although attempts are made to compensate for such differences,⁶ there are still imperfections. I will address approaches to dealing with this problem in the methodology section.

Figure 1 gives a quick look, before regressions are run, at the changes in GPAs of UCSD students that were accepted to EAP. This figure reports the percentages of students that received better grades after the end of the study abroad program than grades before the program. Out of students qualified

³Note that the second condition of full-immersion programs is there to rule out programs such as the one at the American University of Paris, where the majority of students is not necessarily American, but English is the predominant language of instruction.

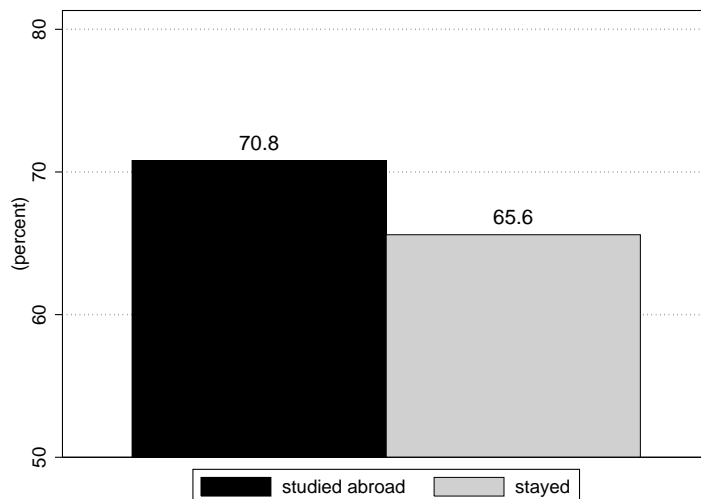
⁴See Ulrich (1996) for an in-depth analysis on the various types of study abroad programs.

⁵Other programs, especially ones administered by private companies, often accept applicants with GPAs under 3.0.

⁶At every EAP center abroad, a director, which is usually a University of California professor, is in charge of converting grades earned abroad to a UC scale.

to study abroad, those that go are predicted to be about 8%⁷ more likely to increase their GPAs than those that stay. However, this information does not help differentiate between causality and correlation, which is the main purpose of this paper.

Figure 1: Percent of Students with a GPA Increase (1997–2006)



source: UCSD and UCSD Programs Abroad Office

note: these statistics are on UCSD students that were accepted to EAP

4 Methodology

A possible methodology for exploring the effect of study abroad on GPA is to compare students at a university who participated in study abroad programs to students that did not. However, this strategy would pose several problems. First, the interest of an undergraduate in studying abroad is a defining characteristic. Individuals applying to study abroad, regardless of whether they actually go, are probably more interested in world affairs and languages, which could have an effect on academics. Second, most study abroad programs are selective, resulting in accepted students being of better academic quality. Any study ignoring self-selection and program selection would likely have an upward bias when estimating the study abroad coefficient.

One of the most cited works in research on study abroad is *Study Abroad: The Experience of American Undergraduates in Western Europe and in the United States* (Carlson et al., 1990). In the study, students that went abroad are compared to those that did not. The authors attempt to correct for the bias created by the selective programs by using a comparison group of students that

⁷ $\left(\frac{70.8-65.6}{65.6}\right) * 100\% \approx 7.9\%$

have a GPA greater than 3.0. However, this attempted redress is flawed because the selection process is not only based on GPA—good letters of recommendation and a strong statement of purpose, among other requirements, are generally necessary to be selected. Likewise, the effort spent to complete the lengthy applications is an indicator of the diligence of a student. Furthermore, the study does nothing to take into account the characteristic of interest in studying abroad as a cause of omitted variable bias.

I propose a methodology that addresses GPA inflation and both selection biases. I eliminate selection bias by only using students that were admitted to EAP. My control group is the students that were accepted to study abroad but did not complete the program. The control group consists of the three categories listed in Table 2. The “canceled program” sub-group is ideal because it provides a natural experiment in which the decision to study abroad was not taken by the student. Unfortunately, only 4 students comprise this category. Students under “pre-withdrawal” balked before the program began, while those under “post-withdrawal” did so after. The control group constitutes 16% of the sample.

Table 2: Control Group

Sub-Group	Number of Students	Percent of Control Group
Pre-Withdrawal	290	88
Post-Withdrawal	37	11
Program Canceled	4	1
Total	331	100

source: UCSD Programs Abroad Office

There are several reasons why a student might be accepted and not go. Some of them, such as the program being canceled, are likely harmless in being a characteristic that might cause omitted variable bias. Others, however, such as financial reasons and family hardships, are causes for concern and must be taken into consideration when scrutinizing the legitimacy of the control group. See Table 3 for some potential reasons why students do not study abroad.⁸

There are studies in education, although in sub-emphases other than study abroad, that use methodologies similar to mine to address selection bias. Dale and Kruger (1999) analyze the effects of attending a high-ranked university on wage. The obvious bias is that the quality of students that enter a top-quality university is likely higher than that of those entering a lower-quality one. To address this issue, Dale and Krueger only compare students that were accepted and rejected by similar institutions, but made different matriculation choices.

My methodology also avoids the possibility of GPA inflation abroad, which persists even if a study controlled for selection bias. Universities factor grades

⁸This survey was completed by students regardless of whether they applied to study abroad. Nonetheless, it can provide some insight as to why students that are accepted to study abroad might end up backing out.

Table 3: Factors in Decision Not to Study Abroad

	Freshmen	Seniors	All
Expense	82%	72%	68%
Learning a foreign language	49%	28%	34%
Lack of interest	31%	22%	23%
Living in a different culture	31%	15%	18%
Giving up social activities	31%	14%	10%
Leaving boyfriend/girlfriend	26%	17%	18%
Leaving parents	19%	8%	12%
Leaving living group	17%	5%	9%
Leaving spouse, children	3%	15%	8%
Other (e.g., graduating)	7%	19%	11%

source: a questionnaire completed by 2800 Oregon State University students (King and Young, 1994)

earned abroad on some programs (such as EAP) into GPA. Students are potentially subject to an easier grading system abroad,⁹ and thus those that went abroad would receive an inflated GPA. A study that did not take this distortion into account would overestimate the benefit of studying abroad on GPA. In order to do an unbiased study on graduating GPA, researchers would need to address inflated grades abroad by filtering out the portion of GPA earned abroad in order to compare like-GPAs. Alternatively, I choose to focus on the GPA of students calculated only from classes at UCSD after the end of the EAP program to which they were accepted, which I denote as *post-program GPA*. Accordingly, I am able to compare the treatment group with the control group using grades from classes at the same university.

Focusing on post-program GPA rather than graduating GPA has the added benefits that the results are easier to interpret and there is greater variance in the outcomes. Consider two hypothetical studies: one finds that studying abroad raised graduating GPAs of students at University A by an average of .2 while the other concludes an average effect of .3 at University B. Which study claims a larger effect of studying abroad? This question cannot be answered without taking into consideration the amount of units a student took upon return and the amount of units at graduation, both of which might differ considerably between the two universities. Conclusions regarding post-program GPA are comparable across universities because they are independent of the amount of credits a student took before, during, or after the program. Furthermore, as shown in Appendix Table A.1, more than 90% of EAP participants study abroad during their junior or senior years, which means that they return only for a few quarters before graduating. Accordingly, we expect to see a larger variance in grades upon return because post-program GPA is more sensitive than overall GPA.

⁹Many host-country professors are sympathetic to foreigners, and the way that grades are translated (from a different grading scale) is usually generous.

Upon return, students that studied abroad probably take different classes than if they had not gone abroad because many classes required by majors are simply not available abroad.¹⁰ Although this likely scenario does not interfere with this paper's goal of exploring the causal effect of study abroad on GPA, it should be taken into consideration when viewing the results. Most likely, students take more units when they get back to compensate for time abroad.¹¹ However, it is also possible that changes in GPA are the result of students changing majors after having studied abroad.

If it were practical to randomly assign students to a study abroad experience, omitted variable bias would not be a concern and one could simply do a regression with a single regressor, a study abroad dummy. However, such a scenario is unrealistic. As a result, although I eliminate the selection bias from EAP admissions, there is still the concern of selection bias on part of the accepted students. That is, one of the ways in which students differ might cause them to change their decision about studying abroad. In order to address self-selection bias, I add a set of background variables to the regressions which take into account certain factors possibly correlated with both GPA and the decision to accept the offer to study abroad.

In order to analyze the effect of studying abroad on the post-program GPA of a student, I estimate the equation

$$y_i = \alpha + \delta s_i + \beta \mathbf{X}_i + u_i,$$

where y_i represents the GPA of student i after the period of time of the EAP program to which individual i was accepted; s_i is a binary variable which takes the value of 1 if the student studied abroad and 0 otherwise; α is a constant; δ measures the effect of studying abroad on post-program GPA; $\beta \mathbf{X}_i$ controls for various demographic and academic variables; and u_i is the error term.

I use two-sided tests when reporting statistical significance because it is plausible that studying abroad has a negative effect on post-program GPA. For example, while abroad students might not be able to take the classes they need to graduate and as a result take more classes per quarter when they return. Similarly, students that return from studying abroad might experience a culture shock while readapting to life in the U.S. (Seiter and Waddell, 1989). Another type of shock with potentially adverse effects is the result of inflated GPA abroad, previously discussed in Motivation and Academic Direction.

Control Group Flaws

There are a few differences in the pre-program summary statistics of the treatment and control groups in Appendix Table A.2, which is a signal of an imperfect control group. The control group's pre-program and high school GPAs are

¹⁰Some students are able to use all classes abroad to satisfy major and general education requirements. Others often add a minor or take classes purely for interest.

¹¹Students abroad could "lose" academic time abroad for two reasons. First, they might take more classes abroad that do not satisfy requirements. Second, classes in other universities often transfer with an incongruous amount of units. A 3-unit class is not allowed to satisfy the requirement of a 4-unit class, while an 8-unit class can only satisfy one class.

lower than those of the treatment group. Students with lower GPAs chose not to accept the offer to study abroad more often than those with higher GPAs. One possible explanation for this observed behavior is that students with lower GPAs received a smaller proportion of the 1.3 million dollars worth of scholarships allocated specifically for EAP students.¹² In this scenario, studying abroad would be more costly for those with lower GPAs and perhaps cause a larger number not to go. Another difference between the treatment and control groups is the average length spent abroad. Students in the control group applied for shorter-length programs, which has two possible implications: these students were already doubtful of their commitment to study abroad; or, they did not apply for longer-length programs because of more demanding GPA requirements.

There are many potential omitted variables which could not be collected and thus are not controlled for in this study. For example, financial information might provide some insight as to why a student decided not to go abroad. Some financial variables of interest are the type of financial aid the student received, the income of the student's family, and whether the student worked or not. Without the addition of these variables and others, the question of how similar the control group is to the rest of the sample for omitted variables remains unanswered.

Consider also that there are potential problems with data on whether students completed a study abroad program or not. Sometimes, students decline an EAP offer in favor of a different study abroad program (however, usually it is the other way around). Statistics on whether students did in fact do this or not are difficult to obtain because students are required to withdraw from UCSD in order to enroll in other programs. If this were true for a significant amount of students, then the findings in this paper would likely be underestimated because some students in the control group would have studied abroad.

Furthermore, it is possible that students in the treatment group are less similar to the control group than to students that are rejected by EAP, because many of these latter students would have studied abroad if given the opportunity. Hence, a better selection of the control group might be students that were rejected by EAP.¹³ Whether this would be a better choice or not depends on which of the following differentiates students the most— acceptance or rejection by EAP, or the reasons that cause some accepted students to go abroad and others to stay.

Table 4: Regression of Post-Program GPA

	(1)	(2)	(3)	(4)	(5)
study abroad	.148	.158	.057	.059	.056
SE	(.027)	(.033)	(.026)	(.026)	(.028)
male	.	-.000	.016	.016	.045
SE		(.051)	(.044)	(.043)	(.043)
pre-program GPA	.	.	.615	.622	.594
SE			(.331)	(.332)	(.391)
continent	.	.	.	✓	✓
high school GPA027
SE					(.033)
<i>n</i>	2021	2021	2021	2021	1821
<i>ncontrol</i>	331	331	331	331	286
\bar{R}^2	.016	.070	.423	.425	.418

source: UCSD and UCSD Programs Abroad Office

5 Results

Table 4 shows the results of regressions of post-program GPA. Regression (1) is a simple regression of post-program GPA on a study abroad indicator. Selection bias from EAP admissions is not a concern because all students in the sample were accepted to EAP. Although the coefficient is large and significant, the \bar{R}^2 is negligible, suggesting that study abroad alone does a poor job of explaining post-program GPA. More importantly, there are omitted variable biases.

Regressions (2) through (5) address the likelihood that the control group is different from the treatment group because of self-selection bias. Regression (2) uses the following demographic information: U.S. citizenship, ethnicity, and age.¹⁴ There are many reasons why foreign citizenship might be correlated with studying abroad and academic performance. For example, perhaps foreign students are less nervous about studying in a different country, as they already made the transition at least once. Regression (2) also includes an interaction term that allows for the possibility that post-program GPA is affected by study abroad differently for males and females.

Similarly, Regression (3) adds academic variables. I include the amount of pre-program credits and whether the student graduated with a Bachelor of Arts (BA) or Bachelor of Science (BS). I add an interaction term that controls for

¹²Source: http://eap.ucop.edu/financial_information/scholarships.shtm
note: this sum of money was spread across all UC campuses, not just UCSD. 1.3 million is the estimate for 2007–2008.

¹³Data on rejected applicants were not available for this project. Even if such data were used, there would still be the same problem of some students going abroad with programs other than EAP.

¹⁴I drop the age variable for all regressions after (2) because it does not change the results and decreases the \bar{R}^2 .

the possible scenario that the effect of studying abroad on post-program GPA depends on whether the student pursued a BA or a BS. Perhaps, for example, students in the humanities and social sciences—thus, pursuing a BA—have more experiences abroad that are directly applicable to their field of study, which leads to greater benefits as a result of experiential learning. Regression (3) additionally controls for the college within UCSD of the student and the department of the student's major.¹⁵ I thus address the possibility that GPAs of students increased from studying abroad simply because the students with easier majors or fewer general education requirements were the ones that predominantly decided to go. Academic information seems to be more important to the regressions than demographics, indicated by a considerable increase in the \bar{R}^2 from (2) to (3) and a drop in the study abroad coefficient. Both of these changes are mainly due to the presence of pre-program GPA in the regression, which expectedly explains a large portion of post-program GPA and also seems to be a difference between the control and treatment groups (see Appendix Table A.2). The large decrease in the study abroad coefficient upon inclusion of pre-program GPA suggests two correlations: students that decided to go abroad had pre-program GPAs higher than those who did not go; and students with higher pre-program GPAs had higher post-program GPAs on average.

By Regression (4), the study abroad coefficient and \bar{R}^2 seem to stabilize, suggesting that the most important variables have been included in the previous regressions. Controlling for the continent of the program to which the student applied and for high school GPA, the coefficient changes negligibly. I use Regression (4) as the main regression.¹⁶ Therefore, I find that studying abroad has a causal impact on post-program GPA of about .059 points for females and .028 points for males. These coefficients are statistically significant at the 5% level.

Something to keep in mind when putting these results into context is whether the increase in GPA reflects a temporary or permanent change of the student. Let us assume that it were true that GPA from UCSD classes did increase, on average, when a student returned from abroad. Is this effect fleeting? The answer to this question would not be as important to students as it would be to employers. If it were found that the effect of studying abroad *permanently* increased students' intelligence and motivation, then their graduating GPAs would not be perfectly reflective of this because of the unit weight of their pre-abroad GPAs. If this were indeed the case, one might even be able to justify the inflated grades earned abroad, assuming one of the purposes of GPA is to indicate the academic quality of the student at time of graduation. On the other hand, if the effect were fleeting, then graduating GPA would overestimate the academic potential of students.

¹⁵UCSD's student body is made up of six colleges, each of which has its own general education requirements and likely a different set of peers.

¹⁶The data on high school GPA are flawed: 300 observations lack high school GPA data, at least 40% (121) of which are transfer students, a much higher percentage than the total sample. I report Regression (5) to show that even this flawed variable does not have much effect on the study abroad coefficient.

Restricted Regressions

Table 5: Restricted Regressions of Post-Program GPA

	(4)	(6)	(7)	(8)	(9)	(10)
study abroad	.059	.091	.040	.079	.045	.061
SE	(.026)	(.041)	(.076)	(.079)	(.045)	(.069)
male	.016	.057	.040	.079	.045	.061
SE	(.043)	(.065)	(.093)	(.152)	(.069)	(.105)
pre-program GPA < 3.0			✓	✓		
quarters ≥ 2					✓	✓
transfer		✓		✓		✓
<i>n</i>	2021	1053	373	201	987	493
<i>n</i> _{control}	331	168	96	49	130	62
\bar{R}^2	.425	.435	.112	.075	.425	.476

source: UCSD and UCSD Programs Abroad Office

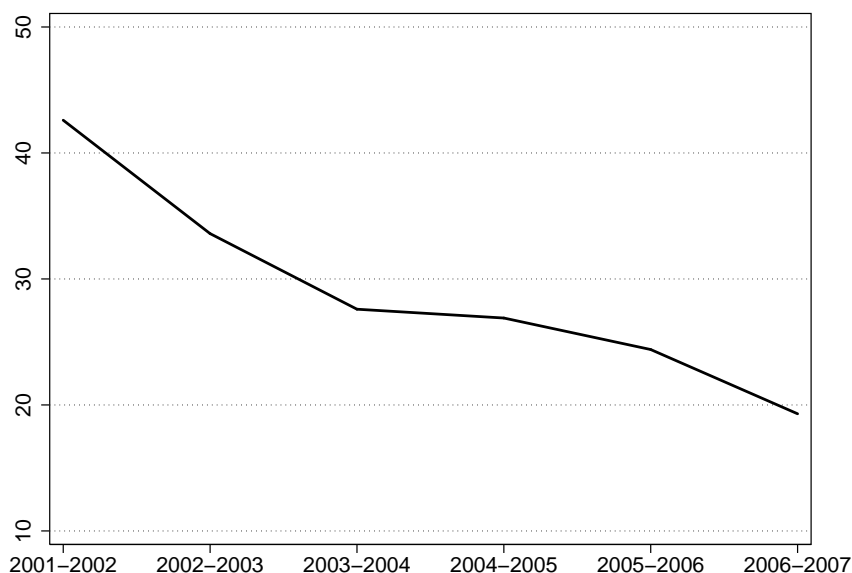
Table 5 presents restricted regressions, which might provide better insights at the cost of reduced sample sizes.¹⁷ For comparison purposes, Regression (4) in Table 5 is the same as in Table 4, and is the main unrestricted regression. A dummy, which equals one for transfer students, was not included in the main regression because it halves the sample. Regression (5) shows that the inclusion of the transfer dummy causes an increase in the study abroad coefficient, although the standard error increases because of a decreased sample size. The interaction term between transfer and study abroad is negative ($-.14$), implying that studying abroad is not as beneficial for transfer students as it is for non-transfers. This could be because transfer students that study abroad are changing too quickly from one learning environment to another. Or, perhaps the main benefit of studying abroad is being in a different learning environment, something that transfer students already did by transitioning to UCSD.

When the sample is restricted to students that have less than a 3.0 for pre-program GPA in Regressions (7) and (8), the study abroad coefficient is positive but less than in the unrestricted regressions, suggesting that study abroad is not as beneficial for low-GPA students. Hence, study abroad programs appear to be justified in having strict GPA requirements. Nevertheless, the positive coefficients suggest that unless low-GPA students would take away spots from high-GPA students, there should be more efforts to encourage all undergraduates to study abroad, regardless of their GPAs. A program that accepts students with a greater range and variation of GPA would be more useful for analyzing how students from certain GPA brackets are affected differently by studying abroad.

¹⁷The similarity of the summary statistics of the part of data that has transfer information and the part without shows there is no reason to believe there is a bias once the sample is reduced.

Supposing that study abroad has a positive effect on post-program GPA, one might assume that the longer a student is abroad, the stronger the effect. The study abroad coefficients in Regressions (9) and (10), however, do not change much when restricted to undergraduates studying abroad for longer than a quarter. These results confirm the similarity of reported effects across all program lengths in Table 1. From an academic perspective, then, there appears to be no reason for concern about the recent trend shown in Figure 2 of students participating in more short-term than long-term programs.¹⁸ It should be noted that these two samples of students represent different populations: one pursued a short-term program; the other sought a longer period abroad. Nonetheless, Columns (1) and (5) of Appendix Table A.3 show that the summary statistics of these two groups are similar.

Figure 2: Year-Long Program Participation (percent), 1997–2006



source: UCEAP Research 2007, <http://eap.ucop.edu/staff/statistics/>

¹⁸Figure 2 only shows data from EAP and after the year 2000. In fact, data from the Institute for International Education of Students show that this decline has been happening for decades nationwide. In the 1950s and 1960s, 72% of students went abroad for the entire year. In the 1990s, only 20% make this commitment (Dwyer, 2004). Ironically, lower travel costs and increased income, which are possibly the reason for a rise in absolute numbers studying abroad, probably also make it easier for students to justify shorter trips.

6 Conclusion

Post-program GPA can be explained largely from pre-program GPA and thus it appears that there are few other factors which significantly affect it. However, one of these factors might be study abroad. I found that studying abroad raised UCSD undergraduates' post-program GPAs by .059 for females and .028 for males. These coefficients are statistically significant in a two-sided test at the 5% level. Furthermore, study abroad appears to be less beneficial for transfers and low-GPA students. Study abroad does not seem to provide increasing returns—students that chose to participate in longer programs did not differ much in outcome from students that went on short-term programs.

This work has analyzed only a small part of what should be examined in study abroad programs; it is a starting point for more research, which should address all aspects of studying abroad and aim to explain causal impacts on important outcomes in academia, the job market, and life. This study followed students throughout their undergraduate degree. A more comprehensive study should look at longer-term outcomes. Additionally, researchers should study what type of students decide to study abroad. Not only would such research help understand omitted variable problems in a study such as this one, but it would also be important for pinpointing the characteristics of the population the findings in this paper concern. Likewise, a question that should be asked is: are the right students being sent abroad? Finding the types of students that receive the most benefits from studying abroad should be a top priority for both researchers and study abroad policy-makers.

The decision to study abroad should not be taken by only thinking about the effect on GPA. At the very least, this study shows that people can reject with some confidence that studying abroad adversely affects a student's GPA, allowing students to concentrate on other, more abstract, benefits to exploring the world. Finally, it is important that this study be taken in context; that is, the population is UCSD undergraduates that applied and were accepted to EAP from 1997 to 2006. EAP is a unique program and no parallels with other programs should be assumed without hesitation.

Appendix

Table A.1: The Levels of EAP Students When Abroad (percent)

Class Level	01-02	02-03	03-04	04-05	05-06
Lower Division	4.2	5.4	4.7	3.8	3.5
Juniors	54.5	50.3	50.8	49.8	49.0
Seniors	40.5	43.3	43.9	46.0	47.1
Graduate	0.8	1.0	0.6	0.4	0.3

source: UCEAP Research 2007, <http://eap.ucop.edu/staff/statistics/>

Table A.2: Summary Statistics

	Total n=2021	Treatment n=1690	Control n=331
study abroad	.836 (.370)	1 (0)	0 (0)
post-program GPA	3.43 (.429)	3.45 (.420)	3.30 (0)
male	.300 (.458)	.295 (.456)	.323 (.468)
US citizen	.906 (.291)	.915 (.279)	.864 (.343)
age	20.98 (1.62)	20.96 (1.65)	21.04 (1.46)
pre-program GPA	3.30 (.334)	3.33 (.324)	3.20 (.363)
length of program (quarters)	1.95 (1.06)	1.99 (1.07)	1.76 (1.01)
pre-program credits	103.97 (32.28)	104.50 (31.65)	101.24 (35.22)
bachelor of science	.284 (.451)	.280 (.450)	.302 (.460)
high school gpa	3.97 (.258)	3.98 (.256)	3.93 (.265)
	n=1821	n=1535	n=286
transfer student	.145 (.353)	.136 (.343)	.196 (.398)
	n=1053	n=885	n=168

source: UCSD and UCSD Programs Abroad Office

Table A.3: Groups With (w/T) and Without (w/o T) Transfer Data

	Total		pre-prog GPA < 3.0		quarters ≥ 2	
	w/o T	w/T	w/o T	w/T	w/o T	w/T
	(1)	(2)	(3)	(4)	(5)	(6)
number of obs.	2021	1053	373	201	987	493
study abroad	.836	.840	.743	.756	.868	.874
	(.370)	(.366)	(.438)	(.430)	(.336)	(.332)
post-program GPA	3.43	3.43	3.04	3.02	3.47	3.47
	(.429)	(.445)	(.449)	(.487)	(.406)	(.421)
male	.300	.279	.332	.299	.301	.298
	(.458)	(.449)	(.472)	(.459)	(.459)	(.458)
US citizen	.906	.913	.855	.871	.932	.939
	(.291)	(.283)	(.352)	(.336)	(.252)	(.239)
age	20.98	21.13	21.24	21.57	20.86	21.03
	(1.62)	(1.85)	(1.53)	(1.80)	(1.61)	(1.84)
pre-program GPA	3.30	3.31	2.81	2.81	3.34	3.35
	(.334)	(.339)	(.162)	(.172)	(.316)	(.318)
length of program (quarters)	1.95	1.89	1.70	1.57	2.95	2.91
	(1.06)	(1.05)	(.99)	(.91)	(.60)	(.65)
pre-program credits	104.0	104.3	102.9	102.9	99.8	99.6
	(32.3)	(34.3)	(39.3)	(42.8)	(26.5)	(27.8)
bachelor of science	.284	.273	.324	.264	.234	.245
	(.451)	(.445)	(.469)	(.442)	(.424)	(.431)
high school gpa	3.97	3.98	3.85	3.87	3.97	3.98
	(.258)	(.249)	(.269)	(.266)	(.261)	(.245)
	n=1821	n=929	n=317	n=161	n=909	n=446
transfer student		.145		.224		.122
		(.353)		(.418)		(.327)

source: UCSD and UCSD Programs Abroad Office

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