Who studies abroad and why?
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Extended abstract

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1. Introduction
Internationalization of higher education has become a priority in the European education policy. According to the strategic objectives of Europe 2020, “an EU average of at least 20% of higher education graduates should have had a period of higher education-related study or training abroad, representing a minimum of 15 ECTS credits or lasting a minimum of three months” (EU Council of Ministers of Education, November 29, 2011).

Since it began in 1987/1988, the world’s most successful student mobility programme, the Erasmus programme, has provided over three million European students with the opportunity to go abroad and study at a higher education institution or train in a company (European Commission, 2014). However, learning mobility barriers still exist and the shares of study abroad participants vary widely across Member States.

Research in this area is expanding with the aim of understanding motivations and potential benefits of international students’ mobility. The studies have mainly focused on the factors influencing the choice to spend a period of study abroad and on the effects that the international mobility can produce on the skills and, eventually, on the employability (see, among others, Di Pietro and Page, 2008; Di Pietro, 2015; Luo et al., 2015; Parey and Waldinger, 2010; Rodrigues, 2013).

Recently, the intent to study abroad has been analyzed in some studies carried out on samples of European students. On the one hand, some studies have investigated ex ante the propensity of students towards international mobility experience. Among them, the Eurostudent survey (fifth edition, 2012-2015) showed how the international mobility still involves a relatively small number of students, characterized by a strong socio-economic and cultural background (Hauschildt, Gwosć, Netz &
Mishra, 2015). On the other hand, other studies have focused on analysing ex post the impact of the experience of international mobility. Among them, the two reports funded by the European Commission *The Erasmus Impact Study* (CHE Consult, et al., 2014; CHE Consult GmbH and CHE Consult Prague, 2016).

Within this context, the aim of this paper is twofold. First, by making use of a rich dataset based on two cohorts of students enrolled in a medium size university of the North of Italy (the University of Bergamo), we empirically analyse those characteristics that are likely to have an impact on the decision to spend a period of study abroad. Second, we investigate mobility students’ motivations and worries about the experience abroad. To this aim, we have conducted an on-line survey addressed to all the outgoing students in the a.y. 2015/16 before the mobility experience. To assess the results of the survey, we apply a principal component analysis.

2. Who studies abroad?

The first objective of this paper is to study in detail the characteristics of the students who apply for a period of international mobility and to compare them with those who do not take this path. The question that we want to try to answer is whether the students who want to study abroad are different from other students and in what sense.

For each student in two cohorts (about 6000 students for the academic years 2013/14 and 2014/15), we have administrative information collected at enrolment (age, gender, region of residence, etc.) and data on academic career (subject area of the degree program, regularity of the studies, exams’ grade, etc.). In addition, we have information on all the students who have applied to the Erasmus + or Extra-EU programs for the academic year 2015/16 (more than 1000 students). Differently from the majority of existing studies in which the intention to apply is taken into account, in this paper we consider those who have actually applied to the programs. All such students are distinguished between those who are eligible to carry the experience abroad and those who do not overcome the selection.

An econometric analysis is carried out, mainly using logit and probit models.

3. Why to study abroad?

3.1 The questionnaire and the students

The second objective of this paper is to investigate mobility students’ motivations and worries about the experience abroad. To assess the experience of the students of the University of Bergamo, we prepared a questionnaire consisting of two sections: “Decision to study abroad” (section B) and “Worries before the departure” (section C). In addition, we ask a few questions (section A) regarding
the student’s personal details: parents’ level of education, parents’ employment status, his/her own previous experience abroad or of their families, the number of semesters to spend abroad, the type of internationalization program (Erasmus+ or Extra EU Program), the host country and the language spoken during the experience abroad.

In the first section “Decision to study abroad”, we ask students to motivate their decision to study abroad, i.e. to enhance future employability, to enrich their CV, to live a new experience, to improve the knowledge of a foreign language, to get in touch with the culture of the host country. Furthermore, we analyse the factors that address the choice towards the host country and the university: i.e. compatibility of study programs and availability of scholarships, prestige of host city and reputation of the university, knowledge of the language and culture of the host country, living costs.

In the second section “Worries before the departure”, we ask students to express their concern about the different teaching methodology, to attend the courses and to take the exams in a foreign language; but also in aligning their progress and the average marks in the University of Bergamo. Finally, we ask about the cost of living in the host country and living away from the home country.

Our survey involves the 299 students (64% females and 36% males) selected to spend one/two semesters abroad for an Erasmus+ or Extra EU program during the academic year 2015/2016. We consider the students belonging to all six departments of the Bergamo University: Engineering (10.0%), Foreign Languages (47.8%), Social Sciences (6.4%), Law (3.3%), Art and Philosophy (3.3%) and Economics (29.2%). Students are mainly Italian (97%). They study abroad mainly during the bachelor (63%) and the fall semester (53.5%). The Erasmus+ student spend their credit mobility mainly in Spain (27.5%), France (20.4%), Germany (19.7%) and United Kingdom (13.4%). A small group of students (30 subjects) leaves to China, USA, Australia and Mexico. The languages of the credit mobility are English (34%), Spanish (25.4%), French (19.1%) and German (14.7%). The other languages spoken during the experience abroad are Chinese, Portuguese, Estonian and Russian. After more than one reminder, the answer rate to the questionnaire is approximately 66%.

3.2 The Principal Component Analysis

The basic idea of principal component analysis (PCA) (Batholomew et al., 2008) is to describe the variation in a set of correlated variables or items \( x_1, x_2, \ldots, x_q \), in terms of a new set of uncorrelated variables, \( y_1, y_2, \ldots, y_q \), each of which is a linear combination of the \( x \) variables. The new variables are derived in decreasing order of importance in the sense that \( y_1 \) accounts for as much of the variation in the original data amongst all linear combinations of \( x_1, x_2, \ldots, x_q \). Then \( y_2 \) is chosen to account for as much as possible of the remaining variation, subject to being uncorrelated with \( y_1 \), and so on. The new variables defined by this process, \( y_1, y_2, \ldots, y_q \), are called principal components. In this way, the
first few components will account for a substantial proportion of the variation in the original variables and can be used to provide a convenient lower-dimensional summary of these variables. In our data analysis, we consider 166 students and 20 items concerning:

- category of student: bachelor or master,
- mother’s and father’s level of education (4 increasing level)
- personal or family previous experience abroad
- 8 factors regarding the importance in motivating the decision to study abroad (4 increasing level for each item),
- 8 factors regarding the worry before the departure (4 increasing level for each item).

To analyse the data we used the open-source \textit{R} language (Everitt, 2007).

In this preliminary analysis, we consider the first three principal components (\textit{pc}): 

- \textbf{First pc – the worries before the departure}
  
  All items (except the living cost in the host country) concerning the worries belong to this first pc: different teaching methodology, to attend a course and to take an exam in a foreign language, to have relationships with students of other nationalities, to decrease the mark average, to have difficulties in aligning the progress in Bergamo and living away from home. The degree of worry decrease if we consider a student of master level and if the student’s mother has a high degree of education.

- \textbf{Second pc – professional and financial interest}
  
  In this second pc we see that to improve the CV and to increase chances of finding work abroad in the future are important factors in motivating the decision to go abroad, but we also find the possibility to have a scholarship, own or family financial condition and the concern for the cost of living in the host country. These aspects become more important for students of master level or who have had previous experience abroad.

- \textbf{Third pc – non-academic interests}
  
  The non-academic factors that motivate the choice to study abroad are the desire to know the culture of the host country, the curiosity about a new experience and the improvement of the linguistic abilities. These characteristics are more important if the parents have a high education level or an experience abroad, but are less important if we consider a master student.

The Plots 1 and 2 explain the relation between the first and the second pc and the first and the third pc; the labels identify the students’ department: Economics (ECO), Engineering (ENG), Foreign Languages (LAN), Law (LAW), Philosophy (PHI) and Social Sciences (SOC).
Plot 1: Relationship between first and second pc  
Plot 2: Relationship between first and third pc

References


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