## Erasmus and internationalization: flow structure and impact on the performances

## Summary

In the last decades the interest in international mobility programmes has increased enormously and as a consequence both fundings from the European Commission and the number of participating students have increased too. The aim of the thesis was to focus on studying the flows between European countries and the influence that such experience has on the students' careers.

In the first Chapter, after a brief introduction of the Erasmus+ programme, which has lately celebrated its 30th anniversary, the thesis concentrated on analyzing exchange students (summing up to 303,8000) who moved throughout Europe thanks to the Erasmus+ programme during the academic year 2015/16. The flows are displayed with 3 different representations: a simple origin-destination matrix, a map and a chord diagram; the first two show all the data, whereas the last one only represents the more substantial flows. The application used to obtain these representations was R and the relative code is shown in the appendix of the thesis.

In Chapter 2 the thesis focuses on the internationalization of Italian universities. The data were collected from two databases: AlmaLaurea's and ANVUR's. The former is an interuniversity consortium which collects every year the profile and employment status of graduates one, three and five years after graduation and collect and make available online the curriculum vitae of graduates; the latter is a public body supervised by the Ministry of Education which aims to ensure the quality of the system of higher education and national research. These two databases combined have a great number of indicators which can be divided into several categories such as indicators

related to teaching, indicators of internationalizazion etc. The indicators selected for the study of this thesis were the ones regarding internationalization (e.g. percentage of CFU obtained abroad), academic results (e.g. graduation grade, delay index) and satisfaction (e.g. percentage of students who would enroll again in the same degree course). The study shows correlations between the variables and the difference, in average, between high mobility courses (the ones with at least 5% of the CFU obtained abroad) and low mobility courses; it also presents an analysis of the internationalization dividing the courses into three teaching areas: scienctific-technological area, humanistic-social area and medical-health area.

In the third and last Chapter, after mentioning some of the previous studies on the subject, a model is presented. The choice was to use a hierarchical model to study the impact of internationalization (the variable used was the aforementioned percentage of CFU obtained abroad) on students' career (in this case, the variable used was the percentage of employed students one year after their graduation); the levels were the cities of the universities and the provincial unemployment rate was used as an explanatory variable too. This model was obtained, just as the graphic representations in Chapter 1, by using R. In the thesis were reported both slope and intercept of the linear regression and the random effects, which are the variations of these two in every group. Some graphics are presented too (one for every group) showing the data, the group's linear regression line and the regression line obtained by applying the hierarchical model.

Although the model shows that there is an influence of internationalization on students' employability, no conclusion can be drawn because the data weren't of the individual, but were aggregated by course of study and so there could be a problem of ecological fallacy. However, this study highlights a possible relation between studying abroad and having more success in the labour market, confirming what previous studies on the same subject had already discovered.

Tommaso Cavalieri