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The Multifaceted Impact of Erasmus Programme on the School-to-Work Transition: A Matching Sensitivity Analysis

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Abstract
This study investigates the effects of studying abroad through the Erasmus Programme (EP), a European Union programme launched primarily to foster international mobility and cultural exchange of University students, on the school-to-work transition of university graduates. Since a satisfactory transition does not only mean finding a job, but also concerns the wage level and the quality of work, such as stability, working hours and risk of overeducation, we consider all these aspects in order to draw a comprehensive picture of the effect of the EP. We exploit a composite dataset, built on administrative and survey data, covering all graduates from the largest Italian university from 2011 to 2015, and replicate the analysis on a national sample of graduates to verify whether the results can be extended nationwide. Estimates are provided, based on a PSM procedure, of the effects of the EP on the probability of employment, including abroad, on the quality of jobs and on wage levels at different points in time after graduation. We also investigate whether less advantaged students benefit from the Erasmus experience, and provide insights about the role of the foreign languages skills. The results show that the participation in the EP improves employment prospects at least in the short term, as well as the quality of job, and has a positive long term effect on the participants' ability to find a job abroad. The wages of participants are persistently higher than those of non-participants. Less advantaged groups also benefit from the Erasmus experience.

Keywords Erasmus Programme · Studying abroad · University graduates · Propensity Score

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Introduction

Erasmus is a long-standing programme launched by the European Union to promote the mobility of students between member states. Since its launch in 1987–1988, it has provided over four million European students with the opportunity to go abroad and study at a higher education institution or train in a company.

Cultural exchange and the shaping of a European identity represent key identifying purposes of the programme. In addition to that, the programme aims to achieve employment objectives. Fostering skills and employability, as well as the inclusion of learners with fewer opportunities, are among its primary goals. Moreover, it is intended to promote the mobility of young workers among European countries as a policy to build an integrated labour market. It is often claimed that the Erasmus Programme (EP) can have positive effects on the school-to-work transition of young graduates, enhancing their skills and employability (European Commission 2014, 2020). However, these beneficial effects cannot be taken for granted as the intensity of study may be lower during the period abroad, resulting in less knowledge acquisition and a slower academic career, with possible adverse consequences on the transition from school to work after graduation. To know whether EP helps graduates early in their career is important for students, universities that manage the programme, and policy makers.

We are aware that the school-to-work transition is a multi-faceted process that needs to be evaluated on several dimensions. Research has now recognised that the duration of the search for the first job is not a sufficient measure of the effectiveness of the transition, as the quality of employment, e.g. in terms of stability, must also be considered (Pastore et al., 2021).

Indeed, young graduates face trade-offs between the duration of their search and other outcomes. Quicker access to employment for Erasmus participants may come at the cost of lower wages or a higher risk of being in temporary employment. These issues are relevant in the youth labour market, especially in countries like Italy, where the youth unemployment rate and the share of young people employed on temporary contracts are both high. Similarly, the outcome of the transition to employment may be affected by the risk of overeducation (Croce & Ghignoni, 2012; Quintini et al., 2014). Earnings represent a further, uncertain outcome of the transition process. Therefore, analyses that focus on a single issue can only be partial. By considering all these aspects, we can gain a more meaningful understanding of the transition from school to work, and are able to provide a more comprehensive analysis of the effect of participating in the EP on young graduates.

Our study is motivated by the uncertainty about the effects of the EP on the transition to work of young graduates. To take into account the multifaceted nature of graduates' transition we consider manifold aspects of the employment outcomes after graduation. We provide answers to four main questions related to the labour market effects of studying abroad through the EP.

1. The first one is the *what* question asking "What is the impact, if any, of studying abroad through the EP on the labour market prospects of young participants*?*".

In particular, we want to know whether participating in the EP affects the likelihood of finding a job after graduation, the likelihood of working abroad, the quality of the job (being employed on a permanent contract, with a full time schedule and a low risk of being overeducated) and, finally, whether the wage is affected.

2. The *when* question asks "Does the effect of studying abroad through the EP, if any, only arise shortly after graduation or is it still present over a longer period of time, after the graduates have already spent some years in the labour market?".

Given the high instability characterising the early phase of the employment career of young graduates, the impact may only be a transient effect that disappears in a short time or, on the contrary, it may take some time to appear. Our goal is to test how EP's effects change over time, from 1 to 5 years after graduation.

3. The why question asks "Which causal mechanisms can explain the impacts of the EP?".

Beyond detecting whether and how studying abroad through the EP affects the outcomes, we also ask what are the reasons for the success or failure of the programme. Multiple competing explanations may be advanced and much information is required to run such an explanatory investigation (Kratz & Netz, 2018). We focus on the role of foreign language proficiency among EP participants. Within the limits of the available information, we aim to uncover if the effect of the EP on the likelihood of working abroad and wages is driven (partially or entirely) by the improvement of this particular skill.

4. Finally, the *who* question asks "Do the less advantaged groups of students actually benefit from studying abroad through the EP?".

While previous studies have shown the average impact on participants, it is highly unlikely that this impact is homogeneous across groups of graduates who differ according to their personal characteristics and social background. Given its public policy nature, it is also relevant to monitor the distributional effects of the EP (Souto-Otero, 2008). For this purpose, we test whether the EP contributes to improving the chances of working abroad for: (i) female graduates, (ii) graduates coming from less advantaged family backgrounds, (iii) graduates living in regions with higher youth unemployment, and (iv) graduates in different fields.

This study's main contribution is that we do not limit the analysis to a single specific issue but, for the same given sample of graduates, consider several aspects of their transition to work to obtain a broader view of the possible effects of the EP. Focusing on a single dimension of employment only allows for a partial analysis of the work of young graduates, since, as already argued, it prevents the detection of possible trade-offs between outcomes.

This study takes advantage for the first time of a large dataset[1] of graduates from the Sapienza University of Rome, which is the largest Italian university and the second Erasmus sending institution in Italy in absolute terms. As well known, there are many qualitative differences between universities that are not easily observable and likely to correlate with the opportunities to study abroad (Iriondo, 2020; Parey & Waldinger, 2011; Sorrenti, 2017). As an example, a university may provide more qualified teaching or have a better reputation, and at the same time, may offer a larger number of scholarships for international mobility programmes. This implies a risk of distortion in analyses concerning

[1] We have information on the universe of Sapienza University graduates during the years 2011–2015, who amounts to 55,569 units.

graduates from different universities (d'Hombres & Schnepf, 2021). By focusing on a single large university, we can minimize this risk and produce results that are sufficiently general in the Italian context. Additionally, to demonstrate the representativeness of our results on a national scale, we replicate the analysis on the dataset provided by the national survey carried out by Istat (the Italian National Institute of Statistics) on a large sample of Italian university graduates.

To account for the heterogeneity of students, our model includes a large number of variables. Moreover, we apply the Propensity Score Matching (PSM) methodology to select the most appropriate control group, based on the available observable characteristics.

The main results of our analysis show that EP participants from Sapienza University have better employment prospects, even though this benefit tends to disappear beyond the short run. At the same time, they are more likely to get a permanent and full-time job, and face a lower risk of being seriously overeducated. Also, the wage of participants is on average higher than that of non participants. Furthermore, the Erasmus experience substantially helps young graduates to find employment abroad. This effect increases over time. Regarding the distributive effects, we find that even the least advantaged groups benefit from this effect. All these results are confirmed by the estimates on the Istat national sample. Finally, the inclusion of foreign language skills in the Prospensity Score equation does not reduce the impact of the EP on employment abroad, while it decreases the effect on wages 1 year after graduation.

In the remainder of the article, Section "Theoretical Framework and Literature Review" summarizes the theoretical framework and previous results of the extant literature. Section "Data Description" presents data and descriptive evidence. The empirical strategy that was adopted is outlined in Section "Empirical strategy". Section "Empirical results" displays and discusses the results. The last Section concludes.

Theoretical Framework and Literature Review

The EP aims at shaping a European identity for new generations through experiences abroad and cultural exchanges. However, promoting skills and employability is also recognized as a primary goal (European Commission 2014, 2020).

This claim can be justified theoretically on the basis of human capital theory, which predicts that employability and earnings depend on the knowledge and competences acquired through education. Studying abroad represents a peculiar step in the student's educational path that, in principle, enlarges and enriches his/her human capital. On the one hand, it implies attending classes and taking exams in a new and stimulating context, with the purpose of fostering academic learning. On the other hand, it allows for the acquisition of a set of non-cognitive skills, distinct from academic learning, namely the propensity to international mobility, openness to change, flexibility to adapt to diverse environments, problem solving and the ability to interact.

A second, more specific explanation of the effects of studying abroad on the labour market perspectives is that it offers the opportunity to enhance one's proficiency in foreign languages. Indeed, students who go abroad have to interact in daily life with people from the host country and take classes and exams conducted in a foreign language. Moreover, studying abroad can reasonably foster the graduate's propensity to mobility, both for work and personal reason, and this may lead to a higher likelihood of employment and higher

earnings (for a comprehensive discussion of the possible explanations of the effects of studying abroad on labour market outcomes of the graduates see Di Pietro, 2022).

However, there is uncertainty in the extant literature about the actual effects of participating in the EP. Indeed, if the quality of learning experiences abroad is low, or the acquired knowledge has low value in the home labour market, the effects could be null or even negative.

In the following, we sketch out the main results from the literature regarding the effects of studying abroad on the labour market, referring to the four research questions defined above. As for the *what* question, both the existence and the sign of the effects are uncertain *a priori*. Spending time abroad, may be detrimental to the chances of finding a job as it may imply a weakening of the student's connections to his/her local networks (Iriondo, 2020). Rodrigues (2013) finds that participating in the EP delays the entry into the first job. The Erasmus experience can also be motivated by the passion for travelling, fun or other extracurricular consumption goals (Waibel et al., 2017). Even in this case going abroad may slow down the student's academic career (Di Pietro, 2015; Granato et al., 2021; Bhatt et al., 2022).

Consistent with these hypotheses, Iriondo (2020) reports a negative short run effect of participating in the EP on the probability of employment. Mixed results are found by Wiers-Jenssen and Try (2005). Liwinski (2019) find no statistically significant effect of studying abroad. In a study on Swiss data Messer and Wolter (2007) report that the effect on wages vanishes in IV estimates (similar to Oosterbeek & Webbink, 2006). Another recent study on Dutch data confirms that the beneficial effects disappear when a PSM approach is applied (Van Mol et al., 2020).

On the other hand, further studies find that studying abroad exerts a positive effect on the employment likelihood and earnings (Waibel et al., 2017 for a review). It is important to note that positive results can be found in studies using different methodologies. In particular, they are confirmed through PSM approach (Favero & Fucci, 2017; Ferri, 2019; Iriondo, 2020; Liwinski, 2019; Rodrigues, 2013;) as well as through IV estimates (Di Pietro, 2015; Favero & Fucci, 2017; Parey & Waldinger, 2011) and other empirical strategies (Kratz & Netz, 2018; Oosterbeek & Webbink, 2006;). Waibel et al. (2017) in their review of the available empirical evidence report a convergence toward a 3–8% wage increase. The meta-analysis carried out by Di Pietro (2022) confirms a moderate positive effect on earnings from studying abroad, and also highlights the considerable heterogeneity in the reported estimates.

As for the *when* question, we distinguish whether such effects arise in the short or in a medium-long run. In our analysis, the short run corresponds to the first year after graduation, the very early phase of entry into the labour market, when the employment relationships of newly graduates are still highly unstable, while the medium and long-term goes from 3 to 5 years after graduation.

Iriondo (2020) finds that the employment probability increases by 11% and the wage by 12.5% six years after graduation, while there are no effects in the short run. Kratz and Netz (2018) report that wages are positively affected beyond the short run. In their estimates, the wage premium for graduates with an international study experience reaches 14.4% five years after graduation. Also Rodrigues (2013) reports a positive effect on wages in the long run.

In a study on a sample of Italian graduates Di Pietro (2015) finds that studying abroad raises the employment probability 3 years after graduation by 23%. According to Ferri (2019), Italian participants in the EP enjoy a wage increase by almost 10% four years after graduation.

As to the *why* question, the explanations for the impacts of international student mobility programmes remain largely unknown (Kratz & Netz, 2018). A number of studies suggest that it may promote the acquisition of non-cognitive skills (Di Pietro, 2015; Kratz & Netz, 2018; Waibel et al., 2017;). According to the European Commission (2014), more than 90% of the participants to the EP perceive an improvement in their soft skills as a consequence of their stay abroad.

Studying abroad also leads to an improvement in language abilities (European Commission, 2014; Rodrigues, 2013; Teichler, 2011). Iriondo (2020) finds that Erasmus experience is associated with a 25% increase in the probability of gaining a high proficiency level in foreign languages. Sorrenti (2017) shows that participating in the EP exerts a remarkable causal effect on the acquisition of a foreign language, which results in increased earnings. On the opposite, Kratz and Netz (2018) find that this effect has only a minor impact.

Rodrigues (2013) and Liwinsky (2019) find that going abroad to study fosters the propensity to move, even for work-related reasons. This represents an effect that can be particularly relevant in the Italian context, as a large number of highly educated young people have moved to other countries for work in the last decade (Assirelli et al., 2019; Cattaneo et al., 2019; Ferri, 2019). According to Di Pietro (2012) studying abroad increases the likelihood of working abroad by 18–24% for Italian students. A similar figure is reported by Parey and Waldinger (2011) for German students.

Turning to the *who* question, the average measure of the impact may hide largely differentiated effects across groups with heterogeneous personal traits and socio-economic backgrounds. However, a few studies focus on the distributional effects of international student mobility programmes. Di Pietro (2015) finds that the average impact is mainly driven by the effect on students from medium-low backgrounds, while Liwinski (2019) reports an improvement in employment prospects only for graduates who have at least one parent with a university degree.

Lastly, Rodrigues (2013) and Waibel et al. (2017) point out that the returns are larger in Southern and Eastern European countries. More recently, Jacob et al. (2019), Van Mol et al. (2020) and d'Hombres and Schnepf (2021) confirm this stylised fact. Italy is one of the countries where the returns are larger, making it particularly relevant for our study (Teichler, 2011).

Data Description

The EP has been promoted and financed by the European Union (EU) since 1987, to enable students from European universities to spend a period of study at a university in another EU member state. The participating student is supported by a mobility grant covering most of the living and travel expenses. The programme basically provides participants with financial support and connections to the host institution, but no additional logistical support or training is included. Participation is voluntary and subject to specific prerequisites. Universities and their departments or colleges (*Faculties*), establish their Erasmus policy, define the number of available grants and establish agreements with host institutions abroad.[2] Each academic year, a call for applications is published where the number

[2] Note that most of Sapienza Erasmus graduates (57%) carry out their Erasmus experiences in Spanish and French universities (Fig. A6 in Online Appendix).

of grants and the destination universities are given. In order to participate, students must apply and receive a score and ranking. Grants are awarded starting from the top-ranked students until all available grants are exhausted. Scores are assigned mainly based on the student's academic performance up to the time of application, in terms of credits accumulated and average grade. A minimum level of foreign language proficiency is required. The academic mobility project is established in a study plan, establishing the courses that the student will take and the corresponding credits that will be given if he/she passes the exams. The duration of the stay abroad can theoretically range between 3 and 12 months, but the vast majority of experiences (almost 60%) actually last 5 or 6 months.[3] Most students (54%) take one or two exams while abroad, and almost all of them (94%) use their Erasmus experience to conduct research for their final dissertation.[4]

According to this picture, participation is subject to a double selection. On the supply side, decisions about the number of available grants and the management of the programme are under the responsibility of each university and department. On the demand side, participation depends on the student's choice. However, in the sample from Sapienza University, the institution did not make any substantial selection, as the number of scholarships available was systematically higher than the number of applications (see Fig. A5 in Online Appendix).

The empirical analysis of this study is based on a unique dataset on the universe of Sapienza University graduates from 2011 to 2015.[5] In doing so, we follow a number of previous studies that have focused on graduates from a single institution (Favero & Fucci, 2017; Iriondo, 2020; Palifka, 2003; Schmidt & Pardo, 2017). As already argued, datasets from a single large university have the advantage of significantly reducing the risk of bias due to unobservable differences among universities, which affect both the participation in the programme and the outcomes of graduates in the labour market. As an example, the outgoing mobility rates for the EP are very different among Italian universities, revealing different attitudes towards international mobility. Now, such an attitude is likely related to the overall quality of teaching, the strategic approach followed by universities to attract students, and other differences among institutions. To the extent that these features are largely unobservable and, at the same time, are expected to have an impact also on the labour market prospects of graduates, the results of an empirical analysis will be biased. Carrying out the analysis on a single institution avoids such a risk (Parey & Waldinger, 2011).

Although this represents a substantial advantage, we are aware that analyses based on a single institution may be limited in their representativeness at national level. In this regard, it should be noted that Sapienza University of Rome is the largest Italian university, and one of the largest in Europe, whose educational offer covers all fields of study. According to the Italian Ministry of Education, University and Research, the number of students enrolled at Sapienza University during the period 2011–2015 represented more than 6% of the total student population enrolled in the Italian higher education system, and it was the second Italian institution for the number of students sent abroad to study through the EP in absolute terms.

[3] During the period under examination, the Erasmus grant for Sapienza students amounted to 230€ per month.

[4] Most of the variation in the duration of the experience, as well as in the number of credits acquired, is explained by college major. As we do not have detailed information at the individual level, we include in the PS equations fixed effects by college. The programme is uniform across destination countries.

[5] Due to students' identification problems, graduates in 2014 are missing.

However, to ensure nationwide representativeness of the results, we also carry out our analyses on data from the 2015 ISTAT Tertiary Graduates' Employment Survey. This is a large, national representative sample of all Italian students who got their university degree in 2011 and were interviewed 4 years later.

Our unique dataset on Sapienza graduates is built by matching survey information (AlmaLaurea) with administrative records (Sapienza Uniout). The use of student ID numbers enabled us to match two Almalaurea Surveys (Graduates' Profile Survey, GPS, and Graduates' Employment Status Survey, GESS) with Sapienza Uniout.

While a number of other studies focus on graduates from a single institution (Favero & Fucci, 2017; Iriondo, 2020; Palifka, 2003; Schmidt & Pardo, 2017), this is the first study referring to Sapienza University of Rome.

GPS is an annual survey carried out on graduates who have just completed their studies. It provides timely and reliable information on all the students who graduated in a calendar year, including the participation in the EP and foreign language skills.

GESS investigates the labour market experience of young graduates 1, 3, and 5 years after graduation, and provides information about employment and unemployment status, wages, and job quality.

Sapienza Uniout is a set of administrative data that provides information on the university career of all Sapienza graduates according to their year of graduation. This data source is useful for the purpose of our study as it contains information about students' province of residence before university enrolment. This represents a crucial piece of information for building 'mobility' indicators for study purposes.

Due to the unique nature of their school-to-work transitions, graduates from Medicine have been excluded from our operative sample. Moreover, as we are interested in graduates' labour market outcomes, we dropped from the analysis those who are still in education 1, 3 or 5 years after (first-level or second-level) graduation.[6] In our final sample we have 35,602 units, of which 2589 (7.3%) participated in the EP.[7]

Students with a good socio-economic family background, and a better level of parental education have a higher probability of participating in the EP (see Figs A2 and A3 in the Online Appendix). As for the fields of study, the probability of studying abroad with the EP varies from 17% of the students enrolled in a Language course to 3% of those enrolled in Chemistry and Pharmacy (see Fig. A4).

The description and sources of the variables involved in our empirical analysis, as well as their descriptive statistics, are reported in Tables A1, A2.a (Sapienza University of Rome) and Table A2.b (ISTAT, 2015) in the Online Appendix.

As shown by Table A2.a, Sapienza Erasmus students are more familiar with foreign languages than the non-Erasmus students, and are a little more used to territorial mobility. As a matter of fact, the average distance in kilometres from the province of residence to the university headquarters in Rome[8] is 104 km for Erasmus students versus 98 km for non-Erasmus students. Erasmus students seem to be characterized by better employability in Italy (54% vs. 45% one year after graduation; 83% vs. 78% three years after, and 89% vs.

[6] Our operative sample on ISTAT data has been constructed using the same type of selection for comparison purposes. Our final sample is composed of 38,383 units, with 10% of them participating in the EP.

[7] Sapienza ranks second (after Bologna University) in the Top Ten Italian universities as far as the number of outgoing Erasmus students is concerned, but when reporting it to the total number of enrolled students by Athenaeum it slips to the third-last place (see Fig. A1 in Online Appendix).

[8] We calculated the distance in km between provinces starting from data on latitude and longitude.

84% five years after) and abroad (6% vs. 1% one year after; 13% vs. 3% three years after, and 15% vs. 5% five years after), and by higher monthly wages (€918 versus €773 one year after, and €1479 vs. €1318 five years after).[9]

Such differences in the labour market outcomes, confirmed by the descriptive statistics of the ISTAT national sample of graduates (Table A2.b), are what we want to analyse more in depth in the following empirical analysis.

Empirical Strategy

By the empirical analysis, we aim to assess whether and how the participation in the EP affects the probability of being employed (in Italy and abroad) in the short and long run after graduation. After building our baseline model, we will work on it to point out the influence of the Erasmus experience on different indicators of job quality. Moreover, we will apply it to sub-samples of students to ascertain if the effect of Erasmus on employability varies among different groups of students. Finally, we aim to quantify the wage effect of the Erasmus experience in both the short and long run.

Both these lines of analysis share a well-known econometric issue. Indeed, the decision taken by students regarding the EP participation is clearly endogenous. Some unobservable individual characteristics, such as abilities, aspirations and motivation, affect the probability of participating in the EP and the probability of being successful in the labour market after graduation, both in terms of employment, employment abroad, job quality and wage levels. As an example, more motivated or self-confident students may be more likely to study abroad and, at the same time, may achieve better results in the labour market after graduation. Similarly, the comparison between participants and non-participants may be affected by selection bias if individual unobserved attributes affect participation and create differences between two groups. As a consequence, probit estimates of the effect of the Erasmus participation on the employment outcomes, as well as OLS estimates of the effect on wages, may be biased (Oosterbeek & Webbink, 2011; Rodrigues, 2013). To address this issue, some economic literature dealing with the causal impact of student international mobility programmes uses an IV approach, by exploiting the variation in scholarship availability by college (*Facoltà*) as a source of exogenous variation in students' probability of studying abroad (for a thorough discussion see Parey & Waldinger, 2011). This instrument does not seem appropriate for Sapienza University, as the number of available scholarships in 2011–2015 was systematically higher than the number of Erasmus applications (see Fig. A5 in Online Appendix). As a consequence, we expect it not being fully correlated with the probability of participating in the EP.

For this reason, we prefer to estimate the Average Treatment Effect on the Treated (ATT) using a PSM procedure (Rosenbaum & Rubin, 1983). It is recognized in the literature on international student mobility that results of the PSM methodology should be taken with caution when inferring the causal effects of participation, as it relies on a comparison between the participants and non-participants groups, where the latter is selected on the basis of observable variables. Nonetheless, PSM is increasingly used and supported by researchers (Favero & Fucci, 2017; Iriondo, 2020; Liwinski, 2019; Rodrigues, 2013;

[9] Participation rates in the labour market differ between Sapienza Erasmus and non-Erasmus graduates only 1 year after graduation (70.7% vs 61.7%), while 3 and 5 years after graduation they are above 90% for both groups (respectively 93.8 vs 92.5 and 95.8 vs 90.8).

Van Mool et al., 2020). In a recent study Bhatt et al. (2022) maintain that the PSM is now a routine and recommended tool to evaluate interventions in the educational field when experimental data are not available. D'Hombres and Schnapf (2021) argue that if the vector of covariates used in the matching procedure includes specific individual characteristics (like family background, information on upper secondary school career and others), the bias deriving from omitted variables may be substantially reduced, as it is reasonable to assume that such covariates are good proxies for unobservables. In this regard, our last section is specifically dedicated to testing the plausibility of the selection on observables.

In this study the 'treatment' is the EP participation, and the outcomes of interest are the employment probability, the probability of employment abroad and wage levels. By using the Nearest-Neighbour method, a graduate from the control group is chosen as a matching partner for a graduate who participated in the EP that is closest in terms of PS.[10]

As a further step, we take into account that PSM relies on the assumption that there are no unobservables influencing treatment probability and outcome at the same time (Conditional Independence Assumption, CIA). Our aim is to assess whether (and to what extent) the estimated ATTs are robust to possible deviations from the CIA by implementing the sensitivity analysis proposed by Nannicini (2007)[11] and Ichino et al. (2008).

In this case, we assume that the CIA is not satisfied given observables, but would be satisfied if one could observe an additional binary variable U that affects both the potential outcome and the selection into treatment. The confounder U, which we use as an additional covariate, can, in turn:

1. mimic the behaviour of some important covariates;
2. capture the characteristics of those potential confounders that would drive the ATT estimates to zero or far away from the baseline.

The comparison of the estimates obtained with and without matching on the simulated confounders will show to what extent the baseline results are robust to specific sources of failure of the CIA. In particular, if only implausible confounders will drive the ATT to zero, or far away from the baseline estimate, the sensitivity analysis would support the robustness of matching results (Nannicini, 2007).

Empirical Results

Main Results

A probit model was used to estimate the PS equations.[12] The optimal number of blocks identified by the PS procedure is 8 for Sapienza University and 12 for Istat data. This number of blocks ensures that the mean PS is not different for treated and controls in each block. The balancing property has been tested and it is satisfied.[13] The necessary common

[10] We did not set a maximum distance for the matching (caliper).

[11] See Sensatt routine in Stata.

[12] PS equations are reported in Table A3 in Online Appendix.

[13] Within each block, the means of the covariates are not statistically different between treatment and control groups. The balance table is available upon request.

support is ensured, and it improves after matching. Indeed, as Fig. 1 shows, the high degree of overlap of the PS density functions between treated and non-treated units before matching, tends to become perfect after matching.

We can now analyse the effects of the treatment on the outcomes of interest. First of all, we are interested in ascertaining whether going abroad with the EP affects the likelihood of employment after graduation. As reported in Table 1, which shows the results obtained with the Nearest Neighbour matching,[14] we find a positive and statistically significant short-term effect. Erasmus students from Sapienza University are on average 7.3% more likely to be employed than their non-Erasmus peers. Three years after graduation, the effect decreases to 4.1%, and it is even smaller and no longer significant in the long run. This result is confirmed by the estimate on the national sample 4 years after graduation, which is 3.4% (not statistically significant). Both values are very close to the findings by d'Hombres and Schnepf (2021) for Italy. This suggests that the programme exerts an early and noticeable positive influence on the transition from university to the work. However, the effect tends to reduce afterwards, as skills and experiences accumulated through seniority become relevant and allow non-Erasmus graduates to close the initial gap compared to the Erasmus participants.[15]

To test the robustness of our results, we follow two ways. Firstly, we apply four additional matching procedures: Stratification matching, Nearest Neighbour without replacement and with caliper = 0.001, Kernel Matching, and Radius Matching (caliper = 0.1). The results prove to be stable to changes in the matching technique (Table A4 in the Online Appendix). Secondly, in the next paragraph, we apply a sensitivity analysis to address the possible impact of unobservables. Even in this case, our results are stable.

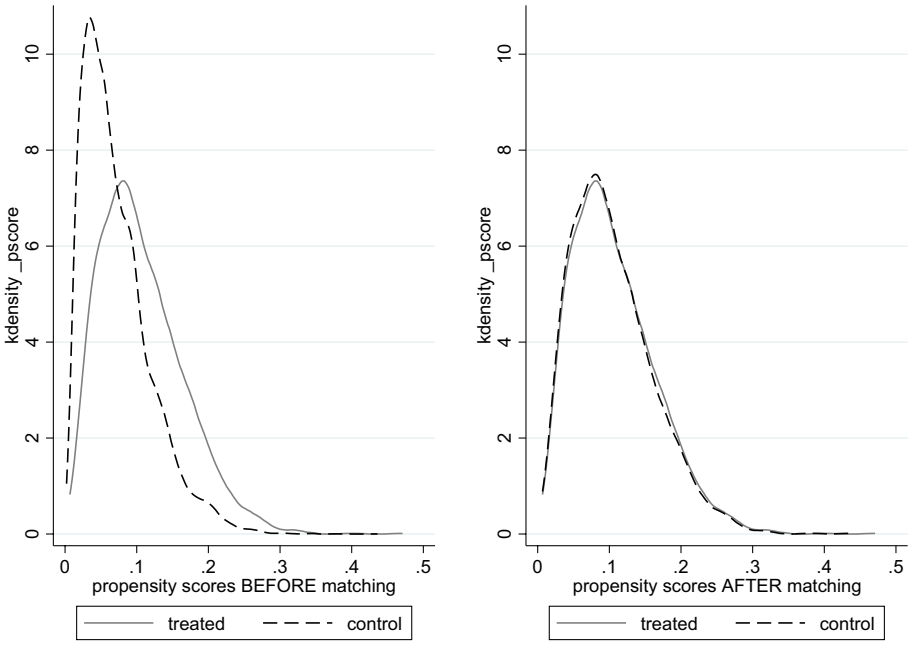
Further on, we ask whether the Erasmus participation also affects the employment quality. Namely, we consider whether employment contracts are temporary or permanent, part-time or full-time and whether workers are seriously overeducated (Table 2). The results show that participants are more likely to have a permanent contract in the short term (+ 2.2%) and that this advantage increases over time up to 8.3% (highly statistically significant). EP participants are also more likely to be in a full-time job. However, this advantage is substantial in the short term (+ 8.9%) while it vanishes in the long run. Finally, graduates with an Erasmus experience face a lower risk of being seriously overeducated, as they are 2.9% less likely to be employed in a job where they do not use their competences at all.[16] This effect persists over time. Table 2 also shows that national sample estimates are quite close to those obtained with Sapienza data and highly statistically significant. As a whole, these results suggest that participants in the EP not only find jobs more quickly (as shown in Table 1), but they also find jobs of better quality. Actually, they enjoy a somewhat less precarious and more satisfactory employment condition.

We now turn to test if graduates who studied abroad through the EP are also more likely to work abroad after graduation. Similar to the results obtained by Parey and Waldinger (2011), our ATT estimates show that the Erasmus students are on average more likely to be at work abroad (Table 3, upper panel). This effect is equal to 4.4% and highly statistically significant in the short term. Furthermore, its magnitude increases over time, reaching 9%

[14] (Single) Nearest Neighbour with replacement, without caliper.

[15] This effect is more conservative, albeit large and positive, than that found by Di Pietro (2015).

[16] The exact question in the GESS Questionnaire is "Referring to your current job, do you make use of the competences you acquired during your university studies? (to a high extent/to a reduced extent/not at all)".



(a) Sapienza University of Rome

Fig. 1 Density function of PS before and after matching (a Sapienza University of Rome)

Table 1 ATTs of Erasmus participation on graduates' employment, PSM estimates

Outcomes[a]	Sapienza University sample					National sample (ISTAT)				
	treat.	contr.	ATT	Std. Err.	t	treat.	contr.	ATT	Std. Err.	t
1 year after	2589	1942	0.073	0.015	4.745					
3 years after	2589	452	0.041	0.021	1.963					
4 years after						999	1007	0.034	0,021	1.598
5 years after	2589	282	0.021	0.021	0.984					

The numbers of treated and controls refer to actual nearest neighbour matches

[a]Nearest neighbour, random draw (attnd command), with replacement, no caliper

and 10.4% in the medium and long term respectively.[17] The national sample shows a very similar effect, which is 11.6% four years after graduation.

This represents a notable result of our analysis. First, it points out that Italian students wishing to search for a job in another European country can consider the Erasmus

[17] Sensatt results, available upon request, prove our ATTs to be stable.

Table 2 ATTs of Erasmus participation on the quality of graduates' employment, PSM estimates

Outcomes[a]	Sapienza University sample					National sample (ISTAT)				
	treat.	contr.	ATT	Std. Err.	t	treat.	contr.	ATT	Std. Err.	t
Permanent contract										
1 year	2589	735	0.022	0.014	1.611					
4 years						3886	2683	0.026	0.012	2.175
5 years	2589	234	0.083	0.032	2.605					
Full time contract										
1 year	2589	733	0.089	0.021	4.141					
4 years						3886	3724	0.036	0.009	4.175
5 years	2589	234	0.002	0.027	0.09					
Make use of competences: not at all										
1 year	2589	734	−0.029	0.02	−1.487					
4 years						3886	3014	−0.014	0.007	−2.077
5 years	2589	232	−0.031	0.026	−1.2					

The numbers of treated and controls refer to actual nearest neighbour matches

[a]Nearest Neighbour, random draw (attnd command), with replacement, no caliper

experience as a gateway to their career abroad. Second, from a public policy perspective, this result shows that the EP represents an effective investment to foster the mobility of young workers across Europe and to build an integrated European labour market.

The increase in the effect over time suggests that migration is a strategy that takes time to adopt. Young graduates are more likely to go abroad after testing the national labour market, and gathering information on job opportunities in other countries. As a consequence, while the effect of Erasmus on the probability of employment 'anywhere' (Table 1) is stronger in the short term and declines afterwards, the higher probability of employment abroad persists and even increases over time.

So far, the model that we have specified to estimate the PS did not include the knowledge level of foreign languages because, on the one hand, the knowledge of foreign languages is a requisite to obtain the Erasmus scholarship and, on the other hand, it is a typical outcome of the Erasmus participation, as it is expected to be substantially improved going abroad to study (Iriondo, 2020; Rodrigues, 2013; Sorrenti, 2017). For this reason, the language proficiency cannot be considered fully determined before the treatment and, as a consequence, we did not include this variable in our main PS equation. However, we ask whether the strong positive association between the participation in the EP and the probability of employment abroad depends primarily on the participants' better knowledge of foreign languages, or if it is largely independent of it.

This is a key issue in order to understand the mechanisms behind the impact of the EP. Two distinct effects play a major role in the better chances of working abroad for graduates who participated in Erasmus. First, the *foreign language effect*, as the participation in Erasmus tends to be associated with higher language proficiency, whether acquired through the Erasmus experience or independently of it. Second, the Erasmus experience may increase the probability of employment abroad by improving the ability to live and work abroad, as students learn to adapt to the environment of a foreign country, establish relationships and

Table 3 ATTs of Erasmus participation on graduates' employment abroad, WITH and WITHOUT language skills in PS

Outcomes[a]	Sapienza University sample					National sample (ISTAT)				
	treat.	contr.	ATT	Std. Err.	t	treat.	contr.	ATT	Std. Err.	t
Without language skills in PS										
1 year after	2589	1942	0.044	0.006	7.758					
3 years after	2589	452	0.09	0.012	7.791					
4 years after						3886	4124	0.116	0.008	14.811
5 years after	2589	282	0.104	0.015	7.1					
With language skills in PS										
1 year after	2546	1925	0.042	0.006	7.513					
3 years after	2546	499	0.076	0.011	6.617					
4 years after										
5 years after	2546	297	0.115	0.014	8.485					

The numbers of treated and controls refer to actual nearest neighbour matches

*Nearest Neighbour, random draw (attnd command), with replacement, no caliper

gather information about the local labor market. We refer to this as the *genuine Erasmus effect*.

We attempt to answer this question by including an indicator of proficiency in foreign languages into the PS equation. Without including it, it would be reasonable to believe that Erasmus participants (the treated) have on average a better knowledge of foreign languages than the controls. In this case, the estimated impact of Erasmus would represent the net effect of both the *genuine Erasmus effect* and the *foreign language effect*. By adding foreign languages knowledge to the other covariates, the treatment and control groups, defined by the matching procedure, are expected to be homogeneous in their knowledge of foreign languages. Therefore, the estimated ATTs may be ascribed to the *genuine Erasmus effect*.

The lower panel of Table 3 shows the estimated ATTs for the probability of employment abroad when the measure of foreign language proficiency is included in the PS equation. The statistical significance levels and magnitude of the effect of Erasmus on employment abroad are largely confirmed by comparing the figures at the bottom of the same Table. In our understanding, these results suggest that the positive influence on the probability of employment abroad is mainly driven by a *genuine Erasmus effect*.

As a further step, we check whether the effect on employment abroad is still positive and significant for females and graduates from less advantaged backgrounds or less dynamic local labour markets. This would represent a valuable distributional effect of Erasmus, as these groups are *ex-ante* weaker and less likely to find career opportunities abroad. We complete the analysis by checking the effect of the EP participation on graduates from different fields of study.

For this purpose, we estimate the ATT for a number of distinct sub-samples.[18] We first compare the impact of participating in Erasmus on the likelihood of employment abroad for both males and females. Table 4 shows that the ATT is positive, statistically highly significant, and grows over time for both groups. More precisely, although the effect is larger for males, young female graduates also benefit from Erasmus. The coefficients obtained from the ISTAT national sample confirm that the benefits for women graduates are substantial, even if lower than those for men.

Next, graduates who come from families with at least one parent with a university degree are compared to those from families with parents with lower levels of education. In the Sapienza sample, graduates from better educated families benefit only slightly more from Erasmus. Yet, even those from less educated families are positively affected. According to estimates from the national sample, the effect is even greater for this group of graduates.

Family background may differ along other socio-economic dimensions, which may be synthesised by grouping graduates into different social classes, such as 'bourgeoisie', 'middle-class' and 'others'.[19] Again, when considering young students from lower social classes, the likelihood of working abroad is substantially higher for Erasmus participants. The ATTs for those from the 'middle' and 'other' social classes are even larger than for those from the 'bourgeoisie' 1 and 5 years after graduation. The same result is obtained from national sample estimates, 4 years after graduation.

After that, we take into account the macro-area where graduates lived before enrolling in university. Graduates from the Central and Northern regions are distinguished

[18] The sub-group analysis involves separate matching for each group.

[19] GESS Questionnaire uses the Almalaurea definition of "Social Class", see Table A1 in Appendix for details.

from those living in the Southern ones, where youth unemployment is structurally higher. Results show that Southern graduates benefit from the EP in their search for a job abroad as much as their peers from the Centre-North. This evidence is confirmed by Istat estimates. Only 5 years after graduation the effect for Southern graduates is much smaller than in the Centre-North and is not significant, due to an insufficient number of observations in the Sapienza university dataset.

In the end, the EP turns out to be effective in sustaining international labour mobility not only on average but also for less advantaged groups. This represents a valuable and not obvious distributional effect for a selective and expensive public programme. On this basis, the results of recent studies, showing that less advantaged groups actually have fewer opportunities to study abroad, should be considered particularly worrying (Netz & Finger, 2016; Schnepf & Colagrossi, 2020).

Lastly, we perform separate matching procedures for three broad groups of fields of study.[20] Results for the Sapienza sample show that the association between the EP participation and the probability of employment abroad is initially stronger for graduates in Scientific and Humanities fields of study in comparison to graduates in Economics/Social Sciences. By contrast, the association for the Scientific and Economics/Social Sciences groups is larger in the long run. The national sample's results are very similar. Notably, participation in the EP is associated with an increase in the likelihood of graduates of the Scientific group working abroad by as much as 16.9%.

To conclude, we turn to analyse whether the monthly wages[21] of young graduates are also affected by EP participation. One year after graduation, the wages of the Erasmus participants are about 14% above those of the control group[22] in the Sapienza sample (Table 5). Although the wage premium decreases over time, it still remains significant. At 3 years after graduation, it is still 7.5%, and at 5 years it is around 9%.[23] The wage premium estimated in the national sample is 10% four years after graduation. These figures are somewhat larger than the moderate effect on wages reported by Di Pietro (2022), while they are close to those reported by Iriondo (2020) for Spain, and consistent with comparative analyses showing that the returns to studying abroad are larger in Southern European countries (Rodrigues 2013, Waibel et al. 2017).

The wage premium of Erasmus participants can be partly explained by their higher probability of being employed on a permanent, well-matched and, above all, a full-time job. Similarly, the decrease of the wage premium over time probably depends on the rapid reduction of the difference in the likelihood of full-time employment between the two groups (as shown in Table 2).

Nevertheless, although declining, the positive effect on the wages of the treatment group persists over time. If the wage premium of the EP decayed and vanished over time, we should conclude that it provides only a signal to the prospective employers of fresh graduates (Di Pietro, 2022). On the contrary, in our estimates it is still substantial in the medium

[20] The Scientific group includes Mathematics, Physics, Chemical-Pharma, Geo-Biology and Engineering. The Economics and Social Sciences group includes Economics-Statistics, Socio-Political studies, Law and Psychology. The Arts and Humanities group includes Literature, Languages, Teaching and Architecture.

[21] We prefer using monthly wages rather than hourly wages, not only because of the missing values on working hours, but also because monthly wages depend on the whole set of job's characteristics, including the hourly wage and the working hours, and can be considered as a better measure of the labour market prospects of graduates.

[22] The sensitivity analysis results, available upon request, prove our ATTs to be stable.

[23] Similarly, Favero and Fucci (2017) find a 8% increase when the PSM is applied.

Table 4 ATTs of Erasmus participation on graduates' employment abroad, by group, PSM estimates

Groups	Sapienza University sample			National sample (ISTAT)
	1 year after	3 years after	5 years after	4 years after
Gender				
Women	0.046***	0.065***	0.064***	0.102***
Men	0.049***	0.116***	0.11***	0.14***
Parents' education				
Both parents with Tertiary degree	0.048***	0.103***	0.097***	0.118***
Parents with less than tertiary degree	0.046***	0.075***	0.081***	0.138***
Social class				
Bourgeoisie	0.042***	0.113***	0.094***	0.114***
Middle class	0.052***	0.063***	0.122***	0.13***
Low Middle class and Working class	0.055***	0.062***	0.133***	0.123***
Macroarea of residence				
Centre-North	0.042***	0.095***	0.097***	0.113***
South	0.059***	0.073***	0.027	0.126***
Field of study				
Scientific	0.057***	0.110***	0.107**	0.169***
Economics and Social Sciences	0.027***	0.078**	0.114***	0.109***
Arts and Humanities	0.061***	0.077***	0.060**	0.081***

*Nearest Neighbour, random draw (attnd command), with replacement, no caliper

*p < 0.05, **p < 0.01, ***p < 0.001

and long term, suggesting that the programme offers students an effective way of accumulating human capital and soft skills valued by the employers.

Table 5 also reports estimated ATTs after including a measure of foreign language knowledge in the PS equation. As already argued, in this way we aim to test whether the impact on wages must be primarily ascribed to the *foreign language effect* (Sorrenti, 2017). We also perform a doubly-robust estimation process by controlling for the covariates that can affect the outcome variable. After including language skills and control variables in the estimates (Table 5, lower panel), the effect on wages decreases from 14.4 to 8.9% one year after graduation and from 8.9% to 8% five years later. This means that the language skills advantage of Erasmus participants is relevant and rewarded by employers, but only at the early stages of a graduate's career. Thus, the estimated ATT largely represents the *genuine Erasmus effect*.

Sensitivity Analysis

The potential source of bias due to the possibility of unobservable factors is addressed in this section, in accordance with the discussion on the assumptions underlying our empirical strategy. To test the plausibility of the selection on observables assumption underlying PSM we apply the sensitivity analysis depicted in Ichino et al. (2008) to the Sapienza dataset and use the 'sensatt' Stata routine designed by Nannicini (2007).

Table 5 ATTs of Erasmus participation on graduates' (log)wages, PSM estimates, WITH and WITHOUT language skills in PS

Outcomes	Sapienza University sample					National sample (ISTAT)				
	Without language skills in PS*									
	treat.	contr.	ATT	Std. Err.	t	treat.	contr.	ATT	Std. Err.	t
1 year after	2589	708	0.144	0.032	4.541					
3 years after	2589	303	0.075	0.034	2.222					
4 years after						3886	3904	0.104	0.016	6.584
5 years after	2589	221	0.089	0.038	2.365					
	With language skills in PS*									
	treat.	contr.	ATT	Std. Err.	t					
1 year after	2546	712	0.086	0.031	2.739					
3 years after	2546	356	0.090	0.034	2.669					
4 years after										
5 years after	2546	222	0.043	0.038	1.152					
	With language skills in PS, Doubly Robust Estimates**									
	treat.	contr.	ATT	Std. Err.	t					
1 year after	828	769	0.089	0.037	2.41					
3 years after	413	440	0.057	0.031	1.80					
4 years after										
5 years after	299	317	0.080	0.038	2.10					

*Nearest Neighbour, random draw (attnd command), with replacement, no caliper. The numbers of treated and controls refer to actual nearest neighbour matches.

**Single nearest-neighbour (without caliper) with Regression Adjustment (kmatch ps command). Control variables in wage equation: year of graduation, gender, type of secondary school degree, final grade in upper secondary school, average grade at university, language skills, Km from the province of residence to Rome, age at graduation, social class, parent's education, citizenship, macroarea of residence and College major.

As a first step, we estimate the bias of unobserved factors as if they could affect our outcomes in a way similar to the most relevant variables included in the PS estimation.[24] Table 6 shows the original ATTs[25] along with the corresponding simulated ATTs in the presence of potential unobserved confounders, obtained by repeating each simulation 100 times. We also report the 'outcome effect' of the simulated confounder (U):

$$\Gamma = \frac{\frac{\Pr(Y=1|D=0,U=1,W)}{\Pr(Y=0|D=0,U=1,W)}}{\frac{\Pr(Y=1|D=0,U=0,W)}{\Pr(Y=0|D=0,U=0,W)}}$$

[24] Note that the 'sensatt' routine requires dummy variables. The original variables were recoded accordingly.

[25] Here we present the results of the sensitivity analysis with respect to the probabilitity of employment reported in Table 1. The other results of the sensitivity analysis are available upon request.

Table 6 Sensitivity analysis of the effect of Erasmus participation on graduates' employment 1, 3 and 5 years after graduation (Sapienza University of Rome)

Confounderlike	no-confounder			
		ATT 1 year after	ATT 3 years after	ATT 5 years after
		0.073	**0.041**	**0.021**
Female	ATT	0.078	0.027	0.037
	Out. Eff.	1.075	0.536	0.648
	Sel. Eff.	0.941	0.7	0.655
Lyceum	ATT	0.079	0.035	0.037
	Out. Eff.	0.792	1.152	1.159
	Sel. Eff.	1.227	1.257	1.193
dip_grade = 100	ATT	0.079	0.038	0.037
	Out. Eff.	1.195	1.596	1.382
	Sel. Eff.	0.977	0.947	0.966
avg_grade ≥ 28	ATT	0.075	0.038	0.035
	Out. Eff.	1.139	1.084	0.954
	Sel. Eff.	1.548	1.209	1.162
Resident in Rome before enrolment (km = 0)	ATT	0.076	0.037	0.035
	Out. Eff.	1.308	1.536	1.362
	Sel. Eff.	1.118	1.136	1.164
age_grad ≤ 25	ATT	0.077	0.029	0.042
	Out. Eff.	0.438	1.26	1.52
	Sel. Eff.	0.944	1.282	1.227
Foreign	ATT	0.078	0.037	0.042
	Out. Eff.	1.052	0.944	1.033
	Sel. Eff.	1.312	2.046	2.242
Bourgeoisie	ATT	0.078	0.032	0.038
	Out. Eff.	0.973	1.104	1.152
	Sel. Eff.	1.461	1.241	1.247
both_laurea	ATT	0.081	0.032	0.039
	Out. Eff.	0.87	1.104	1.164
	Sel. Eff.	1.675	1.491	1.349
Macroarea of residence: South	ATT	0.079	0.032	0.034
	Out. Eff.	0.746	0.596	0.735
	Sel. Eff.	1.01	0.811	0.745
Field of study: Literature	ATT	0.078	0.040	0.041
	Out. Eff.	0.897	0.582	0.593
	Sel. Eff.	1.484	0.977	0.955
"Killer confounder"	ATT	−0.175	−0.062	−0.029
	Out. Eff.	13.286	13.897	14.334
	Sel. Eff.	8.275	4.129	3.699

Original ATTs (Table 1) are given in bold

where Y is the outcome, D is the treatment status, and W is the set of matching variables, along with the 'selection effect' of the simulated confounder:

$$\Lambda = \frac{\frac{\Pr(D=1|U=1,W)}{\Pr(D=0|U=1,W)}}{\frac{\Pr(D=1|U=0,W)}{\Pr(D=0|U=1,W)}}$$

As reported in Table 6, if the unobservable variable U was distributed (e.g.) like the observed variable 'female' in the general model, we would have observed a negative effect on the chance of participating in the EP ($0.941 < 1$) and a positive effect on the probability of being employed 1 year after graduation ($1.075 > 1$). In this case, the impact of the EP on the short term probability of employment would be even greater than the ATTs estimated through the PSM model without the confounder (0.078 vs. 0.073). In general, our simulations show that potential unobserved confounders do not substantially affect our main findings.

As a further robustness check, following the example by Nannicini (2007), we simulate a 'killer confounder' so that it displays a large outcome effect. In particular, U is distributed according to the following parameters:

- The probability of having U = 1 if D = 1 and Y = 1 is equal to: 0.80
- The probability of having U = 1 if D = 1 and Y = 0 is equal to: 0.80
- The probability of having U = 1 if D = 0 and Y = 1 is equal to: 0.60
- The probability of having U = 1 if D = 0 and Y = 0 is equal to: 0.10.

Table 6 shows that only in this case the ATTs are driven very far from the baseline estimates, and in some cases they are very close to 0. To let U drive the ATTs very far from the baseline estimate, such a confounder must have a large effect on both the outcome and the selection into treatment. More precisely, U must increase the relative probability of having Y above the mean by a factor greater than 13, and the probability of treatment by a factor from 3 to 8. As in Nannicini (2007), we can consider implausible the presence among unobservable factors of a confounder with similar characteristics, especially as the set of our matching variables W is rich, and we can conclude that the simulations support the robustness of the matching estimates.

Conclusions and Policy Implications

This study aims to investigate whether participation in the EP has any helpful influence on the school-to-work transition of young graduates. We assume that the school-to-work transition is a multifaceted process that needs to be evaluated on multiple dimensions to obtain a comprehensive and meaningful picture of the effects of the EP. A satisfactory transition does not merely imply finding a job, but also involves considering the level of earnings and the quality of the job, including stability, working hours, and the risk of overeducation.

We used a large dataset of graduates from Sapienza University of Rome, the largest Italian university, and a nationally representative sample provided by the ISTAT survey on Tertiary Graduates. To reduce the endogeneity issues we applied a PSM procedure.

According to our results, the estimated effect of Erasmus is large and statistically significant. The participating students in the Sapienza sample are on average 7.3% more likely to be employed than their non-Erasmus counterparts 1 year after graduation. However, such

an effect tends to decline over time. The participants are also more likely to have a permanent contract in the long run, and to get a full-time job. In addition, they face a lower risk of being seriously overeducated. Graduates who participated in Erasmus are 10.4% more likely to be employed abroad 5 years after graduation in the Sapienza sample and 11.6% four years after graduation in the national sample. The positive estimated effect on the likelihood of employment abroad does not seem to be driven by the better language skills of Erasmus participants.

Furthermore, the EP participation improves the prospects of employment abroad for young females, although slightly lower than for males, for graduates coming from less educated families, lower social classes, and Southern Italian regions, where the youth unemployment rate is higher. The same applies to graduates in all broad fields of study.

Most positive effects do not vanish after a short period, but tend to persist over time. As for the effect on earnings, 1 year after graduation, the wage of the Erasmus participants in the Sapienza sample is around 8.9% above that of the control group. This advantage remains almost unchanged, at 8%, five years after graduation.

Although the primary purpose of the EP is to promote cultural exchange and shape a European identity among young generations, our findings show that it also likely improves the insertion of new graduates into the labour market. Our evidence suggests that its positive influence extends to multiple aspects of the transition to work. The Erasmus experience not only helps young graduates find a job more quickly after graduation, but also helps them to avoid the trade-offs they often face between accepting a job and wage level or job quality.

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