

## **Does international student mobility increase graduate employability? The labor market outcomes of Erasmus students**

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### **Abstract**

*The chapter sets out to answer a question that has long been on the mind of policy makers, university leaders, scholars and students: does international student mobility have a positive impact on graduate employability? Traditionally, this question has been answered using survey data where internationally mobile students self-report their employment situation at a certain point after graduation. According to these studies, international student mobility positively affects the labor market outcomes of students. For instance, the European Commission reports that: (1) students who completed an Erasmus mobility program are half as likely to face long-term unemployment; (2) the unemployment rate of Erasmus students is 23% lower five years after graduation (European Commission 2014). While these studies provide important insights into the added-value of international student mobility, the results can be plagued by self-selection bias. In order to avoid this problem, we propose an alternative research design. The chapter offers an analysis based on register data from university records and employment records of 10 cohorts of graduates between 2007 and 2015 from the West University of Timisoara, a leading comprehensive university in Romania. Using register data offers the possibility to study population-level data and compare the employment outcomes of mobile and non-mobile students. The chapter analyses the impact of mobility on insertion in the labor market, income levels and occupational prestige.*

**Keywords:** international student mobility, employability, labor market outcomes, Erasmus

### **Introduction**

International student mobility is not a new phenomenon (Altbach 2005; Guruz 2008). However, there has been a significant growth in scale in the last few decades. The Organization for Economic Cooperation and Development (OECD) estimates that the number of international students across the world has increased from 0.6 million in 1975 to 2.4 million in 2004 (OECD 2006) and a staggering 4.6 million in 2015 (OECD 2017). In Europe, international student mobility is regarded as one of the most important drivers for synchronizing the continent's disparate higher education systems to the same heartbeat.

In this context, the Erasmus program is considered the “flagship of European co-operation” (Barblan 2002) in higher education. Approximately 4.4 million higher education students have participated in the Erasmus+ program in the three decades since the program was set up in 1987 and the program continues to steadily increase in popularity (European Commission 2017). This year, the European Commission has pledged “to triple the Erasmus+ budget (going beyond the Juncker Commission's proposal to almost double the envelope)” (Rubio 2019, 1) for the 2021-2027 programming period.

Notwithstanding the increasing popularity of and investment in international student mobility, the actual labor market benefits for individuals are still widely debated (Di Pietro 2019). One of the major claims has been that individuals who study abroad enjoy better labor market outcomes than their non-mobile peers. Specifically, mobility is said to lead to a better insertion into the labor market (and thus to decreased unemployment), above-average earnings, a more prestigious occupation, and a higher likelihood that graduates will work outside their country of permanent residence/citizenship.

However, the actual impact of student mobility on labor market outcomes is less clear as research is scarce and the evidence used is “qualitative and anecdotal” or is prone to bias (Di Pietro 2019, 9). Traditionally, the effect of mobility on employability has been measured using interview or survey data collected from (1) students who participated in mobility programs, (2) university administrators in charge of study abroad programs, and (3) employers (Di Pietro 2015, 2019). While these types of studies provide important insights into the added value of international student mobility, the results can be plagued by self-selection bias which can lead to over-estimating or under-estimating the impact of mobility on employability.

In order to avoid this problem, we propose an alternative research design. Using register data offers the possibility to study population-level data and compare the actual employment outcomes of mobile and non-mobile students. The chapter offers an analysis based on register data from university records and national employment and baccalaureate exam records of 10 cohorts of graduates between 2007 and 2015 from the West University of Timisoara (UVT), a leading comprehensive university in Romania. In this way, the chapter both proposes an alternative research design and provides some findings that help to establish stronger linkages in the relationship between mobility and labor market outcomes.

The chapter analyses the impact of mobility on labor market outcomes seeking to answer the central research question: Does international student mobility have a positive impact on graduate employability? To answer this overarching question, the chapter seeks to establish the predictors for international student mobility and whether mobility has a significant positive impact on insertion in the labor market, income levels and occupational prestige. It asks: (1) What are the predictors for participation in Erasmus mobility among UVT graduates? (2) Does participation in the Erasmus student mobility program predict insertion on the labor market? Among those who have an active work contract, does participation in the Erasmus student mobility program (3) predict an above-average salary or (4) having a managerial or professional occupation?

The answer these questions, the chapter proceeds as follows. First, an overview of existing studies exploring the relationship between mobility and employment outcomes is provided. Second, the methodology employed in the chapter and the analytic sample are described. Third, the results of the data analysis are presented and discussed. Finally, the chapter concludes with the implications of the findings to the wider debate of the actual labor market gains of internationally mobile students and highlights avenues for further research.

## **Literature Review**

There is a plethora of theoretical arguments linking international student mobility with micro-level benefits that are expected to translate into better employment outcomes for graduates, but relatively few empirical studies have tested these causal claims (Di Pietro 2015, 2019; Wiers-Jenssen and Try 2005). This section explores the theoretical expectations and the empirical evidence brought forward by previous research attempting to establish that “[m]ore studies are needed to investigate the causal impact of study abroad” (Di Pietro 2019, 8).

The theoretical expectation linking mobility and employability is that individuals who study abroad will accrue non-economic benefits (i.e., skills, mobility capital) that will ultimately transform into economic benefits (i.e., favorable labor market outcomes such as domestic or international employment, higher wages, higher occupational prestige) (Crăciun and Orosz 2018). This is expected on the premise that the skills acquired by individuals through studying abroad are marketable (i.e., valued by employers) (Di Pietro 2015) and because mobility widens the job search area of graduates beyond the domestic labor market (i.e., more and better employment opportunities) (Di Pietro 2019).

International student mobility is perceived and expected by participants, university administrators, and employers to have a positive effect on all aspects of a workers’ skill sets. First, mobility has been shown to have a positive impact on individuals’ cognitive skills, particularly foreign language proficiency (Canto, Jauregi, and van den Bergh 2013; Llanes, Arnó, and Mancho-Barés 2016), problem-solving, and decision-making skills (Bikson et al. 2003). Second, studying abroad exposes students to

foreign cultures which is expected by employers to have a positive impact on their non-cognitive skills, especially inter-personal and inter-cultural skills, confidence and self-reliance (Bikson et al. 2003; Bracht et al. 2006; King, Findlay, and Ahrens 2010; Matherly 2005). Third, mobility can improve job-specific skills for jobs that have an international component or give students the skills and experience to pursue an international career (Di Pietro 2019).

Cognitive, non-cognitive and job-specific skills are all valued in the workplace so the expectation is that they will be rewarded by employers through hiring, higher wages and more prestigious jobs. **Table 1** provides an overview of research findings from existing studies on the relationship between mobility and these employability indicators<sup>1</sup>. Several studies have shown that there is a positive relationship between mobility and various labor market outcomes “though they provide mixed results about the magnitude of this effect” (Di Pietro 2013, 6). Others find no difference in employability outcomes between mobile and non-mobile students in terms of employment outcomes. (European Commission 2014, 2016; Di Pietro 2019; Schnepf and Hombres 2018)

**Table 1:** The relationship between international student mobility and labor market outcomes

Indicator	Benefits for internationally mobile students	Cases
<b>Labor market insertion</b>	<p>(+) Less likely to face long term unemployment (European Commission 2014, 2016)</p> <p>(+) Lower unemployment rates 3 to 10 years after graduation (European Commission 2014, 2016; Di Pietro 2019; Schnepf and Hombres 2018)</p> <p>(+) Mobility useful in securing (first) job (Bracht et al. 2006; King, Findlay, and Ahrens 2010; Teichler and Janson 2007)</p> <p>(+) Mobility experience contributes to making job interviews more successful (King, Findlay, and Ahrens 2010)</p> <p>(=) No difference in unemployment rates compared to non-mobile individuals immediately after graduation (Wiers-Jenssen 2011)</p> <p>(=) No difference in probability of employment 1 month after graduation (Koda and Yuki 2013)</p> <p>(=) No difference in holding a graduate level job (Koda and Yuki 2013)</p> <p>(-) Take a longer time to find a job (Rodrigues 2013)</p>	<p>Europe</p> <p>Italy</p> <p>Norway</p> <p>UK</p> <p>Malaysia</p>
<b>Earnings</b>	<p>(+) Higher wages (Rodrigues 2013; Varghese 2008)</p> <p>(=) No difference in wages compared to non-mobile individuals (Koda and Yuki 2013; Wiers-Jenssen 2011)</p>	<p>Europe</p> <p>Norway</p> <p>Malaysia</p> <p>Worldwide</p>
<b>Occupational category</b>	<p>(+) Likely to have jobs with high professional responsibility (Bracht et al. 2006)</p> <p>(+) More likely to occupy managerial positions 6 months after graduation (Schnepf and Hombres 2018)</p>	<p>Europe</p> <p>UK</p> <p>Germany</p>

<sup>1</sup> The discussion of the findings presented in Table 1 will be extended in a subsequent draft of the paper.

	<p>(+) More likely to hold a management position 5 to 10 years after graduation (European Commission 2016)</p> <p>(+) Positive impact on early career status</p>	
<b>International career</b>	<p>(+) More likely to work abroad after graduation (Parey and Waldinger 2011; Di Pietro 2012; Rodrigues 2013; Teichler and Janson 2007; Varghese 2008)</p> <p>(=) No difference in likelihood to have an international job compared to non-mobile individuals</p>	<p>Europe</p> <p>Italy</p> <p>Germany</p> <p>Norway</p> <p>Worldwide</p>

Source: Compiled by authors

As the employment indicators are generally based on self-reported outcomes by graduates who participated in mobility, administrators in charge of mobility programs, and employers they can be affected by social desirability bias (Bowman and Hill 2011). Moreover, linking mobility and employability in a causal relationship is challenging due to selection effects, i.e. “[s]tudents who study abroad may differ from students who do not in unobserved characteristics that are likely to affect labor market outcomes” (Di Pietro 2019, 3). What is needed is a more robust causal research design that takes these issues into account.

### Research Design: Data and Methodology

In order to measure the effect of mobility on employment outcomes, the chapter relies on an original dataset constructed from institutional and national registrar data. Three sources of registrar data that were linked: (1) university registrar data of individuals who completed a bachelor’s and/or master’s degree at UVT, and national registrar data on (2) Baccalaureate exam scores and (3) labor market outcomes.

The initial dataset was based on university registrar data of individuals who completed a bachelor’s and/or master’s degree at UVT. This data set contains, among other things, information on UVT graduates’ age, gender, the start year of their bachelor’s and/or master’s degree, the field of study, whether they received social and/or merit based scholarships during their studies, and whether they participated in Erasmus mobility during their time at UVT. This dataset was then matched with publicly available data on the graduates’ baccalaureate exam scores launched in 2004 (Ministerul Educației Naționale 2019) and requested information about their labor market outcomes from Revisal, a mandatory national register for all employees in Romania that was launched in 2011 (Guvernul României 2011).

Specifically, matching Revisal data with university records allowed us to capture information on whether UVT graduates had an active working contract with an employer operating in Romania, the highest salary, and the highest occupational category associated with each individual’s working contract(s) during the period 2011-2018. This meant that we were able to test whether mobile students actually enjoyed better insertion into the labor market, above-average earnings and/or a more prestigious occupation as compared to non-mobile students.

The raw dataset includes individuals who completed at least a bachelor’s degree at UVT (n=20,707). From this dataset a number of observations were excluded for various theoretical and practical reasons that are discussed next. First, UVT graduates who could not be matched with Revisal data (n=487) as this meant no conclusions could be drawn about their labor market outcomes. Second, UVT graduates who started their bachelor’s degree program in or before 2007 (n=704) as the UVT Erasmus mobility records we had access to only start from the academic year 2007/2008. Third, UVT graduates who started their bachelor’s degree program in or after 2015 (n=45) because they could not have completed their studies by January 2018, the date when the Revisal export was received. Finally, UVT graduates whose baccalaureate score was missing (n=4569) as we used their grade as a proxy for

academic ability in our analysis. As a result of delimitating the raw dataset in this way, we ended up with an analytic dataset of n=14,922 information on labor market outcomes of both mobile (n=637) and non-mobile (n=14,285) UVT graduates. **Table 2** provides summary statistics for the variables used in our data analysis.

**Table 2:** Descriptive statistics of UVT graduates in the analytic dataset

<b>UVT graduates in the analytic sample (n = 14,922)</b>	<b>Non-mobile students (n= 14,285)</b>	<b>Mobile students (n = 637)</b>
<b>Gender</b>		
Men	3,890 (96,6%)	136 (3,4%)
Women	10,395 (95,4%)	501 (4,6%)
<b>Average baccalaureate exam score</b>	8,60 out of 10	8,94 out of 10
<b>Baccalaureate exam performance (in quartiles)</b>		
Lowest quartile	3630 (92,2%)	106 (2,8%)
Low-middle quartile	3658 (97,0%)	113 (3,0%)
High-middle quartile	3599 (95,7%)	162 (4,3%)
Highest quartile	3398 (93,0%)	256 (7,0%)
<b>Average age at BA graduation</b>	22,52	22,31
<b>Field of study (BA)</b>		
Social sciences	8965 (96,9%)	287 (3,1%)
Humanities and arts	2877 (91,6%)	265 (8,4%)
Mathematics; natural sciences; biology and biomedicine	1919 (96,1%)	78 (3,9%)
Physical education and sport	524 (98,7%)	7 (1,3%)
<b>Receipt of merit-based scholarship</b>		
Did not receive	8605 (98,2%)	154 (1,8%)
Received	5680 (92,2%)	483 (7,8%)
<b>Receipt of social scholarship (based on financial need)</b>		
Did not receive	12692 (95,9%)	547 (4,1%)
Received	1593 (94,7%)	90 (5,4%)
<b>MA status</b>		
Never enrolled in an MA program (at UVT)	8719 (96,7%)	300 (3,3%)
Enrolled in an MA program at UVT but didn't graduate	1980 (94,9%)	106 (5,1%)
Completed an MA program at UVT	3586 (94,0%)	231 (6,1%)
<b>Labor market insertion</b>		
Had at least one active working contract between 2011-2018	9723 (96,3%)	374 (3,7%)
No record of an active working contract between 2011-2018	4562 (94,6%)	263 (5,5%)

Source: Calculated by authors

To test what predicts labor market outcomes, the log odds of (1) having an active contract in Romania in the period 2011-2017 (insertion), (2) having an active contract that is associated with an above-average salary (earnings), and (3) having an active contract that is associated with a managerial or professional job (occupational category)<sup>2</sup> were modelled as a function of UVT graduates' gender, field of BA study, year in which they started their BA, their age at graduation from BA (22 or below vs. above 22), their performance in the baccalaureate exam (in quartiles), their receipt of a merit-based scholarship or social scholarship during their BA, whether they enrolled in or completed an MA degree at UVT, and whether they participated in Erasmus mobility during their studies at UVT. For more robust results, the impact of mobility on earnings and occupational category were also tested using a propensity score matching<sup>3</sup> model with the same specifications as the regression model discussed above.

## **Findings: Data analysis and Results**

### **(1) What are the predictors of participation in Erasmus mobility among UVT graduates?**

Comparing mobile and non-mobile students<sup>4</sup>, the profile of Erasmus participants becomes apparent. Even though 78% of the mobile students are women, all other things being equal, gender is not predictive of participation in Erasmus mobility. Over the years, higher mobility rates in the Erasmus program have been observed for women, at around 60% (Brooks and Waters 2011; Souto-Otero 2008; Teichler, Ferencz, and Wächter 2011). Previous research has shown that for Romania the gender gap is even bigger, with females representing 70% of mobile students at the national level (Souto-Otero and McCoshan 2006, 4). However, "[t]he feminisation of higher education is apparent at all levels of study" in national student populations (Orr, Gwosc, and Netz 2011, 59). Therefore, the tilted balance towards higher female participation rates can be in part accounted for by the general structure of national student populations.

Notwithstanding, other factors are predictive of participation in mobility. First, the year in which students began their BA studies is a positive predictor of mobility: with each year, the odds of participating in the Erasmus program was 8% higher. This can be explained by the growth in popularity, accessibility and funding of the Erasmus program over the years (European Commission 2017, 2018b).

Second, age at the time of BA graduation is a significant negative predictor of mobility: each additional year in age is associated with a 35% lower likelihood of participating in the Erasmus program. This finding is in line with the predictions of empirical studies on migration which "overwhelmingly conclude that the relation with age is negative, i.e., that the likelihood of migration decreases with age" (Zaiceva 2014, 4).

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<sup>2</sup> The analytic sample for the analyses on insertion and occupational category was smaller than the analytic sample for labor market insertion since all observations that did not have an active work contract had to be dropped. We also dropped all the observations that had missing data on income and occupational category. Thus, the analytic sample size in these analyses is n=11,540. The proportion of mobile UVT graduates is 3.9% (n=451) which is higher than the 1.8% average rate credit mobility of graduates from Romanian universities (European Commission 2018a). To compare, the average EU credit mobility of graduates is 8% (European Commission 2018a).

<sup>3</sup> "When subjects are not randomly assigned to treatment and non-treatment groups, as is the case with observational studies, other methods are needed to avoid the possibility of selection bias. Bias can arise when apparent differences in outcome between treatment and non-treatment groups can be attributed to characteristics that affected whether a subject received a given treatment rather than simply to the effect of the treatment itself. Propensity score matching adjusts for such potential bias by creating a sample group of subjects who received the treatment that is comparable on all observed characteristics to a sample of subjects that did not receive the treatment" (Di Pietro 2019, 4).

<sup>4</sup> The log odds of participating in Erasmus mobility was modelled as a function of the UVT graduates' gender, the field of BA study, the year in which they started their BA, their age at graduation from BA, their performance in the baccalaureate exam (in quartiles), their receipt of a merit-based scholarship or social scholarship during their BA, and whether they enrolled in or completed an MA at UVT.



Third, academic ability is a predictor of Erasmus mobility. Students' performance at the baccalaureate exam (a proxy for academic ability) is a significant positive predictor of mobility. Compared to those to students who scored in the lowest quartile, those in the high-middle quartile were 47% more likely to participate in Erasmus mobility, while those in the highest performance quartile were almost 2.5 times more likely to participate. The receipt of a merit-based scholarship is also significantly positively related to mobility. Those students who received a merit-based scholarship were 3.5 times more likely to participate in Erasmus than those who did not receive such a scholarship. The fact that Erasmus grants are awarded on academic merit and that "Erasmus appears to be much more selective in Eastern Europe (where 20% of applicants are rejected)"<sup>5</sup> (European Commission 2016, 14) could explain the magnitude of the relationship.

Fourth, MA status is significantly positively associated with Erasmus mobility. Compared to those who never enrolled in a MA degree program at UVT, those who enrolled but did not complete were 28% more likely to participate in mobility, while those who completed a MA degree were 32% more likely to participate in mobility. This makes intuitive sense, as those who remain affiliated with a higher education institution longer have more opportunities to apply for an Erasmus scholarship. All in all, the typical Erasmus mobility participant is young, academically able and more likely to pursue graduate education.

## **(2) Does participation in Erasmus mobility predict insertion into the labor market?**

Participation in Erasmus mobility is significantly negatively associated with labor market insertion. Graduates who were mobile during their studies at UVT (either during BA or MA) were 40% less likely to have an active work contract compared to non-mobile graduates. Rather than implying that mobile graduates are less likely to be employed, this finding could lend support to the body of evidence that suggests that mobile students are more likely to work abroad after graduating (Parey and Waldinger 2011; Di Pietro 2012; Rodrigues 2013; Teichler and Janson 2007; Varghese 2008) and, thus, less likely to appear in the national employment database with an active contract. As migration research has shown people with a migratory experience have an increased propensity for re-taking this step. "Once someone has migrated, therefore he or she is very likely to migrate again, and the odds of taking an additional trip rise with the number of trips already taken" (Massey et al. 1993, 453). Through the experience of mobility, students acquire 'mobility capital' and are likely to look for and take up jobs outside the domestic labor market (Rodrigues 2013; Wiers-Jenssen 2008).

All other things being equal, gender, Baccalaureate exam results, the year when the BA degree started and the receipt of social scholarship (proxy for socio-economic status) are not predictive of labor market insertion. As previous studies have also shown, the field of study is predictive of employment status. Compared to social scientists, humanities and arts graduates and physical education and sports graduates are significantly less likely to have an active work contract, while graduates from natural sciences, mathematics, biology and biomedicine are significantly more likely to have an active work contract. Also, having an MA degree is significantly positively associated with labor market insertion. Compared to those who never enrolled in an MA degree, MA graduates are twice as likely to have an active work contract. This finding is in line with human capital theory predictions.

## **(3) Among those who have an active work contract, does participation in Erasmus mobility predict an above average salary?**

Erasmus mobility is significantly positively associated with income. All other things being equal, those who participated in Erasmus mobility during their studies at UVT were 75% more likely to have a higher-than-average monthly salary (operationalized at RON 2500 or above) associated with their active work contract. The results from the propensity score matching model (with the same specification as the logistic regression model discussed above) also suggest that participation in

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<sup>5</sup> By way of comparison, the rates of Erasmus application rejection in other European regions are: 19% for Southern Europe, 9% for Western Europe and 7% for Northern Europe (European Commission 2016).

Erasmus mobility is positively associated with an above-average monthly salary among those UVT graduates who had an active contract.

Comparing mobile graduates, the duration of study abroad is not predictive of income. In other words, both short- and long-term Erasmus mobility periods (operationalized as 5 month or less and more than 5 months) mobile students get similar salary premiums. Nevertheless, the year in which students is predictive of income. The year of mobility is negatively associated with income, that is the likelihood to have a higher income mobility decreases with every academic year. This finding is consistent with the idea that, over time, as Erasmus mobility has become more and more common, it becomes less valuable in accessing higher-paid positions. Alternatively, the negative relationship could be explained by the fact that students who went on Erasmus sooner have had more time on the labor market and have had access to higher-paid positions.

**(4) Among those who have an active working contract, does participation in Erasmus mobility predict having a managerial or professional occupation?**

Erasmus mobility is not predictive of a higher occupational category. All other things being equal, those who participated in Erasmus mobility during their studies at UVT were not more likely to have an active work contract with a managerial or professional occupation. The results from the propensity score matching model (with the same specification as the logistic regression model discussed above) also suggest that participation in Erasmus mobility is not associated with managerial or professional occupations among UVT graduates with an active work contract.

This result might be explained by the fact that higher education attainment in Romania is the lowest in the European Union and, as such, having a tertiary degree per se is highly valued by employers when they are looking to fill managerial or professional positions. Our results contradict previous research which found that: “Five to ten years after graduation, significantly more Erasmus alumni (64%) than non- mobile alumni (55%) hold a management position. The difference is especially large in Eastern Europe (70% compared to 41%)” (European Commission 2016).

Comparing mobile graduates, the duration of study abroad is not predictive of occupational category either. In other words, both short- and long-term Erasmus mobility periods (operationalized as 5 month or less and more than 5 months) are as likely to hold managerial or professional jobs. The year of mobility is not associated with the occupational category, that is, the likelihood to have a managerial or professional position is the same irrespective of the academic year in which mobility took place.

**Conclusion and avenues for further research**

This chapter directly answers to the recent call to “causal impact of studying abroad” on labor market outcomes (Di Pietro 2019, 8). It proposes a novel research design based on register data that directly tackles the potential bias (selection and self-reporting) in the results of previous studies. It finds that, a typical working and mobile UVT graduate is a woman (78.5%) who has a BA degree in social sciences (44.4%) or in humanities (42.4%), did not receive a social scholarship (84.5%) but received a merit-based scholarship (75.4%) , enrolled at one point in time in a MA program at UVT (55.6%) and has a managerial or professional occupation (62.5%).

In terms of labor market outcomes, the chapter shows that participation in Erasmus mobility is (1) significantly negatively associated with labor market insertion; (2) significantly positively associated with above average-income, and (3) not predictive of a higher occupational category.

Limitations: findings limited to graduates of a single HEI in Romania, no employment information about self-employed graduates (self-employment more common among degree holders in Law and Psychology), no employment information about those employed outside of Romania, available information on wages only in ranges (“monthly income in the range of...”), and no information about



relevant background characteristics / co-variables (e.g., marital status, number of children, parental education). Avenues of further research<sup>6</sup>.

## Reference List

- Altbach, P.G. 2005. "Globalization and the University: Myths and Realities in an Unequal World." *The NEA 2005 Almanac of Higher Education*: 63–74.
- Barblan, A. 2002. "Academic Co-Operation and Mobility in Europe: How It Was and How It Will Be." *Higher Education in Europe* 27(1–2): 31–58.
- Bikson, Tora, Gregory Treverton, Joy Moini, and Gustav Lindstrom. 2003. *New Challenges for International Leadership: Lessons from Organizations with Global Missions*. [https://www.rand.org/content/dam/rand/pubs/monograph\\_reports/2005/MR1670.pdf](https://www.rand.org/content/dam/rand/pubs/monograph_reports/2005/MR1670.pdf).
- Bowman, N. A., and P. L. Hill. 2011. "Measuring How College Affects Students: Social Desirability and Other Potential Biases in College Student Self-Reported Gains." In *Validity and Limitations of College Student Self-Report Data*, eds. S. Herzog and N.A. Bowman. San Francisco: Jossey-Bass, 73–85.
- Bracht, By Oliver et al. 2006. *The Professional Value of ERASMUS Mobility*. [https://www.eurashe.eu/library/modernising-phe/mobility/professional/WG4\\_R\\_Professional\\_value\\_of\\_ERASMUS\\_mobility\\_Teichler.pdf](https://www.eurashe.eu/library/modernising-phe/mobility/professional/WG4_R_Professional_value_of_ERASMUS_mobility_Teichler.pdf).
- Brooks, R., and J. Waters. 2011. *Student Mobilities, Migration and the Internationalization of Higher Education*. Basingstoke: Palgrave Macmillan.
- Canto, Silvia, Kristi Jauregi, and Huub van den Bergh. 2013. "Integrating Cross-Cultural Interaction through Video-Communication and Virtual Worlds in Foreign Language Teaching Programs: Is There an Added Value?" *ReCALL* 25(1): 105–21.
- Crăciun, Daniela, and Kata Orosz. 2018. EENEE Analytical Report No.36 *Benefits and Costs of Transnational Collaborative Partnerships in Higher Education*. Brussels. <http://www.eenee.de/eeneeHome/EENEE/Analytical-Reports.html>.
- European Commission. 2014. *The Erasmus Impact Study: Effects of Mobility on the Skills and Employability of Students and the Internationalisation of Higher Education Institutions*. [https://ec.europa.eu/programmes/erasmus-plus/sites/erasmusplus2/files/erasmus-impact\\_en.pdf](https://ec.europa.eu/programmes/erasmus-plus/sites/erasmusplus2/files/erasmus-impact_en.pdf).
- . 2016. *The Erasmus Impact Study Regional Analysis: A Comparative Analysis of the Effects of Erasmus on the Personality, Skills and Career of Students of European Regions and Selected Countries*.
- . 2017. "Erasmus+: 30 Years in the Making." *Factsheets*. [https://ec.europa.eu/programmes/erasmus-plus/about/factsheets\\_en](https://ec.europa.eu/programmes/erasmus-plus/about/factsheets_en) (November 1, 2019).
- . 2018a. *Education and Training Monitor 2019: Romania*.
- . 2018b. "Erasmus+: The EU Programme for Education, Training and Sport (2014-2020)." [https://ec.europa.eu/programmes/erasmus-plus/node\\_en](https://ec.europa.eu/programmes/erasmus-plus/node_en).
- Guruz, Kemal. 2008. SUNY Press *Higher Education and International Student Mobility in the Global*

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<sup>6</sup> To be developed.

*Knowledge Economy*. Albany: State University of New York Press.

- Guvernul României. 2011. "Hotărâre Nr. 500 Din 18 Mai 2011 Privind Registrul General de Evidență a Salariaților." *Monitorul Oficial* (372).
- King, Russell, Allan Findlay, and Jill Ahrens. 2010. *International Student Mobility Literature Review*. [http://sro.sussex.ac.uk/id/eprint/12011/1/KingFindlayAhrens\\_International\\_Student\\_Mobility\\_Literature\\_Review.pdf](http://sro.sussex.ac.uk/id/eprint/12011/1/KingFindlayAhrens_International_Student_Mobility_Literature_Review.pdf).
- Koda, Yoshiko, and Takako Yuki. 2013. "The Labor Market Outcomes of Two Forms of Cross-Border Higher Education Degree Programs between Malaysia and Japan." *International Journal of Educational Development* 33(4): 367–79.
- Llanes, Àngels, Elisabet Arnó, and Guzman Mancho-Barés. 2016. "Erasmus Students Using English as a 'Lingua Franca': Does Study Abroad in a Non-English-Speaking Country Improve L2 English?" *Language Learning Journal* 44(3): 292–303.
- Massey, D.S. et al. 1993. "Theories of International Migration: A Review and Appraisal." *Population and Development Review* 19(3): 431–66.
- Matherly, Cheryl. 2005. "Effective Marketing of International Experiences to Employers." In *Impact of Education Abroad on Career Development: Volume 1*, ed. Martin Tillman. , 9–10. [https://www.aifsabroad.com/advisors/pdf/impact\\_of\\_education\\_abroadi.pdf](https://www.aifsabroad.com/advisors/pdf/impact_of_education_abroadi.pdf).
- Ministerul Educației Naționale. 2019. "Bacalaureat." <http://static.bacalaureat.edu.ro>.
- OECD. 2006. *Education at a Glance: OECD Indicators*. Paris.
- . 2017. *Education at a Glance: OECD Indicators*. Paris.
- Orr, Dominic, C. Gwosc, and N. Netz. 2011. *Ocial and Economic Conditions of Student Life in Europe. Synopsis of Indicators. Final Report. Eurostudent IV 2008-2011*. Bielefeld: W. Bertelsmann Verlag.
- Parey, Matthias, and Fabian Waldinger. 2011. "Studying Sbroad and the Effect on International Labor Market Mobility: Evidence from the Introduction of ERASMUS." *Economic Journal* 121(551): 194–222.
- Di Pietro, Giorgio. 2012. "Does Studying Abroad Cause International Labor Mobility? Evidence from Italy." *Economics Letters* 117(3): 632–35.
- . 2013. *Do Study Abroad Programs Enhance the Do Study Abroad Programs Enhance the Employability of Graduates ?* Bonn.
- . 2015. "Do Study Abroad Programs Enhance the Employability of Graduates ?" *Education Finance and Policy* 10(2): 223–43.
- . 2019. *University Study Abroad and Graduates' Employability*. <https://wol.iza.org/articles/university-study-abroad-and-graduates-employability/long>.
- Rodrigues, Margarida. 2013. *Does Student Mobility During Higher Education Pay ? Evidence From 16 European Countries*. [https://publications.jrc.ec.europa.eu/repository/bitstream/111111111/29599/1/jrc\\_report\\_mrodrigues\\_student\\_mobility\\_final.pdf](https://publications.jrc.ec.europa.eu/repository/bitstream/111111111/29599/1/jrc_report_mrodrigues_student_mobility_final.pdf).
- Rubio, Eulalia. 2019. *New Beginnings: An EU Budget in Support of the Next Commission's Agenda*. Paris, Berlin. <https://www.delorsinstitut.de/2015/wp-content/uploads/2019/08/9-BUDGET-Rubio.pdf>.
- Schnepf, Sylke V, and Béatrice D Hombres. 2018. *Ternational Mobility of Students in Italy and the UK : Does It Pay off and for Whom ?* <http://ftp.iza.org/dp12033.pdf>.
- Souto-Otero, Manuel. 2008. "The Socio-Economic Background of Erasmus Students: A Trend towards Wider Inclusion?" *International Review of Education* 54(2): 135–54.

- Souto-Otero, Manuel, and A. McCoshan. 2006. *Survey of the Socio-Economic Background of Erasmus Students: Final Report to the European Commission*. Birmingham.
- Teichler, Ulrich, Irina Ferencz, and Bernd Wächter. 2011. *Mapping Mobility in European Higher Education Vol.1*. Brussels.
- Teichler, Ulrich, and Kerstin Janson. 2007. "The Professional Value of Temporary Study in Another European Country : ERASMUS Students THE IMPACT OF TEMPORARY STUDY ABROAD." *Journal of Studies in International Education* 11(3): 486–95.
- Varghese, N.V. 2008. *Globalization of Higher Education and Cross-Border Student Mobility*. Paris. <http://www.iiep.unesco.org/en/globalization-higher-education-and-cross-border-student-mobility-7917>.
- Wiers-Jenssen, Jannecke. 2008. "Does Higher Education Attained Abroad Lead to International Jobs?" *Journal of Studies in International Education* 12(2): 101–30.
- . 2011. "Background and Employability of Mobile vs. Non-Mobile Students." *Tertiary Education and Management* 17(2): 79–100.
- Wiers-Jenssen, Jannecke, and Sverre Try. 2005. "Labour Market Outcomes of Higher Education Undertaken Abroad." *Studies in Higher Education* 30(6): 681–705.
- Zaiceva, A. 2014. *The Impact of Aging on the Scale of Migration: Older People Migrate Less than Young, yet with Population Aging, Mobility of Elderly and Specialized Workers May Increase*.