DOES INTRA-EUROPEAN MOBILITY IMPACT YOUTH ENTREPRENEURSHIP?

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Abstract
International mobility is an increasing phenomenon among European youth, mostly after the creation of the Single European Market and the warranty of freedom of movement of goods and peoples within the European Union. Being internationally mobile has positive consequences on personal development and on economic performance on the labor market, including the development of entrepreneurial activities. This paper estimates the impact of international mobility in Europe on youth entrepreneurship, after the individual's returning in the country of origin. The data source for this study is a European survey launched within the Horizon 2020 project MOVE "Mapping mobility – pathways, institutions and structural effects of youth mobility in Europe", resulting in sample of 5499 respondents and covering six countries: Germany, Norway, Spain, Romania, Hungary and Luxembourg. Using the advantage of a large sample that provides information on both mobile and non-mobile respondents and applying Propensity Score Matching, we find that people who had an intra-European mobility experience are more likely to be entrepreneurs after returning in the country of origin. Our results confirm that mobility has a statistically significant positive, but rather moderate impact on entrepreneurship in the case of European youth and also explains the determinants of youth being mobile.

Keywords
Mobility, Entrepreneurship, Youth, Propensity score matching

Introduction
Sustainable development in Europe is directly influenced by its economic growth channeled by the growth of enterprises and the internal mobility of labor. Entrepreneurship has a clear contribution to sustainable development, since it creates new companies, generates new jobs, opens up new markets, and nurtures new skills. For policy makers, encouraging and supporting entrepreneurship is more and more a priority.
In the context of sustainable development, entrepreneurship is becoming a popular research topic, and the growing literature emphasizes the increasing role of "sustainable entrepreneurship" (Kardos, 2012). This is an "all-inclusive concept addressing the contribution of entrepreneurial activities to solving societal and environmental problems, to sustainable development in a more comprehensive way" (Kardos, 2012). Sustainable entrepreneurship is described with several features as social responsibility, competitiveness, progressiveness, knowledge creation and usage, innovativeness, dynamism and seeks for

business benefits creating social value (Krisciunas & Greblikaite, 2007). In all societies, youth is a key factor for progress and for innovation, becoming the engine of sustainable entrepreneurship; youth entrepreneurial behavior needs to be understood, studied in order to be better supported and encouraged.

International mobility is an increasing phenomenon among European youth, mostly after the creation of the Single European Market and the warranty of freedom of movement of goods and peoples within the European Union. Labor mobility improves the functioning of the labor markets through the balancing of skill needs, labor-market shortages, and unemployment. Being internationally mobile has positive consequences on personal development and on economic performance on the labor market. However, in spite of its increasing relevance the influence of mobility on the propensity of becoming freelancer or entrepreneur is not much explored in the economic literature. The nexus between migration and entrepreneurship has been mainly explored from the perspective of migrant entrepreneurs or migrants self-employed, as they are perceived as a vector for sustainable development (Naudé, 2012). Using data from Egypt, it was proven that „an overseas returnee is more likely to become an entrepreneur than a non-migrant (...), they accumulate savings and experience overseas that increase their chances of becoming entrepreneurs." (Wahba & Zenou, 2017). At the same time, the determinants of youth entrepreneurship are presented in various papers (Chigunta, 2002; Kojo 2010, Popescu & Roman, 2018) that describe demographic or personal factors, such as financial literacy.

However, the role of international mobility in the particular case of young entrepreneurs is not entirely explored. Therefore, this paper aims to fill this gap and explores the nexus mobility, entrepreneurship and youth, using a very recent dataset representative for six European countries. The main purpose of the study is to explain the role of international mobility in youth successful entrepreneurship in Europe, using a recent dataset, resulted from the MOVE project, financed by the Horizon 2020 Program between 2015 and 2018. MOVE provides a research-informed contribution towards an improvement of the conditions of the mobility of young people in Europe and a reduction of the negative impacts of mobility through the identification of ways of good practice thus fostering sustainable development and wellbeing (Navarrete, L., Lorenzo-Rodriguez, J. et al., 2017).

It should be noticed that most of the related existing literature refers to migration and its interaction with entrepreneurship, and the concept of mobility is less applied. The two concepts, migration and mobility, are used in many cases interchangeably, since there is a certain overlap between them. The concept of mobility differs from migration in at least two dimensions: spatial and temporal. Mobility covers intra-European cross border movement of EU citizens and has a rather short term, temporary character. European mobiles are therefore more difficult to be captured in official statistical data, since their movement is irregular, short term. Therefore, another contribution of the paper is that it is focused on mobile youth, defined as individuals aged between 18 and 29 years who have spent at least two weeks abroad for other purposes than tourism or family reasons. Using a recently produced dataset that includes both mobile and non-mobile youth, our methodological approach mainly relies on propensity score matching, which is a semi-parametric method with increasing popularity in the field of impact studies.

The rest of the papers is structured as follows: section 1 presents the methodology applied, section 2 describes the data set and the variables, while section 3 present the results. Finally, the last section concludes the paper.

Methodological approach

The paper relies on counterfactual impact analysis of mobility, using a quasi-experimental approach in which the mobility experience is associated to a treatment applied to youth European population. Matching involves pairing treatment and comparison units that are

similar in terms of their observable characteristics. According to Dehejia and Wahba (2002) when the relevant differences between any two units are captured in the observable pre-treatment covariates, which occurs when outcomes are independent of assignment to treatment conditional on pre-treatment covariates, matching methods can yield an unbiased estimate of the treatment impact.

As mentioned, in this paper Propensity score matching (PSM) is applied. This is a semi-parametric estimation in three main steps, briefly described in this section. The first step consists in estimating the propensity scores parametrically; the second step involves non-parametric comparison of these propensity scores by applying matching algorithms, while step three involves checking the matching quality. The two most frequent parameters of evaluating policies found in literature are the population average treatment effect (ATE) and the average treatment effect on the treated (ATT). ATE is the average difference in expected outcome between treated and non-treated individuals. ATE is relevant for random assignment to treatment, while ATT is better suited for measures focusing on specific groups in the society.

In the usual binary treatment case of treatment versus non-treatment, the propensity scores are usually estimated by either a probit or a logit model. In the particular case of this study, being mobile is regarded as the treatment and the propensity scores are therefore estimated. According to Caliendo and Kopeinig (2008), the most widely followed tradition in selecting variables into the model estimating propensity score is to include all the variables which simultaneously affect both participation in treatment and outcome variable of interest. We employ a binary logit regression model in order to compute the propensity scores for being mobile. In our study, the binary dependent variable in the model is whether a person was internationally mobile or not. The regression model will be predicting the logit, that is, the natural log of the odds of having made one or the other decision.

There are several matching methods proposed in the literature, out of them the most widely used are: the Nearest-Neighbour Matching (with or without caliper), the Radius Matching, the Stratification Matching and the Kernel Matching. Therefore, in this study all the four algorithms are applied for producing a stronger result and as an instrument for comparing the final results of the matching procedure. For the purpose of a reliable matching, the `psmatch2` command in STATA was used.

Data

The data used in this study are a result from the MOVE project large survey that focuses on cross-border geographic mobility of young people within Europe. The surveys was conducted among young people in order to explore their mindsets, experiences and motivations regarding mobility, and barriers or reasons that hold non-mobile young participants in their countries. The mobility experience was regarded according to the main purpose: work, study, volunteering, entrepreneurship, Vocational Education and Training and pupils' exchange. As previously mentioned, 'mobility' was practically defined as having been abroad for a reason different than tourism or visiting relatives longer, for at least 2 weeks, this 'soft' concept of mobility was set to accommodate for all kinds of mobility types studied such as pupil's exchange (usually weeks), vocational training (in Germany 3 weeks), volunteering, etc. The respondents were young people aged between 18 and 29 from the six countries involved in the project: Germany, Hungary, Luxembourg, Norway, Romania and Spain.

The sample consists of 5499 individuals, both mobile and non-mobile and the national subsamples are representative at country level. A large number of variables were covered by the detailed questionnaire, including demographic characteristics, economic aspects, and perceptions on mobility, future plans and agency. Should be mentioned that at the moment of the interview, all of the respondents were living in the country of origin and therefore the

mobility experience was completed and finished. Those respondents having multiple mobility experiences were given the possibility to describe each experience abroad and to declare the most relevant one. The mobile respondent, as captured by the survey data could therefore be regarded as a returnee. The variables involved in the models are related to age, gender, education, city of residence and European region, but also the number of times the respondent was unemployed. These are detailed in the following section.

Results

The first step in calculating the propensity score is to define the treatment and control group and the relevant outcome variable. The population of interest in this study is defined by those respondents who have declared entrepreneurship as their current occupation. Out of the 5499 respondents, 266 were currently entrepreneurs or freelancers (table no. 1).

Table no. 1 Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Total sample					
Entrepreneur	5499	0,048	0,215	0	1
Age	5499	23,814	3,349	18	29
Male	5499	0,467	0,499	0	1
Size of the place currently live in	5499	4,160	1,607	1	9
Live with a partner	5499	0,411	0,492	0	1
Speaks English	5499	0,869	0,338	0	1
Has secondary education	5499	0,571	0,495	0	1
Father's education:	5160	0,399	0,490	0	1
Number of times in unemployment	5499	2,137	1,400	1	5
Eastern European	5499	0,356	0,479	0	1

Source: own computations using MOVE project data

Table 2 shows the results for the logit regression. The propensity score was estimated through `score` command in STATA, which employs a logit regression model in this regard.

Table no. 2 Logit regression results

	Coef.	Std. Err.	z	P>z	[95% Conf. Interval]	
Age	0,0552	0,0102	5,43	0,000	0,0353	0,0751
Male	0,1275	0,0601	2,12	0,034	0,0097	0,2453
Size of the place currently live in	0,0431	0,0191	2,26	0,024	0,0057	0,0804
Live with a partner	0,1076	0,0631	1,71	0,088	-0,0160	0,2312
Speaks English	0,4384	0,0949	4,62	0,000	0,2524	0,6245
Has secondary education	-0,6367	0,0652	-9.76	0,000	-0,7645	-0,5089
Father's education	-0,0933	0,0626	-1.49	0,136	-0,2160	0,0294
Number of times in unemployment	0,0921	0,0214	4,29	0,000	0,0501	0,1341
Eastern European	-0,5471	0,0661	-8,28	0,000	-0,6767	-0,4176

Constant	-212	0,29095	-7,29	0,000	2.690.94	-1.550.4
Number of obs		5160				
LR chi2(9)	=	357.21				
Prob > chi2	=	0.0000				
Log likelihood	=	-3.243,6				
Pseudo R2	=	0.0522				

Source: own computations using MOVE project data

The results are highly significant, but the pseudo R2 is modest (5,22%) and it is obvious that more variables are needed to overcome unobserved influences. This number designates how well the included covariates explain the participation probability and this low number speaks for a rather weak specification, which must be kept in mind for the further interpretation.

Different matching methods were used to ensure that the best identification strategy is used. It is noticeable that the applied matching methods produced very similar results: the ATT connotes the individuals with a previous international mobility experience have a higher propensity to become entrepreneur, as compare to persons without a mobility experience (table no. 3)

Table no. 3 Average treatment on treated (ATT) group

Matching methods	No. treat.	No. contr.	**ATT**	Std. Err.	t
Nearest Neighbour	1952	1581	**0.038**	0.008	4.668
Stratifcation method	1952	3200	**0.036**	0.007	5.124
Radius method	1952	3200	**0.035**	0.007	5.300
Kernel method	1952	3200	**0.036**		

Source: own computations using MOVE project data

Conclusions

The paper aims at analyzing the impacts of being a young mobile European individual on the propensity of being an entrepreneur, after returning in the home country. In the context of the need for a sustainable development and for reducing youth unemployment, our results confirm that mobility experience has a positive impact on entrepreneurship, for the case of European youth. Using a large dataset collected in 2017, the results are statistically validated through a quasi-experimental approach, using propensity score matching and applying various matching procedures. The main conclusion of the paper states that mobile individuals have a propensity of being entrepreneur higher by 3,8 % than their non-mobile counterparts.

Also, being mobile is more likely for men, for people speaking English language and for those with a larger number of unemployment stages. On the other hand, being mobile is less likely for young individuals with secondary educations as compared to those with higher education, and also for Easter Europeans.

These results confirm that one of the beneficial effects of intra-European mobility is increasing the propensity for entrepreneurship that positively impacts the labor market outcomes.

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