

Will They Stay or Will They Go?

Entrepreneurship Education to Prevent Brain Drain in University Regions

Entrepreneurship has long been seen as a driver of regional development (Tödtling & Trippl, 2005) and plays an important role in societies with its economic efficiency, as a job creator and with transfer of innovation (Shane & Venkararaman, 2000). Previous research has highlighted the role of entrepreneurial training and education as a strategic tool for regional development, and further underpinned the importance of academia, government and business to cooperate to enhance the entrepreneurial intention in regions (Galvão, Ferreira & Marques, 2018). Hence, entrepreneurship in Higher Education Institutions (HEI) can contribute to regional growth and economic development. As HEIs prepare students for different careers that are related to the requirements of the labour market and the opportunities it offers, the HEIs can contribute to increase student employability after graduation. However, the high degree of labor mobility in Europe has increased competition for competent labor, resulting in regions that lack economic and industrial diversity experiencing brain drain. Since many European university locations cannot compete with metropolitan areas in the variety of available qualified jobs, they need to find alternative ways of increasing the attractiveness of their location to avoid brain drain. Suppose that universities and regional decision-makers make joint efforts and, in this way, can help to implement place-based priorities in local communities to create opportunities and incentives for students to start their own business. Consequently, the promotion of entrepreneurship can be a solution to increase the attractiveness and problem of regional brain drain. Offering a customized entrepreneurial education and facilitating access to local innovation networks, lowers the risk for student-entrepreneurs and increases a sense of belonging.

Knowledge is a key factor for economic growth and regional development. The demand and competition for educated people is therefore high, not only within but also between different countries. The principle of free movement of labour was formally established within the European Economic Community (EEC) in the late 1950s and has resulted in a high degree of labour mobility in Europe. Primarily, this mobility is something positive, but it also creates problems in the form of regional brain drain. Brain drain occurs when highly educated people leave their university regions with no intention of returning. This often causes many problems, which in the long run also develop into a negative spiral of lack of knowledge in regions that inhibits economic growth as well as a lack of skills in important sectors. Although there may be benefits for people traveling abroad to study or work, create global networks and increase the exchange of knowledge, an unbalanced escape of knowledge without measures can be very harmful to a region's long-term development. Previous research shows that the cause of brain drain is usually derived from a combination of both push and pull factors, i.e. internal factors reflecting local or home dissatisfactions as well as external factors reflecting attraction to opportunities and conditions elsewhere (Kazlauskienė and Rinkevičius, 2006; Šlibar, Oreški & Klačmer Čalopa, 2023). The external attractiveness is difficult to influence, therefore regions (and nations) that aim to reverse their brain drain do need to consider developing policy initiatives that address push factors for brain drain, for example, the lack of job opportunities, or difficulties in integrating into the local community. Promoting entrepreneurship for university students, through education, is a measure that targets these push factors for brain drain. However, previous research highlights the importance of adapting entrepreneurship education based on different resource-related prerequisites and the

involvement of various stakeholders, in addition to teachers and students, a commitment from local firms, policymakers and incubators is necessary as well (Dick-Sagoe et al., 2023).

The purpose of this paper is to increase the knowledge about European students' attitudes to their study region and to explore if promoting entrepreneurial skills could be a way to avoid regional brain drain.

The following RQs are raised:

1. To what extent do European students intend to remain in their university region?
2. What is the main reason why the students choose to stay or leave their university region?
3. What attitude and experience do students have towards entrepreneurship?

Method and data

The study was conducted within the framework of the Erasmus+ project “Enhancing development of entrepreneurial strategies at university locations affected by brain drain” (ENDORSE). ENDORSE addresses universities in locations affected by brain drain and aims to provide a regionally adapted entrepreneurship concept to boost the entrepreneurial activities of students. In this paper we explore students' attitudes to their place of study, concerning future workplace and living. A web-based survey was conducted in 2024 to university students in Austria, Germany, Greece, Latvia, Poland and Sweden. The survey was distributed by the partners in the ENDORSE project in various universities. Different channels, such as email, newsletter, social media and presentations in courses were used to promote the survey. Finally, after several reminders, 571 students responded the questionnaire.

Table 1. Country and University

Country	University	No of responses
Austria	IMC Krems	134
Germany	Hochschule Niederrhein	97
Greece	Athens University	1
	Democritus University of Thrace	2
	International Hellenic University	1
	National Technical University of Athens	2
	Panteion University	16
	The National and Kapodistrian University of Athens	1
	University of Ioannina	77
	University of Patras	6
	University of Peloponnese	12
	University of Thessaly	83
	University of Western Macedonia	62
	Not answered	3
Latvia	Ventspils Augstskola	25
Poland	Academy of Fine Arts, Łódź	1
	University of Łódź	31
Sweden	Mid Sweden University	16
	Høgskolen Lillehammer	1

Although all countries made great efforts to get their students to respond to the survey, there were large differences in the number of responses between the countries. The most responses came from Greece (47%), followed by Austria (23%) and Germany (17%). The fewest responses came from Sweden (3%), Latvia (4%) and Poland (6%). To answer the RQs we have carried out descriptive frequency analysis and ANOVA tests.

Characteristics of the respondents

The majority, 53 percent, of the respondents studied business administration or economics. More than half of the students were in their 1st or 2nd study year. Most common were bachelor's students (79%). There were more women than men who answered the survey, 62 percent compared to 36 percent (3% did not answer the question, or said they were non-binary). In terms of age, 31 percent were between 18-20 years old, 45 percent were between 21 -25 years old and the remaining, 24 percent were 26 years old or older. The majority, 62 percent of the respondents were single, and 33 percent lived in a relation, 5 percent did not want to answer the question.

Results

RQ1. To what extent do the students intend to remain in their university city/region?

27 percent of the respondents said that they intend to remain; 42 percent said that they will leave, and 31 percent did not know yet. No gender differences were identified, however, there were significant differences in terms of age, marital status as well as country affiliation ($p < 0.001$). Students that were 26 years, or older, said in a higher degree that they intend to stay in the region. Age, correlate with marital status and student that lived in a relation were also more likely to stay than those who were living alone.

Table 2. Intention to remain in the university region

		Yes	No	Do not know yet	
In total (n=571)		27%	42%	31%	
Age	18-20	18%	42%	40%	***
	21-25	22%	47%	31%	
	26 years or older	46%	31%	23%	
Gender	Women	27%	43%	30%	
	Men	26%	39%	35%	
	Non-binary/No answer	29%	50%	21%	
Marital status	Single	21%	45%	34%	***
	In relationship	39%	37%	24%	
Country*	Austria	11%	63%	26%	***
	Germany	48%	24%	28%	
	Greece	23%	43%	34%	
	Latvia	32%	16%	52%	
	Poland	47%	22%	31%	
	Sweden	47%	24%	29%	

*Since the survey has few respondents from Latvia, Poland and Sweden, country differences cannot for sure be statistically verified. N.B. The country above refers to the specific university regions included in the survey (table 1).

RQ2. Main reason why the students choose to stay or leave their university region

Regardless of decision to stay or to leave, the reason for doing so is largely the same. The mean test, presented in table 3 shows no significant differences, regardless of whether the students intend to stay or leave. The most important reason is related to future job opportunities. All three categories rank this option as most important. Those who intend to stay also highlight the proximity to family and friends as important, while for those who are unsure, living costs and the possibility of finding affordable housing also play a large role. Those who intend to leave highlight various push-factors that are crucial for the decision such as unattractive corporate landscape and lack of future potential.

Table 3. Main reason for stay or leave the university region

Reason for Stay		Reason for leave		Do not know yet	
1.	Suitable job opportunities 3.43	No suitable job opportunities 3.37		Suitable job opportunities 3.59	
2.	Proximity to family and/or friends 3.42	Unattractive corporate landscape 3.07		Low costs of living, affordable housing etc. 3.31	
3.	Attractive corporate landscape 3.15	The city / region has no future potential 2.87		Family and friends 3.18	

*A four-point Likert-Scale are used were 1 = Unimportant to 4 = very important

RQ3. Attitudes to and experience of entrepreneurship

Since job opportunities rank as the most important reason to stay or leave the study place, the promoting of entrepreneurial skills could be a way to avoid regional brain drain. The results show that about 10 percent of the students have previous experience of running their own businesses and a majority have family or close friends who are entrepreneurs. The students' attitude towards entrepreneurship was positive and they said that it is very likely (8%) or rather possible (33%) that they will start a business after graduation.

The results show significant differences in whether entrepreneurship is a good career choice in the study region between the three groups: those who intend to stay, those who plan to leave and those who are unsure ($p < 0.001$). Of those who plan to stay in the region 47 percent said that entrepreneurship could be a good career choice in the region compared to 27 percent of those who are not planning to stay. However, there seems to be uncertainty in this question, see table 4, and this applies irrespective of the intention to stay or leave the university region.

Table 4. Entrepreneurship as a good career choice in the university region?

Entrepreneurship as career choice	Plans to stay in the study region?		
	Yes	No	Do not know yet
Yes, a good career choice	47%	27%	34%
No, not a good career choice	11%	27%	19%
I'm not sure	42%	46%	47%

One question in the survey was: *What would increase your intentions to start a business?* The students were given a list of 12 different statements to choose from, multiple answers were possible, and they could also highlight their own alternatives. The following five measures ranked highest among the students:

Table 5. Support that would increase intentions to start a business

1.	Good university networking with local firms (e.g., research, co-publication, business support etc.)
2.	Good university courses to acquire entrepreneurial skills
3.	Low rents for corporate space
4.	Good working environment (e.g., beautiful cityscape, good leisure facilities, co-working spaces, open-minded population etc.)
5.	Lack of products and services in the region/market gaps

As shown in table 5, measures from the university, such as facilitating networking with local actors, as well as providing university courses to obtain the skills required to run businesses. are at the top of the list. The results indicate that entrepreneurship elements were not always included in their university curricula, and one student mean that:

“I have not gained enough knowledge about starting a business through my studies”

(Student from Germany)

The majority of the respondents, 63 percent, highlight that a course that include ‘*core business modules, such as business idea development, business plan development, business model design*’ are the most appropriate course in order to increase competences in entrepreneurship.

“Give us lectures where we simply work on our business ideas” (Student from Austria)

Summary

In a summary the results shows that 1) good job opportunities are the most important reason for staying or leaving the study region, 2) that there is lack of knowledge among the students whether entrepreneurship is a good choice in the region or not, 3) that students consider that universities can increase students’ intention to start a business by facilitate networking with important actors and provide suitable courses in entrepreneurship.

Conclusions

University regions strive for the same thing, i.e. to maintain knowledge in the region and to continue to attract new students, which in turn is a prerequisite for economic development. Although the importance of entrepreneurship and promoting it is well known that many universities still lack education and training in the field. Universities around Europe can take action to improve the opportunities for young, well-educated people to remain in the university region. This can be done by improving the students’ entrepreneurial skills as well as the conditions for entrepreneurship in the university region, resulting in more students being self-employment in the region as a future option and possibility.

The findings offer important insights into how to tackle brain drain in European regions suffering from brain drain due to that well-educated young people are leaving the university region after graduation.

References

- Dick-Sagoe, C., Lee, K. Y., Boakye, A. O., Mpuangnan, K. N., Asare-Nuamah, P., & Dick-Sagoe, A. D. (2023). Facilitators of tertiary students' entrepreneurial intentions: Insights for Lesotho's national entrepreneurship policy. *Heliyon*, 9(6).
- Galvão, A., Ferreira, J.J., Marques, C. (2018) Entrepreneurship education and training as facilitators of regional development. *Journal of Small Business and Enterprise development*, 25(1), 17-40.
- Kazlauskienė, A., & Rinkevičius, L. (2006). Lithuanian “brain drain” causes: Push and pull factors. *Engineering economics*, 46(1), 27-37.
- Shane, S. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 2017-226.
- Šlibar, B., Oreški, D., & Klačmer Čalopa, M. (2023). Push and pull factors in brain drain among university students. *Management: Journal of Contemporary Management Issues*, 28(1), 65-80.
- Tödtling, F. & Trippl, M. (2005). One size fits all? *Research Policy*, 24(8), 1203-1219.