

Determinants of student mobility in Finland in light of Eurostudent VIII

Outline for today's presentation

- 1. We will have a look at patterns in HE student mobility in Finland using national educational statistics
 - 1. Student mobility in Finnish HE
 - 2. Student mobility intentions as reported in Eurostudent VII and VIII
 - 3. At what point in studies mobility usually takes place (and how covid-19 hampered mobility)
 - 4. Mobility by field of study (why does it vary that much?)
- 2. Identifying determinants of student mobility intentions using the Finnish national data
 - 1. Student life situation
 - 2. Factors associated with current degree programme
 - 3. Perceived utility of mobility
- 3. Implications for policy makers and further research

The Finnish Eurostudent Sample

- We conducted a stratified sampling of students from our national student sampling frame (rich with register data) by:
 - Field of study and Track of HE (to ensure an N of at least 200 by e_field2*e_hei)
 - Type of degree
 - Nationality (a slight oversampling of international degree students)
- A total of 26,000 students sampled with 6 836 valid responses (26,3 %)
- Student contact information (e-mail and phone) were delivered by Universities and the sample was also enriched with further contact and other information from Statistics Finland census database (postal addresses, secondary e-mail, completed education)



Student mobility: Differences between tracks of HE

- Finland follows a dual model of HE with more vocationally oriented Universities of Applied Sciences differentiated from academically oriented Universities
- The Finnish Ministry of Education hosts an open access educational statistical database that provides an up-to-date coverage international student mobility (by field, IHE etc.)
- Universities of Applied Sciences
 - In 2019 around 5,400 outgoing mobility periods (3,8 percent of total number students)
 - Around a quarter (24,6 %) of all outgoing mobility are international internships
- Universities
 - In 2019 around 4,500 outgoing mobility periods (3,2 percent of total number students)
 - Around 13,3 % of all outgoing mobility are international internships

Background Outgoing student mobility has been on the decline



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Students (in their freshman & 2nd year) report less mobility intentions



Made preparations Intending to go (but no preparations)

Figure. Percentage of students (1st and 2nd year) reporting mobility intentions in Eurostudent VII-VIII, Finland.

- Useful to compare mobility intentions of 1st and 2nd year students between Eurostudent VII and VIII
- UAS students do not seem to perceive international internships as mobility
- We observe a significant drop in the number of students reporting intentions for international mobility
- But the observed difference is not nearly as drastic as what we observed in the mobility statistics?



Figure. Outgoing student mobility by field of study and HE Track 2018-22. Absolute and proportional (mobility per 10 thousand students.





Mobility by year of study

- We can compare the Eurostudent mobility estimates to an external statistical data source
- Lets see what past student mobility (University students) looks like to see just whose mobility got hindered by the covid-pandemic?





(This is based on register data)







2018



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2019



■ 1st year ■ 2nd year ■ 3rd year ■ 4th year ■ 5th year ■ 6th year ■ 7th year

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2020

2021

We can use the Eurostudent data to estimate mobility of students enrolled between 2019-21.



We can use Eurostudent 8 data to estimate future mobility (using population weights) by adding the number of students reporting to have made preparations for mobility.

In the future?





+ perhaps 50 % those reporting otherwise to have such intentions (as we know, not all of them will materialize)

In the future?





Prior research suggest a number of determinants that can explain student mobility in HE

- Students with educated parents and prior international exposure are more likely to study abroad (Rodrigues 2012)
- Field of study (Jokila & Kallo 2017) [Eurostudent VI]
 - Stem fields less likely than humanities (Daly & Barker 2005)
- Lack of educational opportunities in the home country (van Bouwel & Veugelers 2013)
- Student life situation and macroeconomics (van Mol & Timmerman 2013)
- Social skills and networks (Beech 2014)

Lets see, if we can find such evidence in the Finnish Eurostudent VIII data!

Empirical analysis: Eurostudent VIII Finland

- Lets try fitting a logistic regression on student intentions for going abroad. Students with either intentions or who have made preparations is defined as the target dependent variable
- We limit our focus on students in the beginning of their degree programmes (so that they still have time for mobility should they wish)
- Also students who have already been abroad are excluded
- We can find potential measures (or proxies) for many of the suggested determinants
 - Student life circumstances unrelated to motivation (family, financial resources, jobs)
 - Parental background
 - Field of study related factors (perceived quality of current degree programme, international labour market value, perceived utility of studying abroad)
 - Social networks (knowing other students)
- All regressions are run with SPSS Complex Samples module (due to stratified sampling).

Why I am avoiding the use of v5_11 perceived obstacles as predictors

- The Eurostudent questionnaire includes a substantial sub-questionnaire about perceived obstacles to mobility. So why not use it in the regression?
- In a cross-sectional dataset the problem of inferring causality is obvious, as students are first asked about their mobility intentions and then to give their views about specific obstacles.





Table. Logistic regression model predicting mobility intentions (1st & 2nd year students) by life situation

	EXP	
(Intercept)	0.019	
		An odds ratio of >1 indicates that this group of students is more
Age <21	3.590 **	likely to contemplate mobility and <1 to a lesser degree.
21-24	1.905 **	
25-29	1.210	Initial model suggests that mobility intentions are associated with
Over 30 (ref)	-	age (with younger students showing more intentions).
Student with impairments	0.860	Students with some financial difficulties (as opposed to no or
Financial difficulties		great difficulties) are more motivated (though puzzling).
Great difficulties	1.233	
Somewhat	1.420 *	Family and partnership status are also strong predictors, though
No difficulties (ref)	1.000	working during semesters does not show any significant effect.
Parental education non-tertiary	0.678 **	
Not working	1.496	No difference observed between men and women.
Working 1-20 h	1.725	
Working >20 h (ref)		
No children	1.904 *	
Not living with parents	1.593 *	
Not living with partner	2.034 **	
Internationan students	1.541 *	
Nagelkerke R ²	0.152	20

Next stage: Include field of study specific independents in the model

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Nageikerke K ²	0.152		
Track of HE	0.152		
Field of study			
Perceived (lack of) benefit to studies			
Job in international labour market			
I know a lot of fellow students			
Would recommend current studies			
Expected duration of studies			
Current degree programme			
International students Explains			
Working during semester	Explains		
Not living with a partner	Explains		
Not living with parents	Explains		
Parental education	Explains		
Having no children	Explains		
Fincial difficulties	Explains		
Impairments	Not observed		
Age of student	Explains		
	Life situation		

Depicting the results of the logistic regression in a more approachable manner I only report the observed association by factor.

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Next stage: Include field of study specific independents in the model

	Life situation
Age of student	Explains
Impairments	Not observed
Fincial difficulties	Explains
Having no children	Explains
Parental education	Explains
Not living with parents	Explains
Not living with a partner	Explains
Working during semester	Explains
International students	Explains
Current degree programme	
Expected duration of studies	
Would recommend current studies	
I know a lot of fellow students	
Job in international labour market	
Perceived (lack of) benefit to studies	
Field of study	

+ Degree
programme
characteristics
Explains
Not observed
Explains
Explains
Explains
Not observed
Explains
Explains
Tentatively

Not observed Not observed Not observed Explains

0.169

0.152

Including subjective characteristics of current degree programme does not notably result in any changes in observed associations.

With the exception of student perceiving their current degree as giving competences in the international labour market (v3_5_2)

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Track of HE Nagelkerke R²

Next stage: Include field of study specific independents in the model

+ Degree programme

		1	
	Life situation	characteristic	cs + Motivation
Age of student	Explains	Explains	Explains
Impairments	Not observed	Not observe	d Not observed
Fincial difficulties	Explains	Explains	Explains
Having no children	Explains	Explains	Explains
Parental education	Explains	Explains	Explains
Not living with parents	Explains	Not observe	d Not observed
Not living with a partner	Explains	Explains	Explains
Working during semester	Explains	Explains	Explains
International students	Explains	Tentatively	Tentatively
Current degree programme			
Expected duration of studies		Not observe	d Not observed
Would recommend current studies		Not observe	d Not observed
I know a lot of fellow students		Not observe	d Not observed
Job in international labour market		Explains	Explains
Perceived (lack of) benefit to studies			Explains strongly
Field of study			
Track of HE			
Nagelkerke R ²		0.152	0.169 0.209

We then include the perceived benefit (or lack thereof) of mobility to one's studies and find a very significant effect.

(Though in terms of causal inference this is problematic, as we are dealing with a cross-sectional data)

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Next stage: Include field of study specific independents in the model

	Life situation	characteristics
Age of student	Explains	Explains
Impairments	Not observed	Not observed
Fincial difficulties	Explains	Explains
Having no children	Explains	Explains
Parental education	Explains	Explains
Not living with parents	Explains	Not observed
Not living with a partner	Explains	Explains
Working during semester	Explains	Explains
International students	Explains	Tentatively
Current degree programme		
Expected duration of studies		Not observed
Would recommend current studies		Not observed
I know a lot of fellow students		Not observed
Job in international labour market		Explains
Perceived (lack of) benefit to studies		
Field of study		
Track of HE		
$N_{-} = 11_{-} = 12_{-}$	0.1	50 (

+ Degree

programme

+ Field of study Explains

+ Motivation

Not observed

Not observed

Explains

Explains

Explains

Explains

Explains

Explains

Tentatively

Not observed

Not observed

Not observed

Explains

Not observed **Explains** Explains Not observed Not observed Explains Not observed Tentatively

Not observed **Explains** Not observed **Explains**

Including Field of Study and Track of HE in the model seems to affect the observed association between parental SES, as students in Finland are strongly stratified between the two tracks:

University students report more mobility intentions while parental education loses significance.

Interestingly Field of study does not appear to have any independent explanatory power which is very interesting!

Perceived (lack of) benefit to studies		Expla	ins strongly	Explains strongly
Field of study				Not observed
Track of HE				Explains strongly
Nagelkerke R ²	0.152	0.169	0.209	0.239

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Remember the observed differences in outgoing student mobility by field of study?



Figure. Perceived low benefit for studies perceived as an obstacle by field of study.

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Plotting register based mobility data together with Eurostudent Estimates



Figure. Average mobility by University Field of Study and proportion of students perceiving benefits of mobility low

This begs the question: To which factors are the perceived benefits associated with?

- Perceived international labour market value of current degree?
 - Benefits conditional on relevant work experience from one's own field of study?
- Year of study (students on the verge of graduation might perceive the value differently from freshmen)
- International students may percieve the benefits differently?
- Language proficiency (we included the question, though it was omitted from this round)
- Students from higher SES background might perceive the benefits greater (also would explain why the observed association disappered)

OLS regression: Characteristics of study programme as determinants of perceived utility

Table. OLS (GLM CS) Estimates on determinants of perceived benefit to studies

Parameter	Characteristics	+ Field and Track	Field of study an	ld Track only
(Intercept)	3.630	3.719		
Parental education non-tertiary	0.030	0.020		
International students	0.178 +	0.179		
Relevant work experience 1-5	-0.020	-0.020		
International labour market 1-5	0.182 **	0.190 **		
Language proficiency 1-5	0.078 *	0.061		
Expected duration of studies	0.014	0.034		
Year of study	-0.029 *	-0.032		
Field of study		omitted	omitted **	
Track of HE		0.059 **	0.037 *	<- Results of this model are basically
Interaction Field * Track		omitted	omitted **	the same as in the figure before.
R ²	0.027	0.035	0.018	

- Year of study associated with smaller perceived benefits
- Students already aspiring for the international labour market (v3_5_2) perceive the benefits much greater than others (or less of an obstacle)

Key findings 1: Field of study

- Student mobility varies across fields of study especially among University students
- Field of study aggregated perception of utility is strongly associated with student mobility (both in Eurostudent and with external data sources)
- Though student life situation is a key determinant of mobility intentions, differences between fields of study persist even when these differences in student sociodemographics are accounted for

-> Effective policy measures or interventions should focus on emphasizing the benefits of mobility in those fields of study currently the most under-represented in mobility figures (ICT, Engineering, Education and Health)

Key findings 2: Financial difficulties

- Experiencing financial difficulties could not be shown to have a linear relationship with mobility intentions
 - The "sweet spot" was found in the middle category and for students working only from time to time implying that flexibility is more important than any treshold of income
 - Also parental wealth / educational background were not found significant
 - Empirical evidence would therefore suggest that financial disparities do not seem to explain much about why some students opt to go abroad in Finland.

Policy implication: The current financial situation of students does not seem to be a major obstacle to mobility (though this may not be the case in other countries)

Key findings 3: Student life situations and policy implications

- When field of study related factors are held constant, we nonetheless observe major differences between students in different life situations
 - Students in their early 20s are more motivated to study abroad
 - Also students living with partner/children are less likely to consider mobility
- The empirical models presented treated life circumnstances as independent from field of study, though in real life they are not!
 - Student sociodemographics vary greatly between fields of study and by track of education, so any field of study specific intervention must take this into account

=> The greatest potential might be found among students in stem fields where both perceived utility is low and constraining life situations are less common

Wider implications for research

- Replicating the empirical analysis (regression model trying to explain differences in mobility intentions) with different national datasets might yield an interesting comparison on the relative importance of key predictors in mobility
 - For example: Comparisons between the Nordic countries would be policy relevant in Finland because of all the similarities (as well as some key differences) in our educational systems
 - What's the relative importance of financial obstacles in countries where the average student is much less well-off than in Finland?
- This is why comparing regression parameters (standardized in some way) can be much more fruitful than comparing cross-tabulations and means between countries
- Such an analysis requires much attention to comparability as well as statistical inference, and should be performed centrally by someone with requisite skills in statistical modelling