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Motivation for full degree mobility: analysing sociodemographic factors, mobility capital and field of study

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ABSTRACT

In this paper we have investigated students' motivations for undertaking a full degree abroad. It examines how motivations can be categorised, and if this varies according to gender, social origin, field of study and mobility capital (previous experience of living abroad or parents who have done so). The analyses are based on a survey of Norwegian students abroad, containing information from more than 4100 respondents. The three underlying dimensions of motivations identified are "Exploration", "Pragmatism" and "Differentiation", indicating that the traditional division between push and pull motivation is too simplistic. "Exploration", the most strongly accentuated dimension, is particularly prominent among female students. "Pragmatism" is highly important for students enrolled in long, professional programmes with strict admission restrictions in Norway, such as medicine. "Differentiation" is more emphasised by students with high mobility capital. In general, motivations are more likely to vary according to field of study than sociodemographic factors, but mobility capital also exerts a substantial influence.

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International student mobility; full degree mobility; higher education; motivation; mobility capital

Introduction

International student mobility (ISM) has increased substantially this century. The number of students undertaking a full degree abroad rose from 2.1 million in 2000 to more than five million in 2017 (OECD, 2019a). Most international students who undertake a full degree abroad go to highly developed countries and come from less developed countries (Börjesson, 2017; OECD, 2017), with the USA, UK and Australia being the most popular destinations. ISM between developed countries often takes place through short-term exchanges, e.g. through the EU ERASMUS+ programme. In Europe, only about three per cent of students take a full degree abroad (OECD, 2019a), but some European countries have a far higher proportion of full degree students abroad. Norway is among these, with around six per cent of its student population enrolled abroad (OECD, 2019a).

Motivations for studying abroad by European exchange students have been addressed in a range of studies (e.g. Bryntesson et al., 2018; European Commission, 2014; Krzaklewska, 2008; Lesjak et al., 2015; Maiworm & Teichler, 2002; Murphy-Lejeune,

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2002), but full degree students have less often been the target of quantitative research. Qualitative studies indicate that those who take a full degree abroad have different rationales for studying abroad than exchange students have (Brooks & Waters, 2011), and it is of interest to generate more knowledge about what motivates ISM in this group. However, there are significant barriers to studying international full degree students. There are few accurate registers which include all full-degree international students, and without good population-level data, it is hard to devise representative samples of these types of student. In Norway, a register containing information about full degree students abroad is available, hence there is a unique opportunity to focus on this group. Norway is an interesting case, as outgoing mobility has continued in an era in which domestic higher education provision generally is well developed, and higher education in Norway is mostly public and tuition fee-free. A relevant question to raise is thus– why do students choose to take a full degree abroad, when equivalent options are available domestically?

While some studies have investigated motivation in relation to type of study programme and gender (e.g. King & Sondhi, 2016), few quantitative studies have looked at whether students' motivations for studying abroad are related to social origin. To the best of our knowledge, the relationship between mobility capital (previous exposure to international mobility) and motivations for studying abroad have not been addressed in quantitative studies. Hence, research on how student motivation relates to sociodemographic factors and different forms of capital based on quantitative data is needed. By providing this, the paper contributes to the existing literature. A strength of the study is the size and representativeness of the sample and the sheer number of observations. Our study includes responses from more than 4100 Norwegians studying in 64 countries. The research questions are:

- What are students' motivations for undertaking a full degree abroad, and how can these motivations be categorised?
- Are there differences in motivations by gender, parents' educational level, or mobility capital?
- To what extent do motivations for studying abroad vary by field of study?

Previous research and theoretical approaches

Motivations for studying abroad

Students' motivations for ISM are often divided into two main categories of "push" vs "pull" motives (Altbach, 1998; Maringe & Carter, 2007; Mazzarol & Soutar, 2002; Nghia, 2019; Wu et al., 2019). Push motives mainly refer to (unfavourable) conditions in the home country, such as low quality of education and absence of study places, career options or political/cultural freedom. Pull motives refer to conditions in the host country, such as high-quality education, the opportunity to improve language skills and prospects for permanent migration. However, decision processes for studying abroad have been shown to be complex (Brooks & Waters, 2020; Carlson, 2013) and the need to expand beyond the push-pull model has been observed (Beech, 2014). There are many ways to categorise the motivations of students. Perceptions of enhanced career prospects, cultural experiences

and personal development are among the reasons why students choose to study abroad, and this will be outlined in the literature review below.

Brooks and Waters (2009, 2010, 2011) have conducted qualitative interviews with British students abroad, full degree as well as exchange students. They found that for some full degree students, education at elite institutions abroad represents a “second chance” for students not admitted to their British university of preference. Rather than choosing an institution of less prestige in the UK, they opt for an elite institution abroad. For others, studying abroad represents an opportunity for travelling and experiences. Brooks and Waters (2009) argue that a minority of privileged students are making their decision about higher education in a global rather than a regional context, hence indicating that students of high social origin may have different motivations for studying abroad than others. They found that their informants appeared less career-oriented than expected, and some students seem to use study abroad as a way of postponing their career decisions (Brooks & Waters, 2010). What appears to be a “lack of strategies” is interpreted as a privilege enjoyed by the upper social classes. Building on the theories of Bourdieu (1984), they claim that young people with a privileged background have the capacity to not pay too much attention to economic concerns.

Based on surveys and interviews with British full degree students abroad, Findlay et al. (2011) found that a desire to attend a world-class university, opportunity for a unique adventure and a step towards an international career were the most frequently mentioned motivations for studying abroad. They also found differences between students who had been to independent schools (a sign of social selectivity) and state schools regarding motivations; the former group were more likely to report “distinguishing” type of motivation like world class university and international career. Further, they found that a substantial proportion of students mentioned limited places in the UK for the course in question and student fees as reasons for going abroad, which may be seen as a “push” motive.

A previous study of Norwegian degree students identified three underlying rationales for undertaking higher education abroad: an interest in acquiring new experiences and impulses, a drive for a different kind of education, and an urge to enter a certain profession (Wiers-Jenssen, 2003). However, in this study the relationship between motivation and individual background variables was not considered.

Studies conducted among full degree students from Asian countries and developing countries, studying in Western countries, tend to show that push factors are often prevalent, in addition to pull factors. Some examples: Maringe and Carter (2007) found that political instability and lack of study places are among the reasons why Africans chose to study in the UK. Li and Bray (2007) found that that poor quality in domestic institutions was considered to be an important reason for students from mainland China to study in Hong Kong and Macau, and Nghia (2019) found that poor educational quality and unavailability of a desired programme are important reasons for Vietnamese students to go abroad to study.

Research on exchange students mainly identifies “pull” motives. Students go abroad to achieve something adding to their experiences or career opportunities. Krzaklewska's (2008) study on ERASMUS students highlights the division between “career dimensions” (academic motivation/career motivation) and “experimental dimensions” (cultural and personal motivation). A study of Swedish ERASMUS students divided student motivations

into three types of orientation by using multiple correspondence analysis: academic, labour market orientation and cultural orientation (Bryntesson et al., 2018). A study from Australia found that the main categories of motivation for studying abroad are personal experiences, academic reasons and prospects for future career (Dall'Alba & Sidhu, 2013).

Student mobility between countries with similar economic conditions and educational quality is sometimes labelled horizontal mobility, in contrast to vertical mobility, which describes students going from a country with poorer economic and educational conditions (Ritzva & Teichler, 2007). Mobility from Norway falls into the horizontal mobility category, even though some students go abroad in search of higher quality. While vertical mobility is often related to push factors, such as low-quality education or unfavourable social conditions in the home country, pull factors are likely to be more important in horizontal mobility.

It is important to be aware that students' motives and decisions are influenced by their environment. Van Mol and Timmermann (2014) underscore that students' decisions to study abroad cannot be fully understood unless the context is considered (e.g. macro-economic conditions and students' social environment and biography). Brooks and Waters (2020) are also among those who highlight that the decision to study abroad is strongly influenced by the surrounding social context, such as social class.

The relationship between motivation and other factors

An evaluation of the ERASMUS programme found significant variation in motivations related to field of study. Business students emphasise career prospects, while students in education are more concerned with cultural learning (Maiworm & Teichler, 2002). A previous study from Norway disclosed substantial variation according to field of study, e.g. medical students are motivated by the prospects of entering a profession, while other groups were more driven by opportunities for self-development (Wiers-Jenssen, 2003).

King and Sondhi (2016) applied a gender perspective to ISM studies, comparing the motivation of mobile students from the UK and India. They found relatively small differences according to gender, with two exceptions; British female students rate decision factors related to "push" motives (limited courses in the UK and rising fees in the UK) higher than male students, and Indian male students put more emphasis on migration compared to female students. A study from France found that the motivation for ISM is similar across gender, with a few exceptions: women are more interested in living somewhere other than France and discovering new cultures, while men put more emphasis on career-oriented motives (Campus France, 2016). A similar pattern can be seen in a study of mobile students from New Zealand: men are more motivated by career and economic considerations, while women are more motivated by cultural and travel opportunities (Thorn, 2009).

Murphy-Lejeune (2002) labels mobile students as a *migratory elite*, a concept used earlier by Musgrove (1963). Studies from many countries have shown that internationally mobile students tend to be of higher social origin than their peers at home (see e.g. Blanck & Börjesson, 2008; Brooks & Waters, 2011; Gerhards & Hans, 2013; Netz & Finger, 2016; Di Pietro & Page, 2008). As mobile students often come from highly educated backgrounds,

this also implies that they hold more cultural, economic and social capital than domestic students. Bourdieu (1984) has shown that cultural capital is the form of capital that is most salient for educational success. Children with highly educated parents tend to have acquired more cultural capital than their peers from less educated families, and this gives them an edge in the educational system (Bourdieu & Passeron, 1990). It has been argued that in an era when increasing proportions of cohorts undertake higher education, horizontal differentiation is becoming more important (Teichler, 2017). Thus, choice of field of study, prestige of higher education institution and geographic location of higher education (abroad) are strategies for positioning.

Further, other forms of capital might be at play with regards to ISM, such as familiarity with foreign cultures and higher education in other countries. Aiming to expand Bourdieu's theories to an international setting, Gerhards et al. (2017) applied the term *Transnational human capital* to describe "knowledge, skills, and qualifications that enable a person to act beyond the nation-state in various social fields" (Gerhards et al., 2017, p. 9). This includes competencies such as foreign language skills, cross-cultural competence, and cosmopolitan attitudes, which are more prevalent within people from higher social strata. Transnational human capital is thus assumed to increase the likelihood of studying abroad.

Murphy-Lejeune (2002) introduced the term "mobility capital" as a distinct feature of mobile students. This refers to accumulated experiences with moving and adapting to a foreign setting, either for the student or through the student's family, enabling individuals to enhance their skills. Mobility capital is less directly linked to the Bourdieuan ways of understanding capital and may be seen as a narrower concept than transnational human capital. However, it is more applicable for use in quantitative analyses. In this article, we have used "mobility capital" in line with Murphy-Lejeune's understanding and have thus included an operationalised variable measuring this in our analyses.

Murphy-Lejeune (2002) described studying abroad as something "running in the family" and finds that one mobility experience leads to another. Brooks and Waters (2011) observed a similar trend: mobile students tend to have travelled more in the past. Studies from the Nordic countries confirm that it is far more common for mobile students to have had previous sojourns abroad themselves, or parents who have been internationally mobile (Wiers-Jenssen, 2013). In a survey-based study of determinants of mobility in Europe, Van Mol and Timmermann (2014) found that students with parents who had lived abroad were significantly more interested in studying abroad than others. That one international experience tends to lead to another is also seen in the transition to the labour market; several studies have shown that those who study abroad are more likely to find work abroad (see e.g. European Commission, 2014; Wiers-Jenssen, 2008).

The studies reviewed above illustrate that motivations for ISM may be categorised in several ways. Research targeting exchange students tends to identify variations of the "pull" type of motivation, while studies on full degree students find the "push" type of motivation in addition, more so for students from developing countries than from Western countries. Motivations for studying abroad vary with subject field, and restricted admission to specific programmes brings forth push motivations among certain groups of full degree students. Female students tend to be slightly more interested in the cultural aspects of studying abroad. Students of high social origin are more prone to study abroad in general, and mobile students are also shown to constitute a select group according to

mobility capital. However, there is limited knowledge on the extent to which background factors and selectivity relate to motivation.

In this paper, we have explored how motivations for studying abroad vary according to sociodemographic factors, mobility capital and subject field. We looked for underlying dimensions, as students' motivations are often overlapping and multifaceted. Based on our review of previous research, we have formulated four hypotheses:

- (1) Female students are more likely than males to study abroad for reasons linked to the added value of studying abroad, such as language and culture.
- (2) Students from highly educated families are more prone to go abroad to differentiate themselves, by choosing a unique programme or a programme of perceived high quality.
- (3) Students with mobility capital are more motivated by prospects of an international career.
- (4) Students in fields of study that are difficult to gain admission domestically are less motivated by the added value of studying abroad.

ISM from Norway

Norway has had a long tradition of sending students abroad. Lack of domestic capacity used to be a challenge in the decades following World War II, while today the domestic supply is good, though there is a lack of balance between demand and supply in certain fields. In the last few decades the proportion of the total student body undertaking a full degree abroad has fluctuated around six to seven per cent, which is twice as high as in EU countries and three times as high as in OECD countries (OECD, 2019a).

The main structural reason high numbers of students undertake a full degree abroad is Norway's generous public support scheme, implying that ISM is economically achievable for wide groups of students. There is a strong focus on internationalisation in higher education policy, including facilitating outbound and inbound ISM (Ministry of Education and Research, 2009, 2020; Wiers-Jenssen & Sandersen, 2017).

About one in three students undertaking a full degree abroad are enrolled in prestigious study programmes in which the domestic competition for access is fierce, such as medicine, psychology and creative arts (Research Council of Norway, 2019). There are also large numbers of business students abroad (20% of full degree students), but few enrol in short professional programmes such as teaching, nursing and social work. This pattern of programme choice partly explains why students of higher social origins are overrepresented among mobile students in total,¹ as the difference in social recruitment between mobile and non-mobile students within fields of study is relatively small (Hovdhaugen & Wiers-Jenssen, 2021).

The most popular destinations are English speaking or Scandinavian countries (the UK and Denmark in particular), and countries providing medical programmes taught in English, like Poland and Hungary (Research Council of Norway, 2019). Few Norwegians study in non-Western countries. The vast majority return to Norway after graduation, and domestic labour market prospects are similar for students with and without mobility experience (Wiers-Jenssen & Try, 2005). Unemployment rates in Norway are lower than

the OECD average, and are particularly low among the highly educated (OECD, 2019b). This makes the competition for graduate jobs less fierce than in many other countries.

Data & methods

The analyses are based on data from a survey of Norwegian full degree students abroad. All Norwegian students registered as full degree students abroad by October 2016 in the Norwegian State Educational Loan Fund (NSELF) client database were included in the population (14,160 students) to whom the survey was sent. This database represents a unique opportunity to identify mobile students, as close to 100% of Norwegian bachelor's and master's degree students enrolled abroad have student loans.²

The data collection period lasted six weeks from mid-October 2016. Students were approached via email, and 5464 students opened the questionnaire, rendering a gross response rate of 39%. In the analyses in this article our sample is limited to students who provided a valid answer to all the variables used in the analyses: 4126 students.

Information on subject field, host country, type of degree, number of years abroad and gender were retrieved from the NSELF database and added to the survey data. The representativeness of the respondents versus the population was investigated by comparing background information. There were slightly more women among respondents compared to the population (67.3 vs 63.3%). Regarding field of study, level of programme (bachelor's/master's) and host country, there was no difference in distribution between the respondents and the population. As differences between the population and the respondents are quite small, weights were not applied.

Variables

The dependent variable of the analyses is a 20-item questionnaire battery, *Reasons for studying abroad*. The origins of this battery of questions is qualitative interviews with mobile students, and a similar version had been used in a previous study (Wiers-Jensen, 2003). The items are rated from vital importance (4) to no importance (1). Hence, this is not a Likert scale but rather a scale measuring the importance of a particular item. The scale is used in descriptive analyses and analyses of average scores.

Four independent variables were included in the analyses: gender, parents' level of education, mobility capital and field of study. In the regression analysis we also controlled for how long students have been studying abroad (distinguishing between those who had studied up to two years abroad, 53%, or more than two years). Definitions of the independent variables are given below. Univariate distributions of these variables are shown in Appendix A (Table A1).

Parents' level of education comprises three categories: 1) compulsory schooling or upper secondary education, 2) up to four years' higher education (a bachelor's degree or equivalent) and 3) more than four years' higher education (master's degree or a long professional degree). The variable is defined by the parent with the highest level of education.

Mobility capital distinguishes between students who have lived abroad continuously for more than three months prior to their current sojourn abroad or/and have parents who have done so, and students who have not. Hence, the indicator used is

Table 1. Types of study programmes, clustered.

Category	Types of programmes	No. cases
Medical degree, long	Medicine, veterinary, odontology	916
Medical degree, short	Nursing, physiotherapy, short health related degrees	220
Psychology	Psychology	283
Business	Business studies, leadership, tourism	831
Science/technology	Science, engineering, ICT	511
Creative arts/architecture	Performing arts, architecture	389
Humanities/education	Humanities, teacher training/education	314
Media/soc. science	Journalism, media, social sciences	662

a combination of two variables, and the variable used in analyses distinguishes between those who have some kind of mobility capital and those who have none.

Study programme is clustered into eight groups, as presented in Table 1. Information on gender (0 = female, 1 = male), time abroad (0 = up to 2 years, 1 = more than 2 years) and field of study comes from the NSELF database and was provided for the population.

Methods

We used three methods: factor analysis or correlations between items to explore latent variables influencing motivation for studying abroad, t-tests to investigate statistical significance between group means on summative indexes based on the factor analysis, and linear regression analysis on the factors extracted from the factor analysis, to investigate the influence of several background variables at the same time.

Exploratory factor analysis is a method to uncover the underlying structure in a large set of observed variables, to uncover a smaller number of latent variables, which contributes to making the data more easily comprehensible (Fabrigar et al., 1999; Kim & Mueller, 1978). We have chosen to conduct this type of analysis instead of a confirmatory factor analysis (CFA), as very little earlier research could have guided a CFA. We conducted a principal axis factor analysis, which focuses on the common variance among items and thus the latent factors (Henson & Roberts, 2006). The solution was rotated using Varimax rotation, a form of orthogonal rotation, making the factors uncorrelated to each other.³ When running a factor analysis, the Kaiser-Meyer-Olkin (KMO) test of sampling accuracy measures if the data are suited to this type of analysis, by measuring the proportion of variance among variables which may be common variance. In the present analysis the KMO test indicates that the data are highly suited for factor analysis (.869), as this level is considered “meritorious” (Dziuban & Shirkey, 1974). To determine the appropriate number of factors we followed the advice of Ford et al. (1986) and used a combination of criteria: retaining factors with eigenvalues greater than 1, the number of factors indicated by the scree plot, the total explained variance, and interpretability of factors.⁴ The factors found were saved as variables using Bartlett factor scores, which creates unbiased estimates of the factor scores and has a mean of 0 (DiStefano et al., 2009).

The additive indexes used for bivariate analyses on background variables and field of study are also based on the results of the factor analyses, using the items which score higher than 0.3 as combined to mirror the factors found in the factor analysis.

We used separate linear regression models to investigate how underlying dimensions of motivation, generated by the factor analysis, are influenced by sociodemographic variables and field of study. For further information on creation and use of factor scores in regression analysis, see DiStefano et al. (2009).

Results

Figure 1 shows how students rate the relative importance of the motivations for studying abroad. Most highly ranked are *Interesting to study in a foreign environment* and *Adventurousness*, followed by *Desire to experience a different culture*, *Improve prospects for an international career* and *Wanted a break from familiar surroundings*. These are typically pull-motives, mostly related to personal experiences. More instrumental reasons for studying abroad, such as *Good funding opportunities* are also of considerable importance to most students. *Higher quality of higher education abroad* is important to just over half of the students but is not among the top motivations for studying abroad.

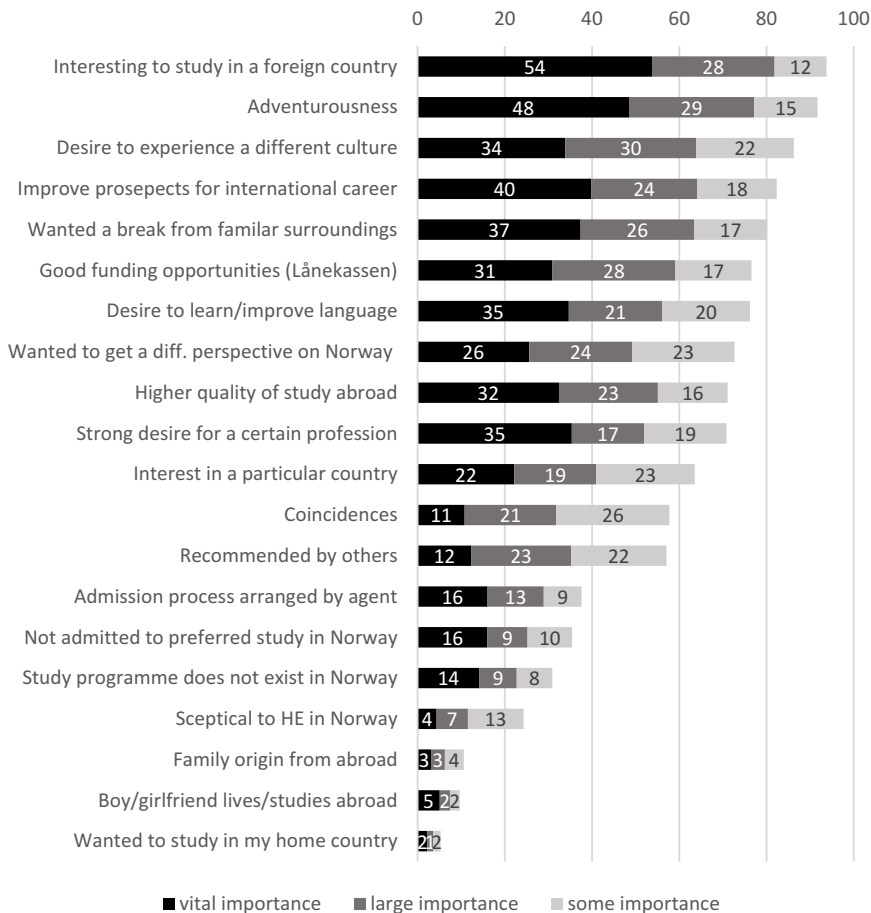


Figure 1. Students' motives for studying abroad. Share stating that the reason was of vital, large or some importance.

Hence, from Figure 1 we learn that there is variability in the importance of different motivations, and that pull motives tend to be accentuated. To reduce complexity, we have conducted an exploratory factor analysis, using principal axis factoring. Four items were initially excluded from the analysis, due to low correlations and few students considering this as important (cf. Figure 1, bottom four). Additionally, the item *Admission process arranged by agent* was also excluded from the analysis since it did not score sufficiently (above 0.3) on any of the factors (Field, 2013). The final exploratory factor analysis was run on 15 items, generating a three-factor solution accounting for 53.7% of the total variance, which is an acceptable level. The analysis is displayed in Table 2.

The first of the three factors consist mainly of pull motives not related to the education itself, but to the added value of studying abroad, and we have labelled this factor **Exploration**. The second factor scores highly on three items: *Higher quality of study abroad*, *Improve prospects for international career* and *Study programme does not exist in Norway*. Common for these items is that the drive for going abroad is linked to wanting something other than what the Norwegian higher education system can offer, and we have labelled this factor **Differentiation**. The third factor consists of push motives such as *Strong desire for a certain profession* and *Not admitted to preferred study in Norway*, as well as more instrumental reasons such as *Coincidences* and *Good funding opportunities*. We have labelled this factor **Pragmatism**, as these students have chosen to study abroad not primarily because they were interested in the added value, or to stand out, but because education abroad was an opportunity to pursue their study programme of preference. Two items in the factor analysis load on more than one factor, but as this is consistent with the logical interpretation of the factors, they were kept in the analysis. *Improve prospects for international career* has a strong loading on the Differentiation factor, but also loads on Exploration, as both display a positive pull-motivation for studying abroad. However, the double loading might indicate that this item means different things to different respondents. *Not admitted to preferred study programme in Norway* also loads on two factors, Pragmatism and Differentiation. The interpretation of the positive loading on Pragmatism, indicates that this is a strong push-motivation for students who feel they have to study

Table 2. Principal axis factor analysis on reasons for studying abroad, using varimax rotation.

	Exploration	Differentiation	Pragmatism
Desire to experience a different culture	0.838	0.051	0.086
Interesting to study in a foreign country	0.775	0.248	0.079
Adventurousness	0.775	0.137	0.087
Desire to learn/improve language	0.706	0.124	0.010
Wanted a break from familiar surroundings	0.660	0.056	0.079
Wanted to get a diff. perspective on Norway	0.658	0.062	0.151
Interest in a specific country	0.493	0.159	-0.131
Good funding opportunities	0.301	0.060	0.293
Higher quality of study abroad	0.216	0.759	0.042
Improve prospects for international career	0.501	0.551	-0.047
Study programme does not exist in Norway	0.030	0.448	-0.028
Not admitted to preferred study in Norway	-0.262	-0.310	0.671
Strong desire for a certain profession	-0.041	0.139	0.553
Recommended by others	0.115	0.044	<u>0.333</u>
Coincidences	0.068	-0.090	<u>0.308</u>
Initial Eigenvalues	4.9	1.8	1.4
Per cent variance explained	32.4	12.1	9.2

abroad to get into a certain profession. The negative loading on the other hand points to students being motivated by Differentiation knowing that they could have been admitted domestically, and the reason is thus not relevant.

To further investigate variations in types of motivation we used indexes based on the factor analysis to explore the relationship between motivation and other variables, presented in Figures 2 and 3. Additionally, mean values on all individual items by gender, mobility capital, parental education and field of study are available in Appendix A, Tables A2 and A3. Figure 2 shows that differences according to gender and parental education are quite limited. Men are significantly less likely than women to score highly on Exploration, while there are no significant differences according to parents' education.

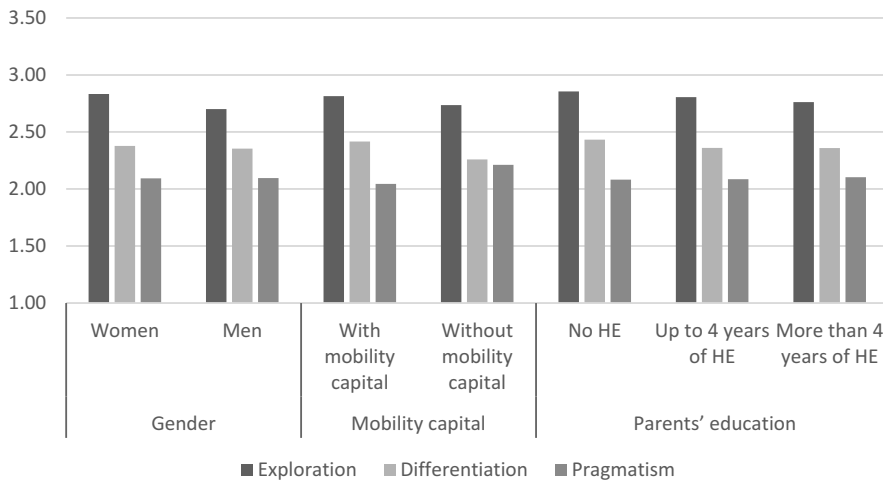


Figure 2. Indexes of motives for studying abroad (scale from 1 to 4), by background variables.

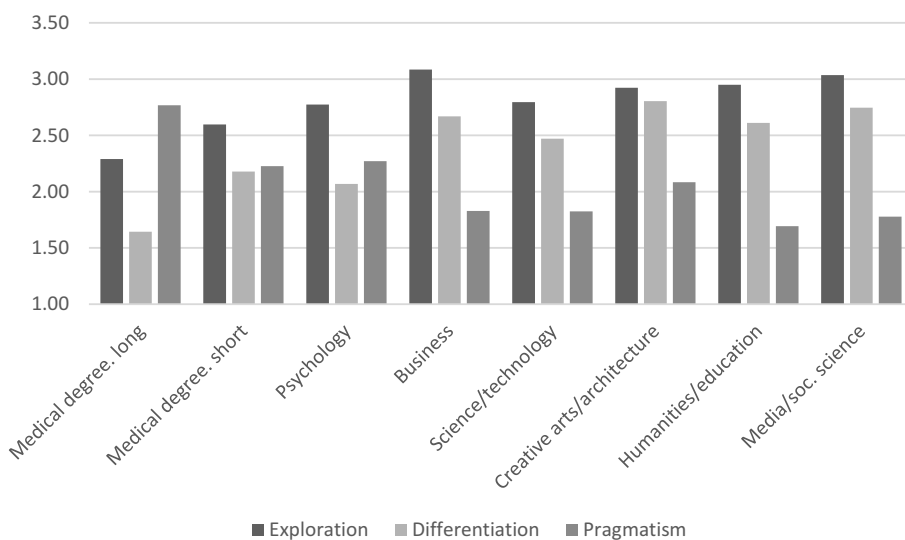


Figure 3. Indexes of motives for studying abroad (scale from 1 to 4), by field of study.

There are differences according to mobility capital: students without mobility capital have a significantly lower score on Exploration and Differentiation, while the score on Pragmatism is significantly higher than for students with mobility capital. Figure 3 on the other hand indicates that the variations according to field of study are rather large. Students in long medical degrees score higher on Pragmatism than other dimensions, while students in all other fields of study score highest on Exploration. Pragmatism is also important for students in short medical programmes and psychology, scoring slightly higher than Differentiation. Creative arts/architecture also have a relatively high score on Pragmatism, indicating that one reason for these students go to abroad is a determination to enter a particular field of study. Differentiation is particularly important to students in creative arts/architecture, social sciences/media and business and administration.

To investigate how field of study and background factors simultaneously relate to motivation, we conducted multivariate linear regression analyses. We also included a dummy variable for duration of studies abroad, to check if time since the decision about studying abroad influenced reported motivation. Based on the factor analysis, we used the three factor scores as dependent variables in the linear regression analyses (Table 3).

The analyses confirm the main patterns of the analyses based on the indexes, including that field of study has more influence on motivation than the background variables. Medical students are the group expressing the most pragmatic motivations, and least Exploration and Differentiation type of motivation, while Differentiation is expressed as a motivation for students in creative arts/architecture and to some extent media/social science students, compared to business and administration which is the reference category.

The analyses also show that women are more likely to be motivated by Exploration than men, also when controlling for other variables. Having mobility capital increases the likelihood of Differentiation as motivation for studying abroad and reduces the likelihood

Table 3. Linear regression analysis on factor scores for the three types of motivation.

	Exploration		Differentiation		Pragmatism	
	B	S.E	B	S.E	B	S.E
Constant	0.405	0.040	0.339	0.046	-0.449	0.039
Gender (male = 1)	-0.205	0.032	0.059	0.038	0.035	0.032
Mobility capital (no capital = 1)	0.000	0.033	-0.110	0.039	0.125	0.033
Parents' edu. level (HE 4+ years = 0)						
Parents' edu: comp/upper sec	0.061	0.044	-0.017	0.051	0.014	0.043
Parents' edu: HE up to 4 years	0.056	0.033	-0.047	0.038	-0.006	0.032
Study length (more than 2y = 1)	<u>0.061</u>	0.030	<u>-0.074</u>	0.035	0.025	0.030
Field of study (Business & admin = 0)						
Medical degree. long	-0.823	0.046	-0.912	0.053	1.611	0.045
Medical degree. short	-0.521	0.072	-0.324	0.084	0.563	0.071
Psychology	-0.300	0.066	-0.611	0.077	0.839	0.065
Science/technology	-0.250	0.053	<u>-0.129</u>	0.062	-0.049	0.052
Creative arts/architecture	-0.301	0.058	0.447	0.068	0.450	0.057
Humanities/education	<u>-0.129</u>	0.063	0.029	0.073	-0.194	0.062
Media/soc.science	<u>-0.073</u>	0.049	0.168	0.057	-0.004	0.048
Number of cases	4126		4126		4126	
Adjusted R ²	0.09		0.14		0.34	

Underlined = $p < 0.05$. bold = $p < 0.01$.

Constant: female business student who has mobility capital and parents with long HE, and who has studied abroad for less than 2 years.

of Pragmatism. We found no significant effect of parents' education on either type of motivation, when controlling for the other variables. We also tested interaction effects between mobility capital and parents' education, but as there are no significant effects, this is not displayed in Table 3. Those who have studied abroad for more than two years are slightly more likely to state Exploration as their motivation, and slightly less likely to be motivated by Differentiation. In the regression model on Pragmatism more of the variance is explained by the independent variables used, which also indicate the importance of field of study.

Discussion

Students report a broad range of motivations for studying abroad, and a factor analysis showed that these can be categorised according to three underlying dimensions. The *Exploration* dimension consists of pull-motives related to the (cultural) added value of studying abroad. This type of motivation is also identified in a range of other studies on full degree and exchange students, including those by Murphy-Lejeune (2002), Brooks and Waters (2011), Dall'Alba and Sidhu (2013), and Bryntesson et al. (2018).

The *Differentiation* dimension comprises motives related to standing out, such as quality and international career, but also that the study programme of preference is not provided domestically. Hence, this dimension consists of both pull and push motives, illustrating that the traditional division between push and pull motives is too simplistic.

The third dimension, *Pragmatism*, mostly includes push motives, as domestic admission restrictions "force" students who are eager to pursue a certain type of education to look for alternatives abroad. This type of motivation is rarely found in studies addressing students on short-term exchanges abroad but is observed in research on full degree students, including those from Western countries (see e.g. Brooks & Waters, 2011; Findlay et al., 2011).

Exploration is the most reported type of motivation, important to all groups of students (though to varying degrees) and indicates that students with certain attitudes or personality traits are more likely to study abroad. Zimmermann and Neyer (2013) found that mobile students diverge from non-mobile students before they go abroad, by being more extrovert and open, and that studying abroad amplifies the differences. This illustrates that psychological factors are also important for ISM. We also note that Differentiation and Pragmatism are clearly more prevalent among students in some fields of study than others, illustrating that students' motivation is related to the kind of subject field they want to enter. International experience may be perceived as more attractive and relevant in some fields of study and some segments of the labour market than others.

Women are more strongly motivated by the added value of studying abroad, in accordance with hypothesis 1 and with previous studies (Campus France, 2016; King & Sondhi, 2016; Thorn, 2009). In general, women seem to have a broader spectre of motivations, and a higher interest in language and culture in general. An interesting question for future research would be to investigate if female students are more likely to accumulate more of these competencies during their stay abroad, than their male counterparts.

Variations according to parents' level of education are relatively small, and insignificant. Hence, we could not find support for hypothesis 2, stating that students of high

social origin are more likely to be motivated by a desire to stand out from others by choosing a unique programme, emphasising quality or opting for an international career. This may have several explanations. It could be that studying abroad is less of an elite activity in a country in which universal public funding for ISM is available and it is quite common to study abroad, and that this is reflected in the students' motivations. On the other hand, ISM students are generally of high social origin, as 85% have parents with higher education. This implies that it might not be enough variation in the data to isolate social differences. But it could also be that our indicators of motivation are not sufficiently sophisticated. The questionnaire may not grasp a "distinguishing" type of motivation, found in the research of Findlay et al. (2011) and Brooks and Waters (2010), in an adequate way. But at the same time, Norway's higher education system is not particularly hierarchically structured (Bleiklie, 2005), which may imply that students are less focused on distinguishing themselves by attending a specific institution. It is also possible that other measures of social origin could have generated slightly different findings. We would have liked to include information about parents' *type* of education (not only the level) or indicators of economic capital, but such information was not available in our data set.

We found that students with high mobility capital are more likely to consider the eventual pursuit of an international career as a motivation for studying abroad, supporting hypothesis 3. In line with the findings of Murphy-Lejeune (2002) and Van Mol and Timmermann (2014), it seems as though one mobility experience tends to lead to another. Mobility capital also has an influence on other motivations for studying abroad, such as the perception of higher quality of education abroad. Previous international experiences may make students more aware of prestige and quality differences in higher education. Hence, we suggest that considering mobility capital is highly relevant when investigating why students choose to go abroad, and further research could investigate the effect of mobility capital on choice of host country and higher education institution.

Field of study has a stronger influence on motivation compared to gender and social origin. In line with hypothesis 4, students in programmes with strict admission restrictions in Norway expressed pragmatic motivations for ISM. This is particularly true for medical students, who are dedicated to a certain profession. However, medical students also express the *Exploration* type of motivations. If they had not been interested in the added value of studying abroad, they might have chosen a different programme, or spent time improving grades from upper secondary school to gain admission domestically. Still, their emphasis on exploration may partly reflect their experiences as international students, rather than their initial motivations. A study comparing prospective and current mobile students has shown that current students are more prone to emphasise "pull" motives than "push" motives (Nghia, 2019), indicating that some students may fail to remember that their initial reasons to study abroad were based on limitations in access in the home country. Such memory lapses may have influenced our study too. Including time spent abroad in the regression analysis showed a small, but statistically significant effect of time spent abroad on the exploration type of motivation; those who had studied abroad for more than two years, were more likely to express an Exploration type of motivation.

While Brooks and Waters (2009) found that studying abroad represents a second chance for UK students not being admitted into elite institutions domestically, we found that studying abroad represents a second chance for students who are not admitted to their *study programme* of preference (which is usually an elite programme). In Norway, prestige is more closely related to field of study than to the higher education institution. Competition to enter is fierce in certain programmes, and a universal, subsidised public funding system gives students the opportunity to choose alternatives abroad. This probably explains why the proportion of students with “pragmatic” motives for studying abroad is high.

The underlying dimensions of motivations are similar to findings in a previous study about Norwegian full degree students’ motivations for studying abroad (Wiers-Jenssen, 2003), indicating robustness of results. The pattern deviates somewhat from what is found in research on exchange students, as a substantial proportion of full degree students in our study emphasised pragmatic push-motivations for ISM, and we also disclose an underlying motivational dimension including both push and pull factors: Differentiation. But there are also similarities with findings from research on exchange students: many are attracted by the opportunities for cultural learning and personal development (see e.g. Bryntesson et al., 2018; Krzaklewska, 2008; Maiworm & Teichler, 2002; Murphy-Lejeune, 2002).

The motivation pattern found is related to the context and opportunity structure of student mobility in Norway, including universal, subsidised public funding, strong traditions for outward mobility, fierce competition for admission in certain fields and limited focus on institutional prestige. A study of full degree students in Nordic countries has shown that “pragmatic” rationales for studying abroad are also prominent in Iceland and the Faroe Islands (Saarikallio-Torp & Wiers-Jenssen, 2010), which are also regions with limited domestic capacity, good funding opportunities and long traditions of outgoing mobility. Motivation patterns may be different for students from countries with higher economic barriers to studying abroad, sufficient supply of study places and a more hierarchical domestic educational system or less favourable domestic labour market opportunities. However, comparative studies are needed so light can be shed on this.

There are limitations to our study. Students were asked about their motivations for studying abroad several years after they had made their initial decision. As mentioned above, there may have been a memory lapse and post rationalisation of choices, though the regression analysis indicates that there is only a small effect of how long students have studied abroad. It can also be questioned if quantitative data alone can grasp the complexity of educational choices, and a combination of survey data and interviews may have strengthened the study.

Conclusion

Norwegian students’ motivations for taking a full degree abroad are multifaceted, but can be grouped into three categories: Exploration, Differentiation and Pragmatism. Female students placed more emphasis on the Exploration type of motivation for studying abroad, compared to male students. Differences in motivation according to social origin are smaller than expected, while mobility capital influences the motivational profile of students, particularly by increasing motivation in the form of

Differentiation. However, motivation varies more according to field of study compared to background factors. Students in certain study programmes (medical education in particular) mainly go abroad for pragmatic reasons: domestic admissions restrictions, combined with a strong desire to enter a certain profession and easy access to funding to undertake education abroad makes this type of choice more likely. Students in other fields of study are primarily motivated by pull factors such as development of language and cultural skills, new experiences or prospects for an international career.

The motivation patterns observed are likely to be related to the context and opportunity structure of student mobility in Norway, including a strong tradition for ISM, the availability of subsidised public funding, numerus clausus in some programmes, and the weak tradition for focussing on differences in institutional quality and prestige.

The study shows that the traditional division between push and pull types of motivation for ISM is too simplistic and confirms that the motivations for ISM among full degree students are more complex than among exchange students. Further, it shows that push factors are also prevalent in mobility between Western countries, and that motivations vary substantially by subject field. The study also illustrates how a country's higher education policy can influence students' choices, through financial incentives and the capacity in certain fields of study in the domestic educational system.

Notes

1. Among students studying in Norway, 56% come from a family with higher education experience, while the corresponding proportion among Norwegian students studying abroad is 85%.
2. To qualify for student loans to study abroad, applicants must be a Norwegian citizen.
3. Following Kieffer (1998) and Finch (2006) we have compared orthogonal rotation to oblique rotation, using Promax. The comparison generates the same factor structure, with similar loadings. According to Finch (2006), when the two rotations "yield similar outcomes, the researcher can rely on the orthogonal solution, but if the results are very different, interpretation based on the oblique rotation is preferred" (Finch, 2006, p. 43).
4. As a post hoc-test of the principal axis factor analysis, we have also conducted a CFA and a principal component analysis on the data. As the results were very similar in all three analyses, this indicates that the factor structure we have found is appropriate.

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Appendix A

Table A1. Independent variables, in total and by field of study.

	Total	Med. degree, long	Med. degree, short	Psycho- logy	Business & adm.	Science & tech.	Huma- nities/ edu	Art/ archi- tecture	Soc. Sciences/ media
Proportion of women	69.2	70.1	74.5	84.8	63.3	54.2	72.2	75.2	73.7
Proportion of students with mobility capital	70.8	63.6	65.5	68.9	76.5	72.6	65.6	73.6	76.4
Proportion of students with parents with no HE	15.1	13.6	16.8	12.4	17.9	11.2	17.0	18.5	15.0
Proportion of students with parents with up to 4 years of HE	35.7	33.6	46.4	37.8	35.7	34.2	40.1	31.8	34.3
Proportion of students with parents with more than 4 years of HE	49.2	52.7	36.8	49.8	46.5	54.6	42.9	49.7	50.8
Proportion who have studied abroad 2 years or less	53.0	33.7	47.7	55.8	61.0	59.9	60.7	58.3	57.8

Table A2. Bivariate analysis of reasons for studying abroad, by gender, educational and mobility capital.

	Average mean score	GENDER			PARENTS' EDUCATION			MOBILITY CAPITAL			
		Women	Men	Sig.	Comp/upper sec	HE <4	HE 4 +	Sig.	Have no mob. capital	Have mob. capital	Sig.
Not admitted to preferred study in Norway	1.77	1.78	1.74		1.74	1.77	1.77		1.96	1.69	**
Study programme does not exist in Norway	1.68	1.70	1.63		1.74	1.69	1.65		1.60	1.71	**
Higher quality of study abroad	2.59	2.58	2.59		2.58	2.56	2.60		2.48	2.63	**
Improve prospects for international career	2.86	2.86	2.86		2.99	2.84	2.84	**	2.70	2.93	**
Strong desire for a certain profession	2.58	2.59	2.57		2.64	2.63	2.53	*	2.78	2.50	**
Interesting to study in a foreign environment	3.29	3.32	3.23	**	3.30	3.32	3.27		3.22	3.32	**
Adventurousness	3.17	3.24	3.02	**	3.14	3.21	3.16		3.07	3.22	**
Desire to learn/improve language	2.67	2.72	2.55	**	2.80	2.71	2.60	**	2.68	2.67	
Desire to experience a different culture	2.84	2.89	2.73	**	2.90	2.88	2.79	*	2.83	2.85	
Wanted to get a diff. perspective on Norway	2.47	2.48	2.45		2.57	2.47	2.45		2.48	2.47	
Wanted a break from familiar surroundings	2.81	2.86	2.69	**	2.88	2.79	2.80		2.80	2.81	
Interest in a specific country	2.27	2.33	2.13	**	2.34	2.28	2.24		2.17	2.31	**
Wanted to study in my home country	1.11	1.12	1.09		1.10	1.10	1.12		1.05	1.13	**
Boy/girlfriend lives/studies abroad	1.22	1.24	1.19	*	1.24	1.22	1.22		1.15	1.25	**
Sceptical to HE in Norway	1.40	1.38	1.45	**	1.41	1.41	1.39		1.30	1.44	**
Family origin from abroad	1.20	1.21	1.18		1.17	1.16	1.23	**	1.06	1.25	**
Recommended by others	2.05	2.02	2.10	*	2.03	1.97	2.10	**	2.07	2.04	
Coincidences	2.00	2.01	1.99		1.95	1.99	2.03		2.07	1.98	*
Good funding opportunities	2.67	2.68	2.63		2.72	2.65	2.66		2.69	2.66	
Admission process arranged by agent	1.83	1.89	1.69	**	1.97	1.91	1.72	**	2.09	1.72	**

Significant group differences $p \leq 0.01$ are marked by bold and **, significant group differences $p \leq 0.05$ are marked by underlining and *.

**Table A3.** Bivariate analysis of reasons for studying abroad, by type of programme.

	Average mean score	Med. degree long	Med. degree short	Psychology	Business	Science/ tech	Creative arts/ architecture	Humanities/ education	Soc.sci./ media
Not admitted to preferred study in Norway	1.77	3.00	1.85	2.25	1.30	1.33	1.43	1.13	1.23
Study programme does not exist in Norway	1.68	1.06	1.83	1.45	1.78	1.82	2.04	1.99	1.98
Higher quality of study abroad	2.59	1.83	2.50	2.26	2.86	2.65	3.13	2.90	2.93
Improve prospects for international career	2.86	2.05	2.24	2.51	3.39	2.96	3.24	2.96	3.33
Strong desire for a certain profession	2.58	3.45	2.94	2.96	2.01	2.09	3.04	2.04	2.18
Interesting to study in a foreign environment	3.29	2.84	3.12	3.21	3.54	3.31	3.44	3.44	3.53
Adventurousness	3.17	2.74	3.16	3.11	3.43	3.18	3.27	3.25	3.39
Desire to learn/improve language	2.67	2.11	2.61	2.61	2.96	2.66	2.72	2.89	2.99
Desire to experience a different culture	2.84	2.47	2.71	2.96	3.08	2.77	2.94	2.97	2.98
Wanted to get a diff. perspective on Norway	2.47	2.26	2.24	2.48	2.69	2.42	2.48	2.50	2.61
Wanted a break from familiar surroundings	2.81	2.39	2.72	2.85	3.05	2.83	2.92	2.93	2.97
Interest in a specific country	2.27	1.51	2.17	2.47	2.59	2.30	2.40	2.69	2.55
Wanted to study in my home country	1.11	1.09	1.08	1.17	1.09	1.11	1.10	1.18	1.13
Boy/girlfriend lives/studies abroad	1.22	1.07	1.36	1.27	1.23	1.30	1.17	1.41	1.24
Sceptical about HE in Norway	1.40	1.24	1.27	1.47	1.45	1.46	1.39	1.46	1.52
Family origin from abroad	1.20	1.13	1.16	1.23	1.16	1.28	1.15	1.33	1.25
Recommended by others	2.05	2.32	2.29	2.06	2.08	1.87	2.00	1.74	1.84
Coincidences	2.00	2.32	1.88	1.82	1.94	2.03	1.87	1.87	1.88
Good funding opportunities	2.67	2.85	2.30	2.65	2.59	2.57	2.53	2.70	2.77
Admission process arranged by agent	1.83	1.94	1.47	1.95	1.82	1.70	1.78	1.72	1.92
Number of cases (min–max)	4097–4116	909–915	215–218	281–283	825–830	505–510	387–389	312–314	655–661

Scores which are significantly different from the mean are marked in bold (black for higher than average score, black+italics for lower than average score).